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The project of informal education.

A design trajectory of university architectures in postwar Latin America and Italy

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ABSTRACT

The 21st century has witnessed a growing debate around learning places. A new educational paradigm that favored the spreading of the concept of informality in the renewed pedagogical models has long promised a radical evolution in the design of educational spaces shaped on the basis of this concept, with the ideal figure of the university *campus* called to rethink its founding principles to stimulate new alliances between the design of its architectures and the new pedagogical agenda. In contemporary architectural discourse, we are witnessing a paradox: on the one hand the euphoric rediscovery of the so-called *radical pedagogies* that in the Seventies had challenged the authoritarianism of the university institution guided by the principle of emancipation from the productive logic of the bureaucratic state; on the other hand, the often artificial revival of an informal use of space instrumentally adapted to the new production logics of a flexible and ever-changing reality. Therefore, the thesis questions the possibilities of re-discussing informality as an educational paradigm interpreted, stimulated and interrogated through the contribution of architectural and urban project. More than a simple spatial declination of pedagogical requirements, the project of education stems from an ambitious relationship between form and pedagogical agenda where an authentic degree of experimentation on the architectural and urban space that is inherent to the rethinking of an educational paradigm does provide the decisive arguments for its elaboration.

The thesis explores the precedents of this phenomenon in the aftermath of the Second World War in a specific region of Latin America which, despite its peripheral position with respect to the official distribution centers of the modern architectural debate, has functioned as a laboratory of design experiences on the project of educational space. This, in a place where the university represented the epicenter of the urban and architectural development of the region and in dialogue with some Italian architects directly involved in the design of the spaces in which they themselves worked as educators. The research is therefore structured on the critical-design analysis of six university campus projects conceived between Chile and Argentina in the 1950s. The selected episodes, generally little explored in the long debate on campus design, are presented as interconnected nodes of an educational project instigated by the same university institutions that intended to favor the relational component in their programs, to transform their internal organization into a flexible structure and to realize the highest level of integration with the outside world, identified both in the immediate context (urban) and in the larger one (regional).

The crucial aspect that unites the selected episodes concerns the degree of design experimentation adopted by the university institutions that intended to reform from within their bureaucratic apparatus, without ever renouncing the architectural implications of a new educational paradigm based on a broad and not yet explicit concept of informality. What emerges from the selected episodes, in fact, is a complex of architectural and urban solutions that are anything but neutral and univocal with respect to an alleged pedagogical mandate. On the contrary, these are multiple, ambitious and even divergent solutions, characterized by having identified a specific design theme through which to explore the new educational paradigm within their own specific context. Therefore, the limits of the peripheral condition are turned into the advantages of a privileged territory for architecturally exploring the relationship between university and city around the theme of the *monument*, the *ground*, the *megastructure*, the *envelope* or the internal *atrium*.

In parallel, the thesis identifies the architect-educator in charge of these experiments as a prototypical figure. In particular, they always participate in the post-war architectural discourse by operating an internal critique mostly supported by design contributions, thus equally distant from the influential profile of CIAM leaders as well as from the revolutionary or self-isolated profile often associated with radical pedagogies. As part of the institutional apparatus of the university, all the protagonists of the selected episodes interpret and adapt this figure to a specific condition with their contribution that are not only original proposals for educational spaces, but these proposals are always reinvested in the environment in which each of them already work as teacher or consultant. Therefore, the institution reviews its role as client in search of ideas for a *new university* using the internal contribution of the architect-educator who, over time, evolves his figure from a member of a highly territorialized collective organization to that of an exponent of the increasingly transitory and cosmopolitan condition.

In conclusion, the selected episodes and the work of the South American and Italian architects operating in this particular context become the pretext for discussing a design trajectory enriched by other experiences and theoretical contributions that are previous, contemporary or subsequent to the selected cases, rather instrumental for repositioning the sequence of architectural and urban themes analysed in this thesis at the center of a critical reflection on the design of the contemporary educational space, especially on the gradual shift from the extended dimension of the campus to the inner content of its architectures.

ABSTRACT

Il XXI secolo è stato testimone di un crescente dibattito sui luoghi dell'apprendimento. Un nuovo paradigma educativo che ha favorito la diffusione del concetto di informalità nei rinnovati modelli pedagogici promette da tempo un'evoluzione nel progetto degli spazi educativi modellati sulla base di questo concetto, con la figura del *campus* universitario chiamata a ripensare i suoi principi fondativi alla ricerca di nuove alleanze tra il progetto delle sue architetture e la nuova agenda pedagogica. Nel discorso architettonico contemporaneo, assistiamo a un paradosso: da un lato l'euforica riscoperta delle cosiddette *radical pedagogies* che negli anni Settanta avevano contrastato l'autoritarismo dell'istituzione guidate dal principio di emancipazione dalle logiche produttive dello stato burocratico; dall'altro, si assiste alla riproposizione spesso artificiosa di un uso informale dello spazio strumentalmente adattato alle nuove logiche produttive di una realtà flessibile e mutevole. Pertanto, la tesi si interroga sulle possibilità di ridiscutere l'informalità come paradigma educativo interpretato e stimolato attraverso il contributo del progetto architettonico e urbano. Più che una semplice declinazione spaziale di requisiti pedagogici, il *progetto educativo* scaturisce da un'ambiziosa relazione tra forma e agenda pedagogica dove un autentico grado di sperimentazione sullo spazio architettonico e urbano interno al ripensamento di un paradigma educativo fornisce le argomentazioni determinanti per una sua elaborazione.

La tesi esplora i precedenti di questo fenomeno all'indomani della Seconda Guerra Mondiale in una regione circoscritta dell'America Latina che, nonostante la sua posizione periferica rispetto ai centri di distribuzione ufficiale del dibattito architettonico moderno, ha funzionato come laboratorio di esperienze progettuali sul progetto dello spazio educativo in un luogo in cui l'università rappresentava l'epicentro dello sviluppo urbano e architettonico della regione, in dialogo con alcuni architetti italiani direttamente coinvolti nel progetto degli spazi in cui loro stessi svolgevano il compito di educatori. La ricerca è pertanto strutturata sull'analisi critica-progettuale di sei progetti di campus universitari concepiti tra Cile e Argentina nel decennio 1950. Gli episodi selezionati, generalmente poco esplorati nel lungo dibattito sul progetto del campus, sono presentati come nodi interconnessi di un progetto educativo in corso di rinnovamento per mano delle stesse istituzioni universitarie che intendevano privilegiare la componente relazionale nei loro programmi, trasformare la loro organizzazione interna in una struttura flessibile e puntare sulla massima integrazione con il mondo esterno, individuato nel contesto più prossimo (urbano) o molto più vasto (territoriale, regionale).

L'aspetto cruciale che accomuna gli episodi selezionati riguarda il grado di sperimentazione progettuale adottato dalle istituzioni universitarie che intendevano riformarsi, senza mai rinunciare alle implicazioni architettoniche di un nuovo paradigma educativo basato su un concetto ampio e non ancora esplicito di informalità. Quello che emerge degli episodi selezionati è un complesso di soluzioni architettoniche e urbane tutt'altro che neutrali e univoche rispetto a un presunto mandato pedagogico. Al contrario, si tratta di soluzioni molteplici, ambiziose e addirittura divergenti tra loro, contraddistinte dall'aver individuato un preciso tema progettuale attraverso il quale esplorare il nuovo paradigma educativo nell'ambito del proprio specifico contesto di riferimento. Pertanto, i limiti della condizione periferica si traducono nei vantaggi di un territorio privilegiato per esplorare architettonicamente il rapporto tra università e città intorno al tema del *monumento*, della liberazione del *suolo*, della *megastruttura*, dell'*involucro* o dell'*atrio* interno. In parallelo, la tesi individua l'architetto-educatore a cui vengono affidati questi esperimenti come figura prototipica, in virtù dei suoi caratteri ricorrenti. In particolare, si tratta sempre di una figura che partecipa al discorso architettonico del dopoguerra operando una critica interna per lo più effettuata attraverso il suo contributo progettuale, equamente distante tanto dal profilo influente dei leader CIAM quanto dal profilo rivoluzionario spesso associato alle pedagogie radicali. Sempre inseriti nell'apparato istituzionale dell'università, i protagonisti degli episodi selezionati interpretano e adattano questa figura alle condizioni specifiche, con un contributo che non si limita a proposte originali sullo spazio educativo, ma queste proposte vengono sempre reinvestite nell'ambiente in cui ognuno di loro già opera come insegnante o consulente. Pertanto, l'istituzione rivede il suo ruolo di committente alla ricerca di idee per una *nuova università* servendosi del contributo interno dell'architetto-educatore che, nel tempo, evolve la sua figura da membro di un'organizzazione collettiva fortemente territorializzata a interprete di una condizione sempre più transitoria e cosmopolita.

In conclusione, gli episodi selezionati e l'operato degli architetti sudamericani e italiani attivi in questo particolare contesto, diventano il pretesto per discutere una traiettoria progettuale arricchita da altre esperienze e contributi teorici precedenti, contemporanei o successivi ai casi selezionati, utile a riposizionare la sequenza di temi architettonici e urbani analizzati nella tesi al centro di una riflessione critica sul progetto dello spazio educativo contemporaneo, in particolare sul graduale spostamento dalla dimensione estesa del campus al contenuto interno delle sue architetture.

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PROLOGUE

Cafeteria after Lunch

Quotations from a conversation between the author and the art historian Helena Čapková, who wrote “Iwao and Michiko Yamawaki and the formation of Japanese Modernist Design”, in Journal of Design History, (vol. 27, no.4, 2014).

The interior space of Bauhaus Dessau building designed by Walter Gropius in 1925, is perhaps the prime example in which a precise condition of ‘informality’ has been emphasized within a modern educational building where students’ community life has been scrutinized in its very intimate condition. Architect trained in Japan, Iwao Yamawaki (1898-1987) was an interesting figure at the intersections of Modern Movement, splitting time between his professional duties for a construction company and his passion profused in Tokyo theatrical circles, for which he used to design stage costumes and settings. Despite Yamawaki was really well connected with the Japanese avant-gardist scene – legitimized by the foundation of his own theatre in town – he became dissatisfied with Japanese practices.

Thus, in 1930 both Yamawaki and his wife Michiko, a textile artist, moved to Germany where they enrolled as students of Bauhaus, Dessau.

Initially attending the preliminary course with Josef Albers and Wassily Kandinsky, Yamawaki studied architecture but soon moved on to the photography section with Walter Peterhans, where he began to produce architecture images, portraits, still-lives and photomontages. His methods were finally influenced by László Moholy-Nagy teachings which encouraged photography of ordinary scenes using unfamiliar perspectives and angles, contrasts of line and form, close-up details, light and shadow gradients, and multiple exposure to emphasize the connection between human beings and the design of space.

Essentially, Yamawaki’s photographs of that period primarily document the school building, objects and activities in Bauhaus, and other modernist architectures and interiors where the subject of education usually took place,¹ as in the case of the black and white photograph ‘Cafeteria after Lunch’ taken by Yamawaki in Bauhaus-kantine (1931-32). If the Bauhaus building complex in Dessau represents the quintessential place within which a designated educational system is carefully orchestrated by form, according to the modernist canon enunciated by a prominent architect, it is right in the building’s innermost space scrutinized by Yamawaki’s picture that a certain degree of informality goes on stage perhaps for the first time, by disclosing the contamination of those same institutionalized learning rituals. In fact, unlike the very much commented transparenc-ies associated with Bauhaus workshops glazed envelope investigated by Colin Rowe and Robert Slutzky in their influential co-authored essay, the Bauhaus kantine was conceived as an early experiment on flexibility through the use of moving party-walls that, on occasion, would have favored reciprocal contamination with the main Lecture Hall immediately connected to the school entrance. In doing so, ‘Cafeteria after Lunch’ exhibits informality at work into the sphere of education, inspiring critical reflections about one of the most recurrent keyword in architectural discourse, descriptions and design instructions directed to almost every kind of space where contemporary forms of learning take place.

1. The Amsterdam-Zuid Openluchtschool in Cliostraat is among the other education spaces portrayed in Yamawaki’s photographs during his period at the Bauhaus.

The Yamawakis could not complete their courses. An article on the closure of the Bauhaus in 1933, published in the magazine *Kokusai kenchiku* (International Architecture), was illustrated by what is probably Iwao's most famous work, the photomontage 'Attack on the Bauhaus' (1932) which anticipated the definitive closure of Dessau' school.

Upon returning to Japan, with the help of Michiko's father, the Yamawakis settled in a small building in Ginza district, Tokuda designed by Tsuchiura Kameki.

The couple occupies the third and half of the fifth floor, renting the rest of the apartments.

Two weavings machines were installed for Michiko, while on the fifth floor, a rich collection of books and various objects designed at the Bauhaus constellate the new domestic environment where the furnishings of the Bauhaus kanteen stood out, those that travelled along with the pedagogical methods they learned.



FIG. 1
"Cafeteria after Lunch" by
Iwao Yamawaki, 1930-32

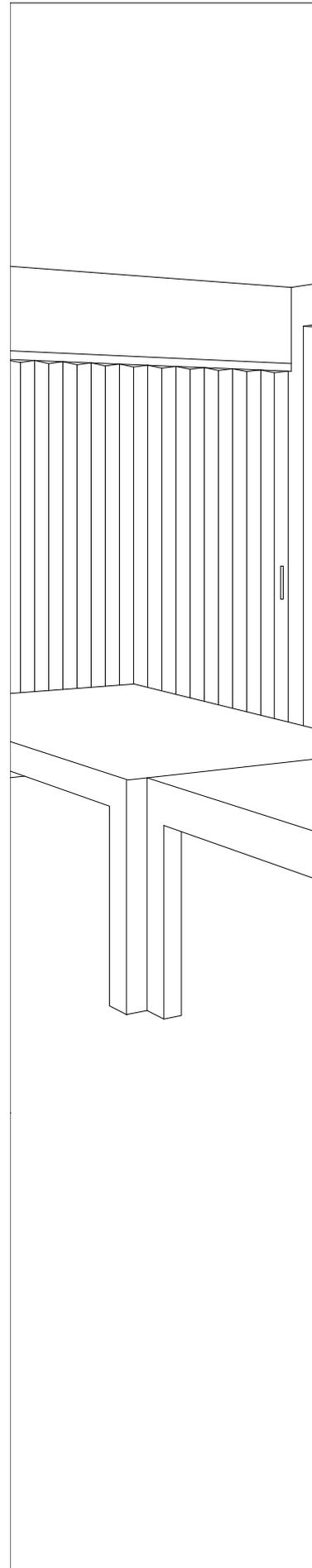
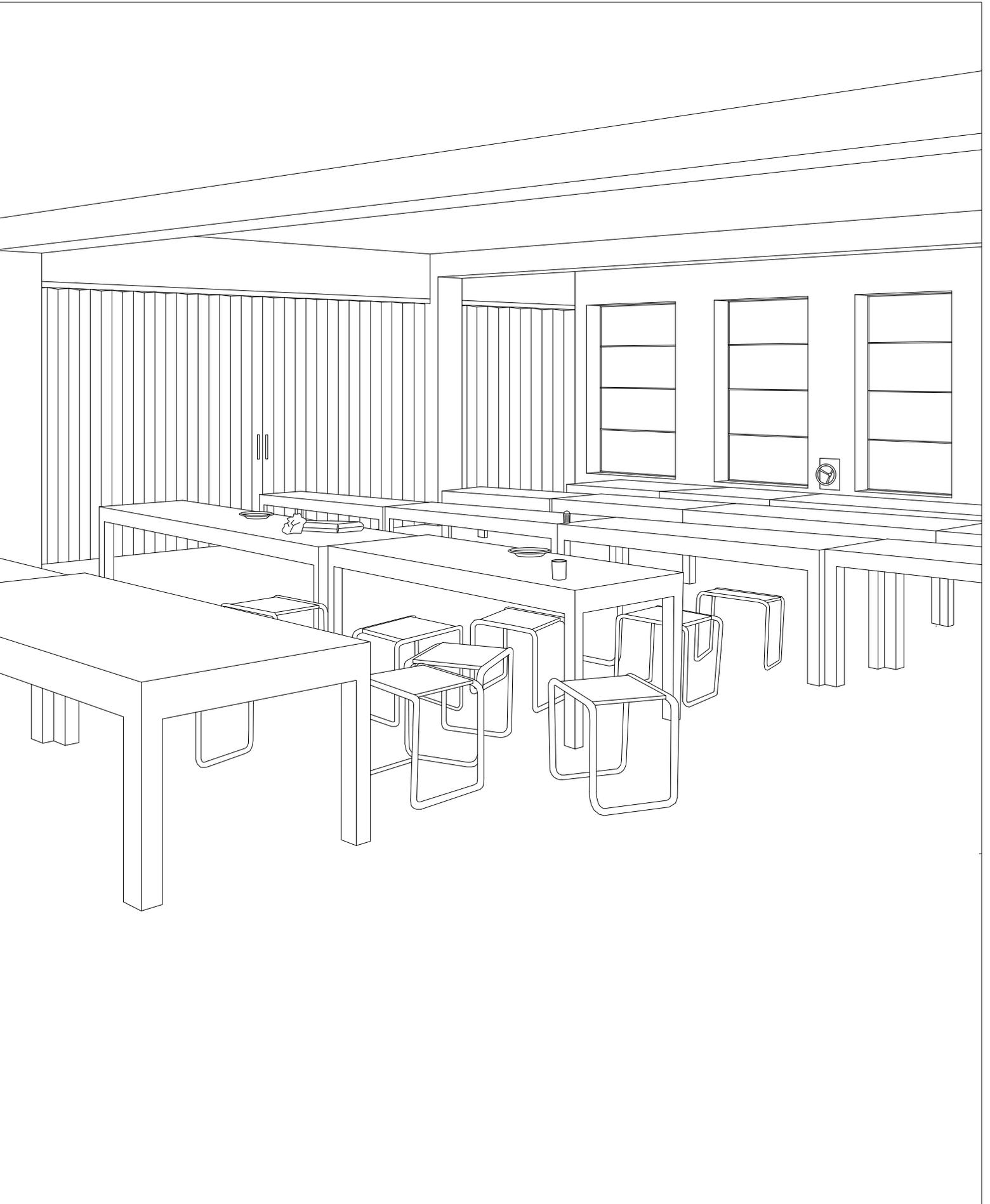


FIG. 2
Expanded linedrawing by the author, which reveals the continuity with one of the most “formal” educational spaces of the Bauhaus school that is the ground floor conference/lecture room which is located exactly beyond the movable partitions in the background of the kantine portrayed by Yamawaki.



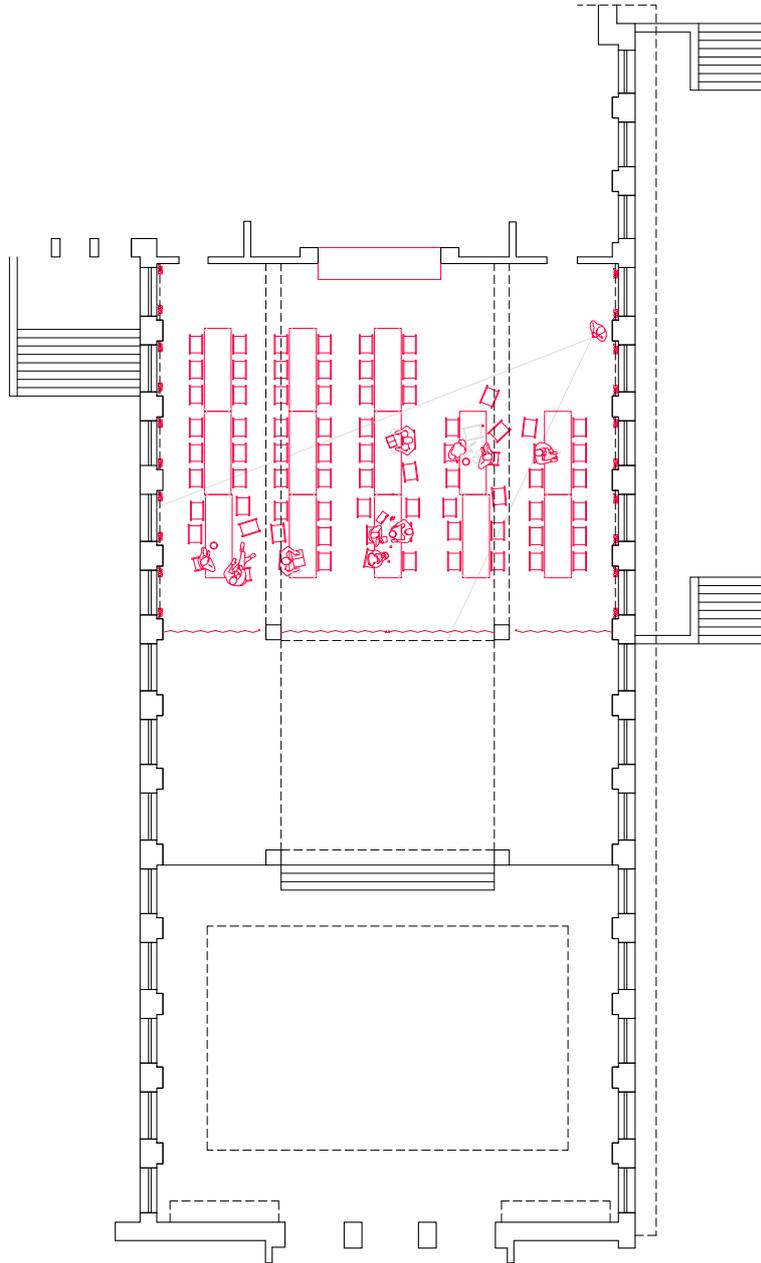


FIG. 3
Bauhaus kantine plan.
Redrawn by the author

INTRODUCTION

‘Università’.
Designing permanence in a world of change

The study presented in this thesis has its roots in various occasions of investigation on the architecture of university campuses and their relationships with the city that took place immediately after graduation. First, within the international context of a post-graduate MSc obtained at the University of Applied Arts in Vienna (Die Angewandte) which included one semester in New Zealand focused on the university campus expansion in the city of Christchurch destroyed by the earthquake. Subsequently, within the local context thanks to the Research Grant “Progetto di Riqualificazione del Campus Santi’Ignazio”, seat of the Faculty of Economic, Law and Political Sciences at the University of Cagliari developed as a Collaboration Agreement with DICAAR (Department of Civil-Environmental Engineering and Architecture). On this occasion of design and research coordinated by professors Marco Lecis and Pier Francesco Cherchi, co-supervisors of this thesis, relationships between the university and the city have been explored through the analysis of contemporary international cases accompanied by interviews with the authors of the projects, by providing the basis for a critical investigation on spaces of education. Therefore, the doctoral thesis aims to investigate the modes in which architecture could critically interpret the pedagogical agenda and the reciprocal implications between the two areas.

An architectural project for an educational paradigm

The 21st century was witnessed to a growing skepticism towards the merits of *traditional* education, harshly criticized for the imposing nature of knowledge transmission. A new educational paradigm has diffused around the concept of informality frequently applied to renewed pedagogical models and contemporary learning rituals, finding confirmation both in the theoretical discussions and European recommendations that, for ‘the successful transition to a knowledge-based economy and society’, have redefined the scope of *learning* on the basis of three categories: *formal*, *non-formal* and *informal*, with the last assumed as the natural corollary of each individual everyday life. Informal learning is generally described as fortuitous and haphazard, but its distinctive trait compared to the other two categories is better specified by its unintentional and unpremeditated nature. For this reason, ‘informal environments represent a considerable reserve of knowledge and could constitute an important source of innovation in teaching and learning methods’ favoured by forms of interaction exercised on the basis of relational and interpersonal practices. These appear instrumental for redesigning the whole choreography of a long-desired educational project able to dismantle hierarchical relationships and disciplinary barriers perfectly coagulated in the notion of *life-wide learning*. That is, learning activities spatially distributed in every area of the individual’s life, by completing the already well-known temporal connotation of ‘life-long learning’.¹

In this sense, the change of educational paradigm towards the concept of informality has long promised a radical evolution in the design of learning spaces. However, its appropriation in contemporary architectural discourse shows, upon a first observation, the coexistence of two apparently contradictory reactions. On the one hand, the euphoric rediscovery of the so-called *radical pedagogies* mapped between the late-1960s and 1970s that had challenged the authoritarianism of the university institution by opposing revolutionary projects against the very existence of a bureaucratic apparatus delegated to provide knowledge for the mass, whose obvious detachment from reality legitimized the desire for freedom and emancipation from rigid educational programs limited to the *productive* aims of the state institution.² On the other hand, the same euphoria is paradoxically placed in the revival, and often contrived, sense informality adapted to contemporary needs that stimulate relational practices in order to compete in the framework of a flexible and unpredictable reality of neoliberal mode of *production*, with a good number of contemporary projects united by the same comforting images depicting continuous flow of learning which metaphorically dissolves any rigid form of knowledge transmission.

Lo studio presentato in questa tesi è stato sviluppato a partire da alcune occasioni di approfondimento sul progetto dello spazio educativo avvenute subito dopo la laurea. Prima nel contesto internazionale del MSc ottenuto presso la University of Applied Arts di Vienna (Die Angewandte), che prevedeva un semestre in Nuova Zelanda incentrato sul progetto del campus universitario nella città di Christchurch distrutta dal terremoto. In seguito, nel contesto locale con una Borsa di Ricerca per il “Progetto di Riqualificazione del Campus Santi’Ignazio”, sede del polo giuridico-economico dell’Università degli Studi di Cagliari, svolto all’interno di un Accordo di Collaborazione con il DICAAR. In questa occasione di ricerca coordinata dai professori Marco Lecis e Pier Francesco Cherchi, co-supervisor di questa tesi, è stato approfondito il tema dei rapporti tra università e città attraverso un’analisi di casi contemporanei internazionali accompagnata da interviste agli autori dei progetti, che ha fornito le basi per un’investigazione critica sulle forme dello spazio educativo universitario. La tesi di dottorato nasce quindi con l’intenzione di indagare i modi in cui il progetto d’architettura interpreta l’agenda pedagogica universitaria e le reciproche influenze tra i due ambiti.

Un progetto architettonico per un paradigma educativo

Il XXI secolo è stato testimone di un crescente scetticismo verso i meriti dell’istruzione superiore tradizionale, fortemente criticata per la natura trasmissiva dei suoi contenuti. Un nuovo paradigma educativo ha favorito la diffusione del concetto di informalità nei rinnovati modelli pedagogici e rituali di apprendimento, trovando riscontro nelle

discussioni teoriche e raccomandazioni in ambito europeo che per “il buon esito della transizione ad un’economia e una società basate sulla conoscenza” hanno ridefinito l’ambito della formazione permanente sulla base di tre categorie: *formale*, *non-formale*, *informale*, di cui l’ultima assunta come corollario naturale della vita quotidiana di ciascun individuo. L’apprendimento informale è generalmente descritto come fortuito e casuale, ancor meglio precisato dal suo carattere non intenzionale. Per questo motivo, “l’ambiente informale rappresenta una riserva considerevole di sapere e potrebbe costituire un’importante fonte di innovazione nei metodi di insegnamento e di apprendimento” che privilegiano l’interazione, esercitata sulla base di pratiche relazionali che ambiscono a ridisegnare l’intera coreografia di un modello educativo che smantella rapporti gerarchici e barriere disciplinari efficacemente restituito dalla nozione di “lifewide learning”, ovvero un concetto di apprendimento spazialmente distribuito in ogni ambito della vita dell’individuo completando la già nota connotazione temporale di “life-long learning”.¹

In questo senso, il cambio di paradigma educativo verso il concetto di informalità promette da tempo un’evoluzione radicale nel progetto degli spazi dell’apprendimento. Tuttavia, la sua appropriazione nel discorso architettonico contemporaneo mostra, a una prima osservazione, la coesistenza di due reazioni apparentemente contraddittorie. Da un lato, l’euforica riscoperta delle cosiddette *radical pedagogies* mappate tra gli anni Sessanta e Settanta che avevano sfidato l’autoritarismo dell’istituzione universitaria intraprendendo progetti rivoluzionari contrapposti all’esistenza stessa di un corpo burocratico – deputato alla trasmissione di conoscenza rivolta alla massa – il cui palese distacco dalla realtà legittimava il desiderio di libertà ed emancipazione da rigidi programmi educativi limitati ai soli scopi produttivi dell’istituzione.² Dall’altro lato, la stessa euforia è paradossalmente riposta nella riproposizione, spesso artificiosa, di un’informalità adattata alle esigenze contemporanee che stimolano

FIG. 4
Catalogue of “radical pedagogies” extracted from the homonymous website, as a collaborative research project led by Beatriz Colomina at Princeton University



In this complex scenario of de-institutionalization, we are witnessing a second paradox that concerns the work of architecture even more closely. In fact, despite the growing demand for informality, the professional contribution of architecture to education has been impressive. In large part because the effectiveness of new learning methods is literally measured on the performance of the architectural space commonly described as *learning landscape*, on whose flexible, adjustable and versatile *settings* the greatest boost of creative energy is consequently invested.³ At the same time, however, there is a glimpse of the risk that the research on architectural space will be increasingly simplified and reduced to the anxious search for relationships instigators – often limited to the scale of interior furnishings – wisely distributed as a diversion towards a silent neutralization of architectural work in the name of informality, rather assumed as a real educational mandate.

Therefore, this thesis claims the possibilities of intending education as a project. The aim is to reposition informality as an educational paradigm that should be interpreted, stimulated and challenged through the contribution of architectural and urban project. More than a mere spatial declination of pedagogical requirements, the educational project rather stems from the ambitious relationship between form and pedagogical agenda as the privileged territory for architectural and urban experimentation, that is inherent to the rethinking of an educational paradigm providing the decisive arguments for its explorations. This reflection has animated a research path articulated along two parallel lines of investigation.

Campus, città e architettura.

Lo spazio contestato dell'educazione universitaria

Sul fronte più generale, lo studio intende collocarsi nel quadro di un dibattito aperto sull'università come infrastruttura materiale e immateriale che regola, storicamente, le relazioni tra il suo mondo interno abitato dalla comunità accademica e un mondo esterno da cui proteggersi, su cui riflettersi, al quale concedersi. Rapporti che hanno visto alternarsi scelte ideologiche e scelte strategiche, con la figura ideale del *campus* che viene conseguentemente riadattata senza mai rinunciare al suo costrutto retorico sempre più spesso riproposto nella sua variante urbana. L'emergenza pandemica, ancora in corso mentre si redige questo testo, ha naturalmente incrementato le riflessioni su questo dibattito ampliando i suoi termini a quelli di un colloquio internazionale sulla prima vera crisi della *società della conoscenza* sottoposta a un profondo esame, per esempio, nella raccolta di saggi curata da "Places Journal" nel mese di aprile 2020 sotto il titolo 'Field Notes on Pandemic Teaching'. Alcuni di questi contributi, almeno quelli che si sottraggono a una mera disputa tra *distanza* e *presenza*, analizzano piuttosto la situazione corrente con il pretesto di ridiscutere l'educazione come progetto definito da un complesso sistema di mediazioni: se le attrezzature digitali rappresentano una delle componenti più in vista in questo momento, le mediazioni che coinvolgono lo spazio fisico rappresentano ancora la porzione più consistente dell'intero sistema.⁴

Tra i contributi più significativi in questo senso, il lavoro di Reinhold Martin (2021) pubblicato di recente dopo circa un decennio di approfondimenti resi disponibili da varie pubblicazioni e seminari, identifica l'università come *media complex*.⁵ Che si tratti della circolazione di un testo scritto, della formulazione del calendario, dell'effetto luminoso e sonoro riprodotto dentro un'aula di lezione, o della disposizione delle sedie intorno a un tavolo seminariale fino ai rapporti di prossimità con la città, ognuno di questi

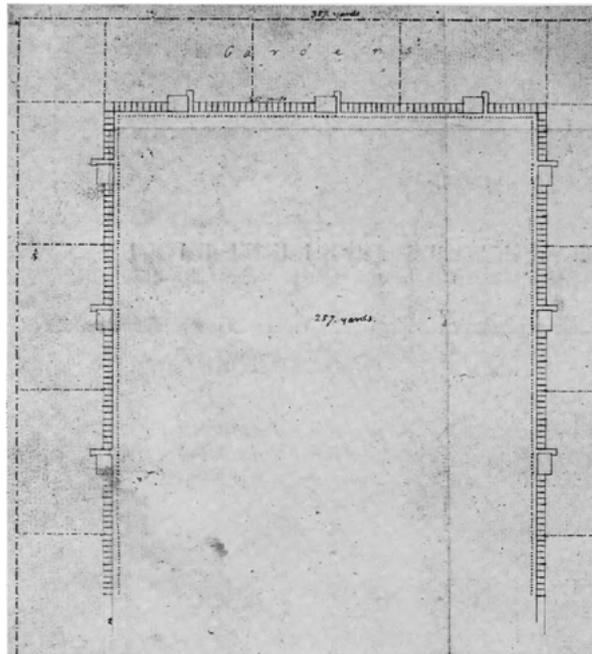


FIG. 6
Site plan for Central College
(later the University of
Virginia), by Thomas Jefferson
presented to trustees of the
institution in May 1817.
Image from Turner (1987)

the transmission of knowledge within the university environment, they simultaneously operate on the continuous repositioning of its institutional perimeter with respect to the external world as the gear of a complex mechanism which, to paraphrase Martin, 'has enabled, constrained, and otherwise defined the freedom to know, the freedom to learn, and the freedom to teach'. While it is true that Martin's *knowledge worlds* focus on the case of the North American university from the Enlightenment to the 21st century, his study contrasts with the abundant literature that has investigated the same context in search of campus genealogy as 'American planning tradition' (Turner, 1987). This genealogy has recently expanded in the form of *good practice guides* collecting detail-illustrated sequences of case studies, continuing in the original tradition of the 'search for perfection' (Coulson, Robert and Taylor, 2010). A notion that, at the hands of the same authors, is converted into something even more manageable like *university trends* (2014), not by chance epitomized in a cover image showing a learning landscape in the foreground (un)defined through the multiple scales of interior furnishings.⁶

One of these most popular *trends* concerns, as mentioned, the much-talked-about urban campus. Or in general, the overcoming of its connotation of *enclave* in favour of a renewed complicity with the forms of the city. If Sharon Haar (2010) explores this paradigm in the specific case of Chicago by introducing a counter-argument to the American tradition as radical as *the city as campus*, the Italian debate of the late-1960s and 1970s recently reconstructed by Francesco Zuddas (2019) has certainly redefined the terms of city-campus relationships in a non-trivial way: the university intended as a *settlement principle* contributed to the late-modern architectural discourse with radical proposals alternative to the *status quo* that declined, albeit with significant differences, the common idea of exploring the *territory*

mezzi fisici che garantisce l'assolvimento del compito primario di trasmissione del sapere dentro l'ambiente universitario opera in contemporanea sul continuo riposizionamento del suo perimetro istituzionale rispetto al mondo esterno, come ingranaggio di un meccanismo complesso che, parafrasando Martin, 'has enabled, constrained, and otherwise defined the freedom to know, the freedom to learn, and the freedom to teach'. Se è vero che i knowledge worlds di Martin si focalizzano sul caso dell'università nordamericana dall'Illuminismo al XXI secolo, il suo studio fa da contraltare all'abbondante e approfondita letteratura che ha indagato il medesimo ambito in cerca della genealogia del campus come 'American planning tradition' (Turner, 1987). Sequenze dettagliatamente illustrate di casi studio nella forma di good practice guides continuano nella tradizione dell'originaria 'search for perfection' (Coulson, 2010), oggi transitata per mano degli stessi autori nella nozione ancor più maneggevole di 'university trends' (2014), non a caso identificati da un'immagine di copertina che esibisce in primo piano un paesaggio interno (in)definito attraverso la scala dell'arredo.⁶

Uno dei trends più frequentati riguarda, come detto, la variante del *campus urbano* o comunque il superamento della sua connotazione di enclave a favore di una rinnovata complicità con le forme della città. Se Sharon Haar (2010) esplora questo paradigma nel caso specifico di Chicago introducendo proprio nella tradizione nordamericana del *academical village* una contro-argomentazione così radicale come *the city as campus*,⁷ il dibattito italiano degli anni Sessanta e Settanta dettagliatamente ricostruito da Francesco Zuddas (2019) è tra quelli che hanno certamente ridefinito i termini di questo rapporto in maniera non banale, dove l'università intesa come settlement principle contribuiva al discorso architettonico della tarda modernità con un numero straordinario di proposte radicali e avverse allo status quo che declinavano, pur con marcate differenze, l'idea comune di acquisire il *territorio* come unico vero

FIG. 7
Front cover of
"University Trends"
(2014)

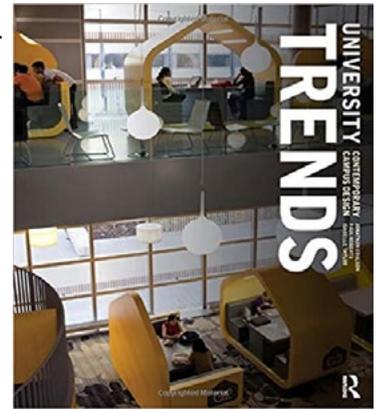


FIG. 8
Front cover
"Casabella" (no. 423, March 1977)

as the privileged field of action for future projects, in particular those related to the ascending knowledge society.⁷ Among the exponents of this idea, instigated by the flourishing season of design competitions for public universities that legitimizes a place for Italy in the map of *post-war universities* (Muthesius, 2000), Zuddas repositions the work of Giuseppe Samonà, Giancarlo De Carlo, Guido Canella, Archizoom, and Vittorio Gregotti.⁸ The latter, in his speech at the University of Calabria in 2010, retraces that season through a trajectory of four university projects pervaded by illusions, frustrations and contradictions but still animated by the belief that 'architecture could somehow prefigure a civil commitment through its own forms'.⁹ The stimulus to overcome the canonical campus-city contrast by giving a form to a place, whose urban quality can never ignore the inherent principles of its architecture, is renewed in the lesson of the inhabited portico of Chieti student housing designed by Giorgio Grassi and Antonio Monestiroli (1976-79). A misunderstood lesson on that occasion,¹⁰ with the principle of *building a public place between the city and the countryside* (Carlos Martí Arís, 1997) expertly furthered by Monestiroli in the context of the Milanese periphery redesigned around the concept of *centro altrove* (Triennale di Milano, 1995), that is to say a polycentric conformation where the university reaffirms its architectural ambitions to attribute an authentic urban connotation to the new campus for the Polytechnic of Milan in Bovisa. Conceived between the mid-late 1970s and 1990s, this project reinvigorates the aspiration of a university space that offers itself as a design paradigm of a broader vision of 'a city that is diversified within it, which will assume this diversification as its nature, trying to experiment on a form that no longer represents it as a single unit, but a form that establishes relationships between its different parts' (Monestiroli, 1979). A radical concept that has been

reconsidered and revitalized on the occasion of a recent international conference I attended, and to which I participated among the young contributors,¹¹ presenting for the first time an early-stage sequence of episodes relating to this thesis' specific case. That is, that of the university project in Latin America with a closer look at two countries – Chile and Argentina – in dialogue with each other and with some exponents of the above described Italian architectural debate rooted in the aftermath of the Second World War.

A specific case.

The Latin American university in construction and in dialogue with Europe

On this second level, this thesis aims to offer an original contribution by investigating a specific context in which the transition to a radically changed educational project coincided with the moment of internal revision of the modern architectural discourse. Therefore, the context examined in this thesis shifts the focus of attention to Latin America hitherto considered a peripheral region of the debate, here rediscovered as a laboratory of ideas on university architecture stimulating radical changes in the educational model since the end of 1940s. Consequently, its timeframe is chronologically placed about two decades before student protests made explicit the crisis already underway in university institutions all over the world, in search of a new *institutional archetype* (Joseph Rykwert, 1968). And of course, long before informality entered the scientific debate on contemporary education.¹²

Hence, this thesis is structured around the in-depth analysis of this specific case made possible thanks to the several research opportunities offered by foreign institutions including the Pontificia Universidad Católica de Chile (Santiago), the Universidad Católica del Norte (Antofagasta), the Anglia Ruskin University and the Architectural Association (London). Peculiarly, a specific case that immediately seemed underexplored, if we consider that the most recent collection of South American university projects produced in the framework of, and funded by, the Harvard Graduate School of Design (Garcíavelez-Alfaro, 2015), recalls the survey formula historically applied by the longstanding cultural institutions in discovery of the continent, by entrusting their narrative to a magnificent iconographic apparatus.¹³

campo d'azione per il progetto futuro, in particolare quello che prefigurava l'ascesa della società della conoscenza. Tra gli interpreti di questa idea, contraddistinta dalla florida stagione di concorsi di progettazione per le università pubbliche che legittima un posto per l'Italia nella mappa delle *post-war universities* (Muthesius, 2000), si avvicendarono tra gli altri Giuseppe Samonà, Giancarlo De Carlo, Guido Canella, Archizoom, e Vittorio Gregotti.⁸ Quest'ultimo, in un suo intervento presso l'Università della Calabria nel 2010, ripercorre quella stagione seguendo la *traiettorie* di quattro progetti universitari attraversati da illusioni, frustrazioni e contraddizioni ma pur sempre animati dalla convinzione che 'l'architettura potesse in qualche modo prefigurare una responsabilità civile attraverso le proprie forme'.⁹ Lo stimolo di superare la canonica contrapposizione campus-città dando forma a un luogo, la cui qualità urbana non può mai prescindere dai principi che regolano le sue architetture, è rinnovato nella lezione del portico abitato della casa dello studente di Chieti disegnato da Giorgio Grassi e Antonio Monestiroli (1976-79). Lezione incompresa in quell'occasione,¹⁰ con il principio della costruzione di un luogo pubblico tra città e campagna (Carlos Martí Arís, 1997) che viene sapientemente approfondito e avanzato da Monestiroli nel contesto della periferia milanese ridisegnata sul concetto del *centro altrove* (Triennale di Milano, 1995), ovvero di una conformazione policentrica dove l'università ribadisce la sua ambizione architettonica per attribuire un'autentica connotazione urbana al nuovo campus del Politecnico di Milano nell'area di Bovisa. Concepito tra metà degli anni '70 e '90, in questo progetto sopravvive l'aspirazione di



FIG. 9
Collage for Università della Calabria linear settlement by Vittorio Gregotti design group (left) and the new campus of Milan Polytechnic in the Bovisa Quarter coordinated by Antonio Monestiroli (right)

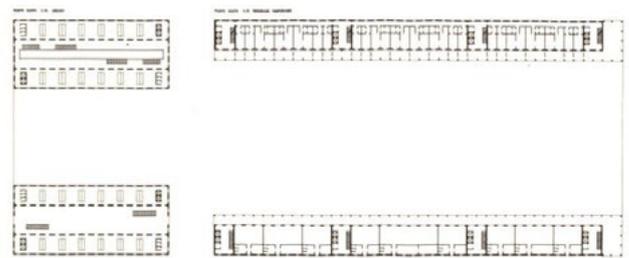


FIG. 10
Perspectival view and plan of Chieti student housing designed by Antonio Monestiroli and Giorgio Grassi. Image from "Zodiac" (no.7, 1992)

uno spazio universitario che si offre come paradigma progettuale di una visione più ampia di “città diversificata al suo interno, che assumerà questa diversificazione come propria della sua natura cercando di dare ad essa una forma che la rappresenti non più come singola unità, ma una forma che stabilisca le relazioni tra le sue diverse parti” (Monestiroli, 1979). Concetti estremamente attuali rievocati nell’ambito di una conferenza internazionale,¹¹ a cui anche io partecipo tra i giovani contributors, presentando per la prima volta alcuni episodi relativi al caso specifico della mia ricerca. Ovvero, quello del progetto dell’università in America Latina con uno sguardo ravvicinato verso due paesi – Cile e Argentina – in dialogo tra loro e con alcuni esponenti di quel dibattito italiano iniziato all’indomani della Seconda Guerra Mondiale.

Un caso specifico.

L’università Latino Americana in costruzione e in dialogo con l’Europa

Su questo secondo fronte, il percorso di ricerca intende offrire un contributo originale esaminando un contesto specifico in cui la transizione verso un’idea di istituzione universitaria radicalmente rinnovata, coincideva con il momento di profonda revisione interna del discorso architettonico moderno. Pertanto, il contesto esaminato nella tesi sposta il fuoco dell’attenzione sull’America Latina fino a quel momento considerata regione periferica del dibattito, riscoperto invece come laboratorio di idee sull’architettura universitaria che promuoveva cambiamenti radicali del progetto educativo fin dalla fine degli anni ’40. E quindi collocato, cronologicamente, circa due decenni prima che le contestazioni studentesche esplicitassero una crisi del sistema

The first of these surveys commissioned by the Museum of Modern Art (New York) was conducted by the North American historian Henry-Russell Hitchcock (1954-55),¹⁴ exhibiting for the first time a large number of unpublished images from Latin America that, even then, reserved a privileged space for the impressive construction of *Ciudades Universitarias*. However, Hitchcock’s intent was that of depicting a homogeneous image of the entire region, thus counterbalancing individual protagonism that could have undermined the stability of the modern architectural discourse interrupted during the war years (Del Real, 2012).¹⁵ The catalogue edited by Hitchcock focuses on the exemplary cases of university cities already built in Caracas and Mexico City, evoking the transposition in a peripheral context of the two opposing tendencies that he himself had identified in the famous 1947 article for “Architectural Review”, where the architecture of *genius* and the architecture of *bureaucracy* coexisted as the only authentic expressions of modernism looking to its future. The contrast between the creative impulse of the young Carlos Raul Villanueva expressed in Caracas and the organizational machine that included more than seventy architects in Mexico City, can be interpreted as the subtle Hitchcock’s attempt to enlist modernism’s champions throughout a new extended geography of modernity.¹⁶

For its part, Italy too seemed to apply a personalized vision of Latin America, with architecture magazines that had historically conveyed a local connotation of the early modernism now engaged in legitimizing this idea by tracing analogies with South American design experiences. This operation, mostly related to domestic space and influenced by aspects of climate, social life and tradition (Clelia Pozzi, 2015) aimed for disseminating a culturally advanced thought on the question of dwelling ‘la casa dell’uomo’, a primary need for Italy post-war reconstruction and an opportunity to relaunch the production of modern architecture in the national territory.¹⁷ However, as Jorge Francisco Liernur points out (2008):

“La modernidad es un momento que se caracteriza [...] por la dispersión de los núcleos de elaboración cultural que en las sociedades tradicionales estaban ligados de manera directa a la centralidad política y económica. La existencia de procesos de disputa por la hegemonía cultural produce equilibrios momentáneos y constantes desplazamientos de núcleos de irradiación”.¹⁸

FIG. 11
Aerial view of Ciudad Universitaria
de la Universidad Nacional
Autonoma de Mexico (UNAM).
Image from Garciavelez Alfaro
(2015)



universitario già in corso in tutto l'Occidente in cerca di un nuovo archetipo istituzionale (Joseph Rykwert, 1968), e naturalmente molto prima che l'informalità entrasse nel dibattito scientifico sull'educazione contemporanea.¹² La tesi è pertanto strutturata sull'approfondimento di questo caso specifico, reso possibile grazie alle occasioni di ricerca dottorale condotta presso istituzioni estere tra cui la Pontificia Universidad Católica de Chile (Santiago), la Universidad Católica del Norte (Antofagasta), la Anglia Ruskin University e la Architectural Association (Londra). Un caso specifico ancora poco esplorato, se si pensa che la raccolta più recente di progetti universitari sudamericani curata nell'ambito delle ricerche finanziate dalla Harvard Graduate School of Design (Garciavelez-Alfaro, 2015), ricorda piuttosto la formula del *survey* storicamente applicata dalle grandi istituzioni culturali alla scoperta del continente che affidava la narrativa a un imponente apparato iconografico.¹³

Il primo di questi *survey* commissionato dal MoMA fu condotto dallo storico nordamericano Henry-Russell Hitchcock (1954-55),¹⁴ che espose per la prima volta un gran numero di immagini inedite del continente con uno spazio privilegiato dedicato ai complessi monumentali delle grandi Ciudades Universitarias. Tuttavia, il vero intento di Hitchcock era quello di restituire l'immagine omogenea di un intero continente, lontana dai protagonismi che avrebbero potuto mettere in crisi la stabilità del discorso architettonico moderno interrotto negli anni della una guerra (Del Real, 2012).¹⁵ Il catalogo curato da Hitchcock si sofferma sui casi esemplari di città universitarie già costruite a Caracas e Città del Messico, evocando la trasposizione in un contesto periferico delle due tendenze contrapposte che lui stesso aveva individuato nel famoso articolo del 1947 per "Architectural Review", dove l'architettura del *genio* e l'architettura della *burocrazia* coesistevano come espressione più autentica del modernismo che aveva superato la guerra e guardava al suo futuro. La contrapposizione tra l'impulso creativo del giovane Carlos

And in fact, some of these *external* views have often been superimposed on several design experiences that remained concealed and mostly unexplored, as the result of a non-linear, ambiguous, intertwined and complex circulation of ideas such as those that will be exposed in this thesis.

The shift declared by some Latin American universities towards a radically changed educational project that privileged its relational components, stimulated by the exercise of the most varied forms of interaction within the institution and proactive contaminations with the outside world in order to concretely operate within reality, was transforming the campus ideal from a protected place for monotony to a space of relational liveliness.

Methodological experiment.

A design trajectory of university educational space

The methodology applied to investigate this process as a research in the field of architectural and urban design, is made explicit in a trajectory of six case studies that have generally received little attention compared to the canonical narrative on Latin America's Ciudades Universitarias. However, this methodological experiment does not aim at repositioning each of these singular cases claiming a character of exemplarity within a coherent and codified historical discourse. On the contrary, what is argued is that the selected cases acquire a greater interest in the moment they are interrelated and presented together according to a sequence of design themes. Only in this way, it will be possible to appreciate the contribution of these projects and their authors as *main characters*, despite their peripheral condition, of an extremely complex architectural scene that originates immediately after the WWII and that found in the educational issue one of the most promising arguments for continue its project of modernity.



Raul Villanueva espresso a Caracas e la macchina organizzativa che comprendeva più di settanta architetti a Città del Messico può essere letto come sottile tentativo da parte di Hitchcock di arruolare nuovi campioni nel modernismo nel territorio di una geografia più estesa.¹⁶ Dal suo canto, anche l'Italia sembrava applicare una visione personalizzata dell'America Latina, con le riviste di architettura che avevano storicamente veicolato una connotazione locale della prima modernità ora impegnate nel legittimare questa idea tracciando analogie con le esperienze progettuali del continente sudamericano. Perlopiù riconducibile a una spazialità domestica, influenzata dagli aspetti climatici insieme a quelli legati alla socialità e alla tradizione (Clelia Pozzi, 2015), questa operazione intendeva diffondere un pensiero culturalmente avanzato sul tema dell'abitare la casa dell'uomo come esigenza primaria dell'Italia in termini di ricostruzione e opportunità di rilanciare la produzione di architettura moderna nel territorio nazionale.¹⁷ Tuttavia, come fa notare Jorge Francisco Liernur (2008):

“La modernidad es un momento que se caracteriza [...] por la dispersión de los núcleos de elaboración cultural que en las sociedades tradicionales estaban ligados de manera directa a la centralidad política y económica. La existencia de procesos de disputa por la hegemonía cultural

The thesis structure reflects the methodology described so far. PART I contains a single chapter which introduces the theoretical and analytical categories that serve to contextualise the selected case studies and analysed later on. In particular, it focuses on the historical moment of the immediate post-war period where the figure of the architect-educator emerges as a peripheral exponent of the modern debate, on the migration of ideas between Italy and Latin America conveyed by some of those exponents and on the critical revision of the spatial implications of a broader and not yet explicit concept of informality. PART II, on which the main body of the thesis is structured, consists of five chapters each of which explores a single case study associated with a specific design theme (with the exception of Chapter 2 which collects two case studies to discuss the same theme planning). In particular, each chapter questions the design theme starting from the case study taken as the *main character*, whose critical design analysis is conducted starting from the documental support and argued by calling into question *secondary characters* who have contributed, directly or indirectly, to the development of that specific design theme including contemporary, previous or subsequent episodes and theoretical contributions compared to the main case study. The structure reveals the thesis first objective, that is offering the tools for an effective interpretative key to understand the connections between the general topic – the need for an architectural project for an educational paradigm – and the specific case based on the rediscovery of design experiences which are only apparently peripheral and historically distant. The second objective is to make explicit the design contents of these experiences instrumentally analysed in order to understand the contemporary educational project, and to operate within it as designers aware of the formal implications of a contemporary paradigm that has actually faced a long evolution between civic ambitions and economic pragmatism.

The other modernism.

An educational project between Chile and Argentina

In the first instance, the selected episodes belong to two Latin American countries that were substantially neglected by Hitchcock's MoMA survey and the subsequent *outside* views, namely Chile and Argentina. On the contrary, they are two extremely interesting countries in the perspective of this research due to the fact that they shared a long period of protests and contestations against the authoritarianism of the university system between the end of the 1910s and the early 1930s. This evidently represented a moment of incubation for the subsequent experimental projects on educational spaces after the Second World War.¹⁹ Secondly, the selected cases are

produce equilibrios momentáneos y constantes desplazamientos de núcleos de irradiación".¹⁸

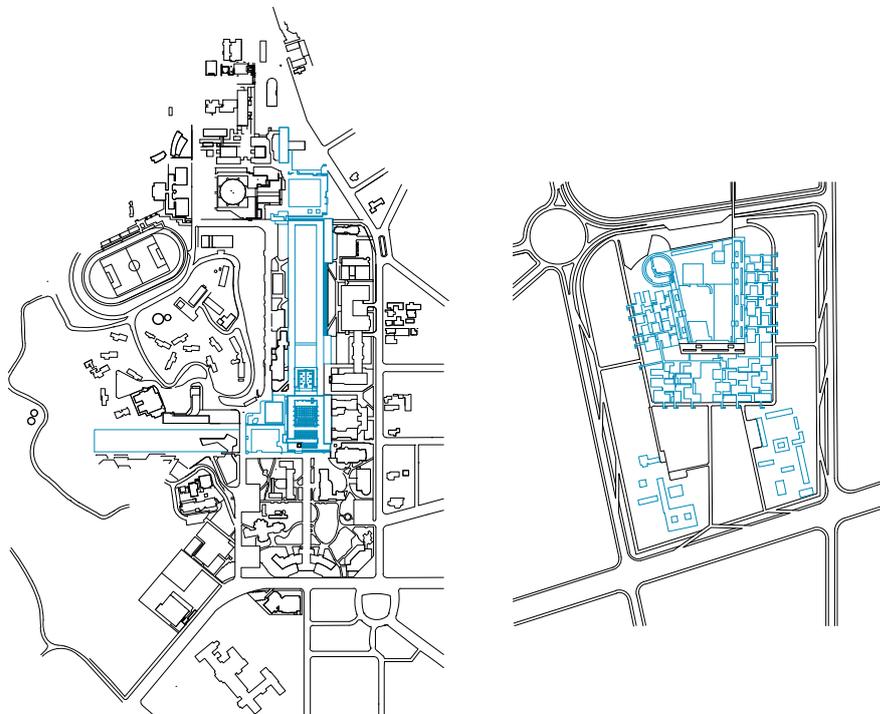
E infatti, alcune di queste visioni esterne si sono spesso sovrapposte ad esperienze progettuali rimaste sottotraccia, perlopiù inesplorate, frutto di una circolazione di idee non lineare, ambigua, intrecciata e complessa come quelle che saranno esposte in questa tesi. Lo spostamento dichiarato da alcune università cilene e argentina verso un paradigma educativo che privilegiava l'esercizio di pratiche relazionali sia all'interno che all'esterno dell'ambiente accademico per poter operare concretamente sulla realtà, stava trasformando radicalmente l'ideale del campus.

Esperimento metodologico.

Una traiettoria progettuale dello spazio educativo

La metodologia applicata all'investigazione di questo caso specifico, è esplicitata in una traiettoria di sei casi di studio che hanno generalmente ricevuto poca attenzione rispetto alla narrazione canonica sull'America Latina. Nello specifico, la metodologia adottata non mira al riposizionamento di ognuno di questi casi, preso singolarmente, rivendicando un carattere di assoluta esemplarità dentro un discorso coerente e codificato secondo i principi di uno studio storiografico. Al contrario, si ritiene che i casi selezionati acquisiscano un interesse maggiore se raccontati insieme seguendo una *traiettoria* impostata su temi progettuali. Solo così, sarà possibile apprezzare il contributo di questi progetti e dei loro autori come *personaggi principali*, nonostante la loro condizione periferica, di una scena architettonica estremamente complessa che inizia nell'immediato dopoguerra e trova, nella questione educativa, uno degli argomenti più promettenti per proseguire il suo progetto di modernità.

La struttura della tesi riflette la metodologia descritta finora. La PARTE I contiene un unico capitolo che introduce le categorie teoriche e analitiche che servono a contestualizzare i casi studio selezionati e analizzati in seguito. In particolare, si focalizza sul momento storico dell'immediato dopoguerra dove emerge la figura dell'architetto-educatore come esponente periferico del dibattito sulla modernità, sulla migrazione delle idee tra Italia e America Latina veicolate da alcuni di quegli esponenti e sulla revisione



united by the institutional context in which the process of discussion, elaboration and transition to a new educational project is conducted. Paradoxically, these are never cases that derive from an overtly revolutionary act. On the contrary, this thesis focuses attention on a range of operations conducted from within the university institution and its bureaucratic apparatus, in search of a more *horizontal* organizational structure obtained through the exercise of informal practices that increase collaboration and interdisciplinarity. This not only affected pedagogical methods and programs, but also favoured the concept of institutional flexibility (Rudolph Atcon, 1958) which could determine a different posture towards the real-world aiming for maximum integration to be able to transform it.²⁰

Architect-educator.

A prototypical figure

The third aspect taken into consideration is the fundamental role played by the architect-educator in this range of sophisticated operations conducted from within the university institution. A figure that is personified by the authors of the selected episodes and, for this reason, outlined in the thesis as a prototypical figure referring to some distinctive and recurring features, then readapted to the specific context in each case. In general, the architect-educator outlined in the thesis occupies a position that is equally distant from that of the post-war CIAM leader, therefore without being able to boast such a strong influence needed to support a process of cultural colonization on peripheral territories, as from the openly revolutionary profile sometimes voluntarily detached from the real context that often populates the *radical pedagogies* narratives. The architect-educator is, instead, a peripheral exponent who often acts in a context of instability, but perfectly introduced into the real-world in which to

critica nelle implicazioni spaziali di un concetto ampio di informalità. La PARTE II, su cui è strutturato il corpo principale della tesi, si compone di cinque capitoli ognuno dei quali esplora un singolo caso studio associato a uno specifico tema progettuale (fa eccezione il Capitolo 2 che raccoglie due casi di studio per discutere lo stesso tema progettuale). In particolare, ogni capitolo interroga il tema progettuale a partire dal caso studio assunto come personaggio principale, la cui analisi critica progettuale è condotta a partire dal supporto documentale e argomentata chiamando in causa *personaggi secondari* che hanno contribuito direttamente o indirettamente allo sviluppo di quello specifico tema progettuale, includendo episodi e contributi teorici contemporanei, precedenti o successivi al caso studio principale. La struttura della tesi così configurata ha come primo obiettivo quello di offrire gli strumenti per una chiave interpretativa efficace a comprendere le connessioni tra il tema generale – un progetto architettonico per un paradigma educativo – e il caso specifico che riscopre esperienze progettuali in un contesto apparente periferico e storicamente lontano. Il secondo obiettivo è quello di esplicitare la dimensione progettuale delle esperienze analizzate in modo strumentale alla comprensione del progetto educativo contemporaneo, per operare al suo interno come progettisti consapevoli dei risvolti formali di un paradigma contemporaneo che ha affrontato, in realtà, una lunga evoluzione tra ambizioni civiche e pragmatismo economico.

L'altro modernismo.

Un progetto educativo tra Cile e Argentina

In primo luogo, le esperienze progettuali selezionate in questa tesi appartengono a due paesi sostanzialmente trascurati dal primo sondaggio di Hitchcock per il MoMA, e dalle successive visioni esterne, ovvero il Cile e l'Argentina. Al contrario, si tratta di due paesi estremamente interessanti nella prospettiva di questa ricerca, per il fatto di aver condiviso piuttosto anticipatamente un lungo periodo di accesa contestazione contro l'autoritarismo del sistema universitario, tra la fine degli anni '10 e i primi anni

operate. In particular, the architect-educator is not simply committed with a design proposal in the educational field, but this proposal is always reinvested within the institutional bureaucratic apparatus in which the architect-educator is already incorporated as a teacher, manager, consultant. Some recurring features concern their *high mobility*, since they often do not operate in the context of origin and in general they experiment temporary conditions; their *professional practice*, mostly invested in the field of educational spaces in order to conceive or improve the same environment where they themselves are supposed to work; their *pedagogical methods*, as they participate in the construction of a critical discourse through course briefs, local journals articles or conference contributions rather than manifestos, treatises or written masterworks. In addition, these recurrent features define a peculiar relationship with the university institution that reconsiders its role as *client*, making use of the contribution of the architect-educator not so much to influence the debate. On the contrary, the university institution adopts a more pragmatic sense to reform its educational project with the architect-educator working from within the bureaucratic apparatus of the university, leaving ample room for action and design experimentation to stimulate solutions that provide for the increase of relational and collaborative practices.

In dialogue with Italy.

Laboratory of architectural and urban ideas

The fourth point refers to the contribution of the architect-educator in conveying the circulation of ideas between different *areas* both in terms of geographical contexts and disciplinary fields, as in the case of educators and radical thinkers who worked in Latin America at the time.²¹ Above all, reconnecting the apparently peripheral specific context investigated in this thesis with the contribution of some Italian architects involved – directly and indirectly – in some of the selected design experiences. On the one hand, they were encouraged by CIAM leaders who intended to expand their influence towards still unexplored regions such as Latina America; on the other hand, guided by their personal aspirations to be invested in a unique historical moment where profound uncertainty and unmissable opportunities coincided. The first post-war CIAM congress in Bridgwater (1947) best exemplifies this condition, and it will be precisely at that juncture that Ernesto Nathan Rogers will accept the invitation to participate

'30. Questo aspetto, ha evidentemente rappresentato un momento di incubazione per la successiva elaborazione di progetti sperimentali sul tema dello spazio educativo maturati all'indomani della Seconda Guerra Mondiale.¹⁹ In secondo luogo, i casi selezionati sono accomunati dall'ambito istituzionale in cui viene condotto il processo di discussione, elaborazione e transizione verso un nuovo paradigma. Paradossalmente, non si tratta mai di casi che derivano da un atto apertamente rivoluzionario. Al contrario, la tesi focalizza l'attenzione su un'operazione condotta dall'interno dell'istituzione universitaria e del suo apparato burocratico ridisegnato nella sua struttura organizzativa, alla ricerca di una maggiore orizzontalità ottenuta attraverso l'esercizio di pratiche informali che incrementano confronto, collaborazione e interdisciplinarietà. Non solo nei metodi pedagogici, ma a favore di una concetto di flessibilità istituzionale (Rudolph Atcon, 1958) che determini al contempo una nuova postura verso il mondo esterno.²⁰

Architetto-educatore.

Una figura prototipica

Il terzo aspetto preso in considerazione, è il ruolo fondamentale che gioca l'architetto-educatore in questa sofisticata operazione condotta dall'interno dell'istituzione universitaria, figura impersonata dagli autori dei progetti selezionati e tratteggiata nella tesi come figura prototipica. Riferendosi ai suoi caratteri distintivi e ricorrenti che vengono allo stesso tempo riadattati al contesto specifico di ogni singolo caso, questa figura prototipica è delineata grazie a uno specifico approfondimento sulle biografie degli autori. In generale, l'architetto-educatore delineato nella tesi occupa uno ruolo equamente distante sia da quello dei leader CIAM del dopoguerra, quindi senza poter vantare un'influenza così forte da sostenere un processo di colonizzazione culturale sui territori periferici, sia dal profilo apertamente rivoluzionario e volontariamente distaccato dal contesto reale che spesso popola la narrazione delle pedagogie radicali. L'architetto-educatore è piuttosto un esponente periferico che agisce spesso in un contesto di instabilità,



FIG. 13
Nikolaus Pevsner and Enrico Tedeschi in 1957

in the ambitious project for the new Universidad de Tucumán, in the peripheral region of Northwest Argentine – on the border with Chile – together with Luigi Piccinato, Cino Calcaprina, Guido Oberti and Enrico Tedeschi.

Five design themes.

The renegotiation of the urban role of architecture

Finally, the fifth aspect is the one that contains the main argument of this thesis, that is to analyse selected episodes that have explored the concept of informal education by investing in their precise architectural and urban ambitions. Principles such as that of flexibility, adaptability, permeability, versatility and openness are critically explored through the project of university campuses in Tucumán, Santiago de Chile, Concepción, Mendoza and Buenos Aires. While assuming the university as a platform for change, none of these cases adopt an approach driven by a feeling of *unlearning* modernity. On the contrary, all the selected episodes are united by a significant effort to advance the idea of a modern society adapted to the changing reality in the aftermath of the Second World War without ever renouncing the formal implications deriving from this adaptation, not even in the spatialization process requested by a radically renewed educational paradigm mostly based on relational components. The limits of their peripheral condition are indeed transformed into the advantages of a privileged territory to experiment on the ambitions of architectural and urban form, thus resisting the dissolution of every spatial structure already propagandized with insistence in the name of a more pervasive notion of *informal* (Fabricius, 2011).²² The critical analysis conducted for each of the selected cases reveals the challenging design content of these ambitions. Far from being neutral and univocal, the proposed solutions appear multiple, bold and even

ma perfettamente introdotto nella realtà in cui si trova a operare. In particolare, si tratta sempre di un architetto che non è semplicemente impegnato in una proposta progettuale nel campo educativo, ma questa proposta viene sempre reinvestita all'interno dell'apparato burocratico istituzionale in cui è già inquadrato come insegnante, manager, consulente. Alcuni tratti ricorrenti riguardano la loro alta *mobilità*, ovvero spesso non operano nel contesto d'origine e comunque sempre in condizioni di temporaneità; la loro *pratica professionale*, investita soprattutto nel campo educativo con proposte elaborate quasi sempre per migliorare gli spazi dove loro stessi lavorano; la loro *pedagogia*, in quanto partecipano alla costruzione di un nuovo discorso con le dispense e i brief dei loro corsi, articoli su riviste locali o conferenze piuttosto che manifesti, trattati o libri seminali. Questi caratteri definiscono un rapporto inedito con l'istituzione che riconsidera il suo ruolo di committente, avvalendosi del contributo dell'architetto-educatore non tanto per influenzare il dibattito. Al contrario, l'istituzione adotta un senso più pragmatico per riformare il suo progetto educativo con l'architetto-educatore che opera dall'interno dell'apparato burocratico dell'università, con ampio margine d'azione per stimolare soluzioni che prevedano l'incremento di pratiche relazionali e collaborative.

In dialogo con l'Italia.

Laboratorio di idee architettoniche e urbane

Il quarto punto fa riferimento al contributo dell'architetto-educatore nel veicolare la circolazione di idee in contesti geograficamente differenti – oltre che disciplinarmente trasversali come nel caso dei pedagogisti radicali che operavano in America Latina in quel momento.²¹ Soprattutto, riconnettendo il contesto specifico apparentemente periferico indagato nella tesi con il contributo di architetti italiani coinvolti direttamente – e indirettamente – in alcuni dei casi selezionati: da un lato incoraggiati dai leader CIAM che intendevano espandere la loro influenza verso orizzonti ancora inesplorati come l'America Latina, dall'altro guidati dalle loro personali

divergent from each other, giving the impression of an authentic laboratory towards the space of education with the paradigm of informality constantly interrogated by design and never taken as a mandate. The project of informal education is rather assumed as the privileged territory for a spatial renegotiation of the urban role of architecture, with each case characterized by a well-defined design theme: **monument, ground, megastructure, envelope, atrium.**

Chapter 1 – monument

The first episode is related to the new project for the Ciudad Universitaria de Tucumán (1947), with the group of Italian architects joining the institutional organization of the IAU (Instituto de Arquitectura y Urbanismo) to participate in their ambitious educational project based on a regional scale exploring the theme of *monument* on inspiration, apparently, of the iconic and magnificent exemplars built in the South American capitals. However, the Argentine architects-educators including Eduardo Catalano and Horacio Caminos, in direct dialogue with the Italians – including Ernesto Nathan Rogers and Enrico Tedeschi in charge of the new pedagogical programs and Pier Luigi Nervi as external consultant of the buildings projects – conceive a radical experiment on the emerging issue of the *new monumentality* promoted by the CIAM leaders at the time. It is no coincidence that the English magazine “Architectural Review” and the Italian “Urbanistica” have commented this peripheral experience even if, in neither case, the critical positioning of the project is understood, as demonstrated by a more targeted analysis of Tucumán's monumental architectures such as the Centro Comunal and the Vivienda Universitaria. In both monumental-scale buildings it is recognized how the introduction of the (fifth) *civic function*, interpreted in the idea of university promoted by the IAU, was producing a progressive rarefaction of the spatiality commonly associated with the modern monument that was hardly perceived by dwelling on its massive image needed to confront with the geographical scale of the impressive Andean landscape of Cordillera.

Chapter 2 – ground

The return of Rogers to Italy engaged in the organization of the Venice CIAM Summer Schools after the first edition at London Architectural Association in 1949, coincides with the gradual abandonment of

aspirazioni in un momento storico unico che vedeva coincidere profonda incertezza e irrinunciabili opportunità. Il primo congresso CIAM postbellico ospitato a Bridgwater nel 1947 rappresentava al meglio questa condizione, e sarà proprio in quel frangente che Ernesto Nathan Rogers accetterà l'invito a partecipare all'ambizioso progetto della Universidad de Tucumán nella regione periferica del Nord-Ovest argentino – al confine con il Cile – insieme a Luigi Piccinato, Cino Calcaprina, Guido Oberti ed Enrico Tedeschi.

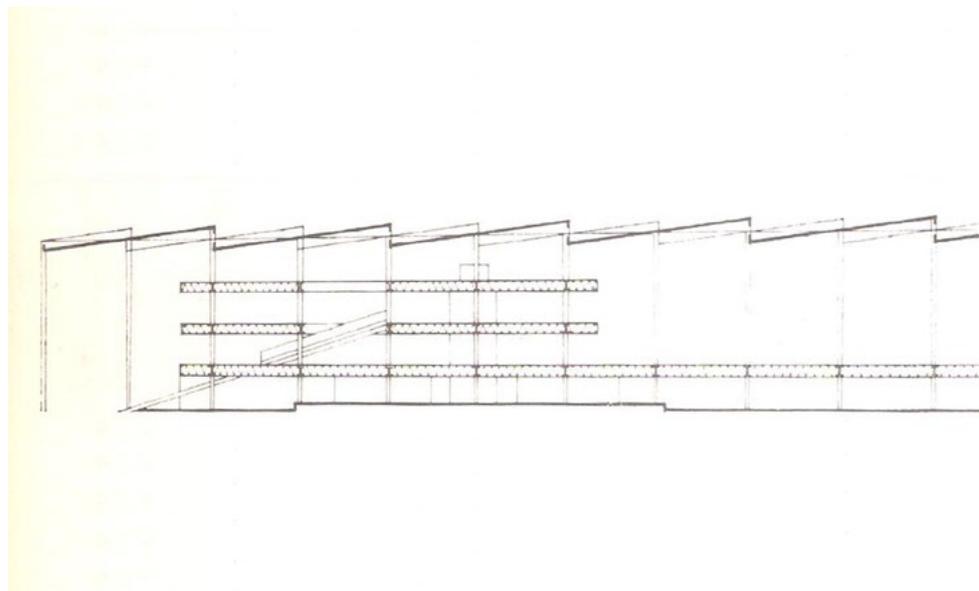
Cinque temi progettuali. La rinegoziazione del ruolo urbano dell'architettura

Il quinto aspetto è quello su cui si costruisce l'argomentazione principale di questa tesi, ovvero dare risalto a casi che abbiano esplorato un nuovo paradigma educativo investendo su precise ambizioni architettoniche e urbane. Alcuni principi di flessibilità, adattabilità, permeabilità, versatilità e apertura, sono criticamente esplorati attraverso il progetto nei campus universitari di Tucumán, Santiago de Chile, Concepción, Mendoza e Buenos Aires. Pur assumendo l'università come piattaforma per il cambiamento, nessuno di questi casi adotta un approccio avverso ai principi moderni. Al contrario, tutti gli episodi selezionati sono accomunati da uno sforzo significativo per proseguire nell'idea di una società moderna adattata alla realtà mutevole del secondo dopoguerra senza mai rinunciare alle implicazioni formali derivanti da questo adattamento, anche nella spazializzazione di un paradigma educativo radicalmente rinnovato nella sua componente relazionale: i limiti della condizione periferica sono anzi tramutati nei vantaggi di un territorio privilegiato per sperimentare sulle ambizioni della forma architettonica e urbana, resistendo così alla dissoluzione di ogni struttura spaziale già propagandata con insistenza in nome di un principio più pervasivo di *informalità* (Fabricius, 2011).²² L'analisi critica condotta per ognuno dei casi selezionati, rivela il ricco contenuto progettuale di queste ambizioni. Tutt'altro che neutrali e univoche, le soluzioni proposte appaiono molteplici, articolate e addirittura divergenti tra loro dando l'impressione

Tucumán monumental project in the mid-late 1950s. This when the demand for a new *technological image* was maturing in Chile, to be associated with the renewed educational project supported by the state for a strengthening of technical and professional education. In 1957 the construction of the new Universidad Técnica del Estado in Santiago began at the same time as the expansion of Universidad de Concepción, respectively entrusted to Santiago's architectural firm BVCH and the Chilean architect Emilio Duhart. Although the request for a technological image to be associated with the modernization process of the university institution was evidently referring to the *literal transparency* guaranteed by innovative materials such as steel and glass, the most radical move that unites the two projects consists on the liberation the campus' ground to promote spatial continuity and to instigate the maximum contamination with the surrounding urban context. This by minimizing the occupation of the architectural device adopted, that is in both cases a variation on the theme of the *narrow block*. The same *device* used as an example by Colin Rowe and Robert Slutzky to describe the spatial implications of the revolutionary concept of *phenomenal transparency*.

Chapter 3 – megastructure

While the two Chilean campuses are still under construction, the internal reorganization process of one of the most influential university institutions in Latin America has begun. The authorities of the Pontificia Universidad Católica de Chile are aiming for a renewed educational project in the wake of the long reform process that began in the 1930s-1940s. The university acquires new land in San Joaquín area, south of Santiago, where the academic community could gather against the process of excessive professionalization and consequent disintegration of the university presence. On the contrary, the main



di una autentica sperimentazione progettuale condotta autonomamente rispetto al paradigma dell'informalità assunto come mandato pedagogico. In tutti questi casi contraddistinti da un tema progettuale ben definito – monumento, suolo, megastruttura, involucro, atrio – il progetto educativo si configura quindi come territorio privilegiato per una più ampia rinegoziazione del ruolo urbano dell'architettura.

Capitolo 1 – monumento

L'episodio della Ciudad Universitaria de Tucumán (1947) vede il gruppo di architetti italiani unirsi all'organizzazione istituzionale dello IAU (Instituto de Arquitectura y Urbanismo) per partecipare a un ambizioso progetto educativo su base regionale esplorando il tema del monumento su ispirazione, apparentemente, degli esemplari iconici costruiti nelle grandi capitali sudamericane. Tuttavia, gli architetti-educatori argentini tra cui Eduardo Catalano e Horacio Caminos, in dialogo diretto con gli italiani – tra cui Ernesto Nathan Rogers ed Enrico Tedeschi incaricati del nuovo programma pedagogico e Pier Luigi Nervi consulente tecnico esterno dei progetti – danno vita a un esperimento piuttosto inedito sul tema della nuova monumentalità promosso dai

objective was to produce the optimal conditions to stimulate a vibrant environment where exchange, collaboration and interdisciplinarity prevail. This principle translates into the search for a 'condicionalidad arquitectonica, más que una arquitectura', as clearly expressed in the document relating to the design competition launched in 1963, only addressed to employees from the school of architecture working at Universidad Católica. The first prize goes to the young Germán Brandes, second year teacher, who proposes a radical solution surprisingly updated compared to the experiments conducted in those same years by the *young* exponents of TEAM X: a campus conceived as an urban infrastructure, where the scale of architecture and that of the city coincide. However, more than an uncritical adhesion to newly born categories such as that of megastructure or *mat-building*, San Joaquín proposal shows an in-depth investigation on the process of liberation, multiplication and stratification of the ground brought to a greater degree of complexity compared to the previous Chilean cases. All this, while maintaining a hierarchically defined ordering system through the architectural components of its urban infrastructure, which reposition this unprecedented episode in a non-trivial way with respect to the most famous experiences of the period such as the Free University of Berlin, or the *university structure* on which Giancarlo De Carlo would have focused his work for a long time.

Chapter 4 – envelope

If Germán Brandes' 1963 project is destined for an extremely limited circulation that will preclude any mention in the international colloquium on megastructures, a small university building built in the peripheral region of Mendoza, on the Argentine side of the Cordillera, appears that same year in the pages of "Architectural Review" and the Italian magazine "L'Architecture Cronache e Storia". These are a few images of a V-shaped structural grid briefly commented in terms of its *non-orthogonal* geometry and the *anti-conformism* of its anti-seismic solution. That grid façade is designed by Enrico Tedeschi for the first building on the new campus of the Universidad de Mendoza where the Italian architect moved in the late 1950s after the interrupted adventure of Tucumán. Thanks to that experience, Tedeschi had established himself as the re-founder of historical, theoretical and critical studies in Argentina, even if his still little-explored work

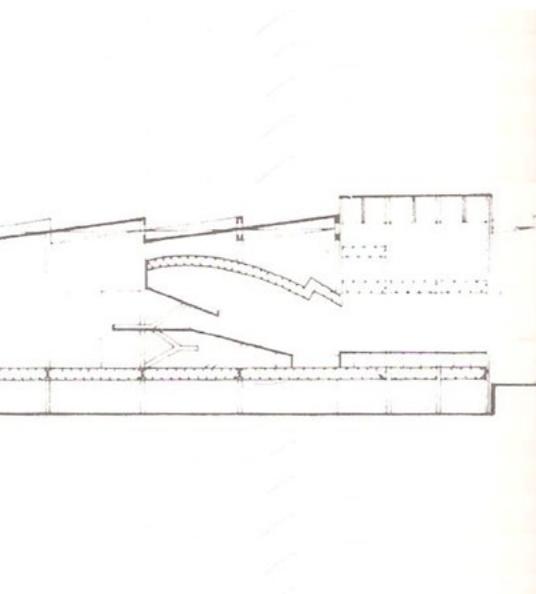


FIG. 14
Centro Comunal of Ciudad Universitaria de Tucumán (late 1940s)

is often relegated to that of the emissary of Bruno Zevi's thoughts on organic architecture in the South American continent. Indeed, Tedeschi was among the founders of APAO and the Italian magazine "Metron" before leaving for Argentina in 1948. But what emerges from an in-depth study of his theoretical framework formalized in *Teoría de la Arquitectura* (1962), is a very specific connotation of *space*. Tedeschi's complex biography, which includes close acquaintances with the English intellectual circles, determines some of his personal theoretical positions around spatial implications materialized in the urban educational project for Mendoza. This cannot be explained, moreover, without considering his appointment as *arquitecto-urbanista* for the plan of the Gran Mendoza, his managerial tasks within the university institution that he himself directed, and finally his complicity with the construction industry that was introducing concrete prefabrication in the region. The combination of these aspects favours a typological experimentation on the educational space: a compacted volume set-back from the street to create a public space in front, consisting of a sequence of free typical plans vertically repeated and only supported by a completely permeable inhabited envelope, the only element of mediation with respect to the urban environment with which the university dissolved.

Chapter 5 – atrium

The Mendoza campus will be finished, surviving Tedeschi's theoretical framework put in crisis in occasion of the seminars on environmental control held by Reyner Banham in the summer of 1968 between Córdoba and Rosario, invited by the Instituto Interuniversitario de Historia de la Arquitectura (IIDEHA) that the same Tedeschi had founded years earlier. Until then, this regional network that operated on the border with Chile and in close dialogue with other exponents

leader CIAM in quello stesso momento. Non a caso, la rivista inglese "Architectural Review" e quella italiana "Urbanistica" raccontano questa esperienza periferica anche se, in nessuno dei due casi, viene colto il posizionamento critico del progetto originario, come dimostra l'analisi ravvicinata delle architetture monumentali del complesso universitario come il Centro Comunal e la Vivienda Universitaria. In entrambi, si riconosce chiaramente come l'introduzione della (quinta) funzione civica, interpretata nell'idea di università promossa dallo IAU, stesse producendo una progressiva rarefazione della spazialità associata al monumento che era difficilmente percepita soffermandosi alla sua immagine imponente e massiva a confronto con la scala geografica dell'imponente paesaggio andino.

Capitolo 2 – suolo

Il ritorno di Rogers in Italia, impegnato nella organizzazione delle CIAM Summer School che transitano a Venezia dopo la prima edizione ospitata alla Architectural Association di Londra nel 1949, coincide con il progressivo abbandono del colossale progetto di Tucumán che si consuma definitivamente nella seconda metà degli anni '50, proprio quando in Cile inizia a maturare la richiesta di una nuova *immagine tecnologica* da associare al rinnovato progetto educativo sostenuto dallo stato per un rafforzamento della formazione tecnica e professionale. Nel 1957 si inizia la costruzione della nuova Universidad Técnica del Estado a Santiago contemporaneamente all'espansione del campus della Universidad de Concepción, affidate rispettivamente al grande studio BVCH e all'architetto cileno Emilio Duhart. Nonostante la richiesta di una immagine tecnologica da associare al processo

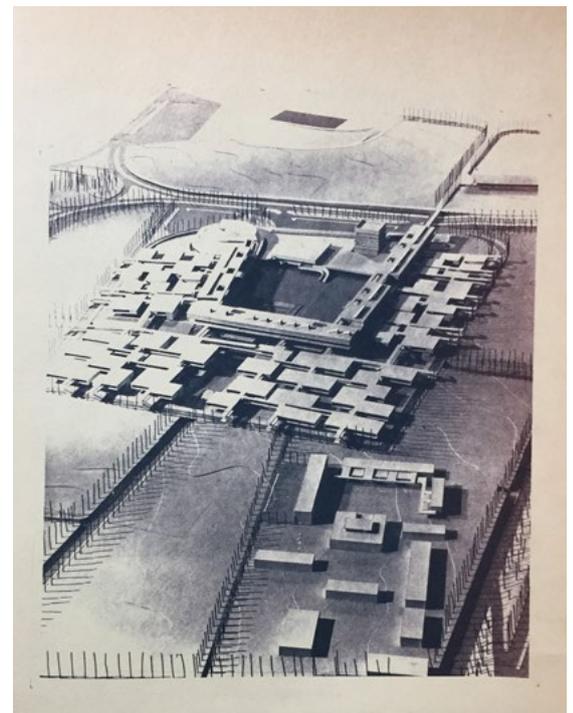


FIG. 15
German Brandes winning
proposal for Campus San
Joaquín internal competition
in Santiago.
Archivo de Originales. FADEU
Pontificia Universidad
Católica de Chile

di modernizzazione dell'istituzione universitaria fosse evidentemente riferita alla trasparenza letterale garantita da materiali innovativi come acciaio e vetro, la mossa più radicale che accomuna i due progetti, seppur realizzati in contesti piuttosto differenti, consiste nell'aver liberato il suolo del campus per favorire la massima continuità e contaminazione con il contesto urbano circostante, riducendo invece al minimo l'impronta del dispositivo architettonico adottato, in entrambi i casi, come variazione sul tema del 'narrow block'. Lo stesso dispositivo preso ad esempio da Colin Rowe e Robert Slutzky per descrivere le implicazioni spaziali del concetto rivoluzionario di *trasparenza fenomenica*.

Capitolo 3 – megastruttura

Mentre i due campus cileni sono ancora in costruzione, inizia il processo di riorganizzazione interna di una delle istituzioni universitarie più influenti della nazione e dell'America Latina. Le autorità della Pontificia Universidad Católica de Chile mirano a un progetto educativo rinnovato sulla scia del lungo processo di riforma iniziato negli anni '30-'40. L'università acquisisce un nuovo terreno nell'area di San Joaquín, a sud di Santiago, dove riunire la comunità accademica contro il processo di eccessiva professionalizzazione e conseguente disgregazione della presenza universitaria. L'obiettivo è quello di produrre, al contrario, le condizioni ottimali per favorire un ambiente dove prevale lo scambio, la collaborazione e l'interdisciplinarietà. Questo principio si traduce nella ricerca di una 'condicionalidad arquitectonica, más que una arquitectura', come chiaramente espresso nel documento relativo al concorso di progettazione bandito nel

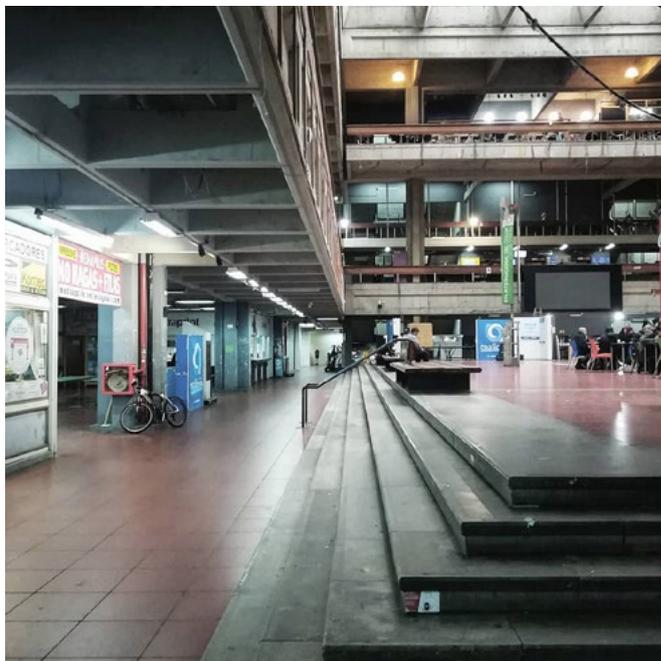
of architectural modern debate, had resisted the cultural centralization of the Argentine capital. In late-1950s, the long discussion on the new Ciudad Universitaria de Buenos Aires took form, elaborated in the final phase by two of the most active Argentine architects in Tucumán experience. In fact, Eduardo Catalano and Horacio Caminos cultivated a complex career outside the country, passing through the Architectural Association in London, the School of Design in North Carolina and finally Boston MIT, where both were operating at the time they received the commission by the rector Risieri Frondizi. The result of their proposal for Buenos Aires, progressively simplified up to the repetition of a single typical block on an abstract surface, is received with enthusiasm among the local commentators who exalt its *systemic* conception. The repetitiveness of its structural module combined with the managerial processes adopted for its construction have propagated the abstractness of the calculation as the most distinctive quality of a work of architecture that, in reality, was exploring a very precise spatial condition in the educational field: the typical block is internally excavated at its full-height, revealing the urban interior as the unexplored territory for the practice of relational skills. The *atrium* becomes the privileged spatial structure to be explored, in dialogue with some precedents of modernity, when the outside world seems to be no longer under the control of the architect working in a conditions of absolute unpredictability.

Acknowledgments.

Towards a new circulation of ideas

In conclusion, the welcome and the support I received from the foreign institutions was fundamental for the construction of this research path. The collaboration in support of this study was consolidated following stays as visiting researcher at Chilean institutions which included participation in the cycle of seminars of the Doctoral School in Arquitectura y Estudios Urbanos coordinated by Professor José Rosas Vera (Pontificia Universidad Católica di Santiago), with Professor Roberto Fernández as visiting lecturer invited from Argentina (Universidad de Buenos Aires). This opportunity was accompanied by the invaluable encouragement offered by Professor Claudio Galeno-Ibaceta (Universidad Católica del Norte, Antofagasta) which began in the course of Cátedra Latinoamericana and continued for the entire duration of the research, even in the most difficult periods caused by pandemic. This favoured the first elaboration of the doctoral research path on primary sources and unpublished material, thanks to an extensive network of archives and experts on the topic of the educational space

FIG. 16
Typical block's interior view at
Ciudad Universitaria de Buenos Aires.
Photo by the author



1963 e rivolto ai professori della scuola di architettura. Il primo premio va al giovanissimo Germán Brandes, che propone una soluzione decisamente inedita e sorprendentemente aggiornata rispetto agli esperimenti condotti in quegli stessi anni dagli altrettanto giovani esponenti del TEAM X: un campus concepito come infrastruttura urbana, dove la scala dell'architettura e quella della città coincidono. Tuttavia, più che un adesione acritica al tema della megastruttura declinata come *mat-building*, San Joaquín mostra un approfondimento sul processo di liberazione, moltiplicazione e stratificazione del suolo portato a un grado di complessità maggiore rispetto ai casi cileni di poco precedenti. Tutto ciò, mantenendo un sistema ordinatore gerarchicamente definito attraverso le componenti architettoniche della sua struttura urbana, che riposizionano questo episodio inedito in maniera non banale rispetto alle esperienze più note del periodo come la Free University di Berlino o la struttura universitaria su cui si sarebbe misurato Giancarlo De Carlo.

Capitolo 4 – involucro

Se il progetto di Germán Brandes del 1963 sarà destinato a una circolazione estremamente limitata che precluderà qualsiasi menzione dentro il colloquio internazionale sulle megastrutture, un piccolo edificio universitario realizzato nella regione periferica di Mendoza, sul lato argentino della Cordillera, compare quello stesso anno nelle pagine di "Architectural Review" e poco più tardi in quelle della rivista italiana "L'Architettura Cronache e Storia". Per la verità, si tratta di poche immagini di un reticolo strutturale a V di cui si commentano brevemente le qualità estetiche della sua geometria *non-orthogonal* e *l'anti-conformismo* della soluzione antisismica. In realtà, quel reticolo è ideato da Enrico Tedeschi per il primo edificio del campus della nuova Universidad de Mendoza, dove l'architetto italiano si stabilirà alla fine degli anni '50 dopo l'avventura interrotta di Tucumán. Grazie a quella esperienza Tedeschi si era comunque affermato come rifondatore

from the local context. The program included a last stay as a visiting researcher at the Pontificia Universidad Católica in Santiago, that has been postponed and eventually cancelled due to the pandemic. The collaboration continued at a distance, benefiting from the possibility of an extension to readapt the program of activities without affecting the work in dialogue with archives, institutions and the various interlocutors already involved in this research despite the complicated and uncertain situation.

Among these, I would like to thank Professor Roberto Fernández and Professor Alberto Pérez-Gómez for their initial suggestions on a research path between two continents, offered in occasion of the seminars respectively organized in Santiago de Chile and Antofagasta. For further information, insights and suggestions on the specific context, professors Daniel Talesnik, Horacio Torrent, Franco Marigliano, Alejandra Sella, Maria Claudina Blanc, Maria Pilar Pinchart, Alejandro Beals, Loreto Lyon, Augusto Angelini, Cristián Berríos, Roberto Lombardi, Mario Marchant, Pablo Fuentes Hernández, Alejandro Rojo Martinez, Rodrigo Aguilar, Macarena Ibarra, Jorge Fiori, Roberto Franciosi, Carlos Caminos, Ximena Bruna, Ana Amora, Sharif Kahatt, Patricia Ciriani Espejo, Helena Capkova, Massimo Palme, Ernesto Sferrazza Papa, Giuliano Vivanet e Aldo Hidalgo. In particular the latter, for his valuable comments on the contribution presented at the conference Teoría y Historia de la Arquitectura (4th ENTHA) and the following one for the Chilean magazine "Arteoficio". My gratitude is also addressed to the dean of the Universidad Católica del Norte Carlos Miranda for having me offered the precious opportunity to accompany my research work in Chile with the coordination of urban design studios, in close dialogue with some of the issues discussed in this thesis. For the same reasons, I am immensely grateful to Francesco Zuddas who inspired my

degli studi storici, teorici e critici in Argentina, anche se il suo lavoro ancora poco esplorato è spesso relegato a quello di emissario dell'architettura organica e del pensiero di Bruno Zevi nel continente sudamericano. Effettivamente, Tedeschi fu tra i fondatori dell'APAO e della rivista "Metron" prima di partire per l'Argentina nel 1948. Ma ciò che emerge da uno studio approfondito del suo impianto teorico formalizzato in *Teoría de la Arquitectura* (1962), è piuttosto una connotazione di spazio ben precisa. La biografia complessa di Tedeschi, che include strette frequentazioni con l'ambiente intellettuale inglese, determina alcune delle sue personali rielaborazioni teoriche materializzate nel suo progetto educativo urbano per Mendoza, che non può essere spiegato senza considerare la sua nomina di architetto-urbanista per il piano della Gran Mendoza, i suoi compiti gestionali all'interno dell'istituzione universitaria che lui stesso dirigeva, e infine la sua complicità con l'industria delle costruzioni che aveva introdotto la prefabbricazione del cemento nella regione. L'insieme di questi aspetti favorisce la sperimentazione tipologica sullo spazio educativo: un volume arretrato rispetto alla strada per ricavare uno spazio pubblico antistante, costituito da una sequenza di piani liberi ripetuti verticalmente unicamente sostenuti da un involucro abitato completamente permeabile, unico elemento di mediazione rispetto all'ambiente con cui l'università intendeva integrarsi.

Capitolo 5 – atrio

Il campus di Mendoza verrà terminato, sopravvivendo al pensiero teorico di Tedeschi messo in crisi nei seminari sul controllo ambientale tenuti da Reyner Banham nell'estate del 1968 tra Córdoba e Rosario, invitato dal Instituto Interuniversitario de Historia de la Arquitectura (IIDEHA) che lo stesso Tedeschi aveva fondato dieci anni prima. Fino a quel momento, questa rete regionale che operava al confine con il Cile e in dialogo con altri esponenti periferici del dibattito sulla modernità, aveva retto il confronto con l'accentramento culturale della capitale. Alla fine degli anni '50 si

thoughts by offering me the precious opportunity for a continuous and passionate discussion on a research topic very dear to him, and for welcoming me to London, as a visiting researcher at Anglia Ruskin University. Also in London, at the Architectural Association, I was able to expand my research on the occasion of the seminars coordinated by Pier Vittorio Aureli and Maria Shéhérazade Giudici, together with open lectures/reviews related to the research topic (Unit 15 'The School of Athens' coordinated by Xristina Argyros and Ryan Neiheiser).

Finally, as said, this work is primarily conducted upon documentary research from archival primary sources which not only allowed to find unpublished information on the projects and their authors, but also, and above all, inspired original interpretations about them. For this reason, I thank Isabel García Pérez de Arce who directs the Archivo de Originales Centro de Información y Documentación Sergio Larraín García-Moreno of the Facultad de Arquitectura, Diseño y Estudios Urbanos Pontificia Universidad Católica de Chile, for the extreme willingness to provide original materials with the help of María del Pilar Lira and Camilo Meneses Ferrada (especially for Chapters 2 and 3); Alejandra Sella for having facilitated access to the original materials kept at the Facultad de Arquitectura y Diseño of the Universidad of Mendoza (especially for Chapter 4); MIT Archive Distinctive Collections, North Carolina State University Special Collections Research Center Libraries and the Biblioteca Sociedad Central de Arquitectos de Buenos Aires; Archivio Progetti of the IUAV University of Venice, London Metropolitan Archives and finally Edward Bottoms from the Architectural Association (AA) Archives. A special thanks to the reviewers of this work, Davide Deriu and Sabrina Puddu, who provided insightful and decisive comments aimed at the drafting of the final text, together with my immense gratitude to the professors of the Doctorate School of the University of Cagliari, especially Giorgio Peghin, Antonello Sanna, Marco Lecis and Pier Francesco Cherchi, who have offered their constant support as supervisors during these three years.

concretizza il lungo confronto sulla Ciudad Universitaria de Buenos Aires (Capitolo 5), elaborato nella fase finale dai due architetti argentini più attivi nell'esperienza di Tucumán. In realtà, Eduardo Catalano e Horacio Caminos avevano costruito una complessa carriera al di fuori del paese, passando per la Architectural Association di Londra, la School of Design in North Carolina fino al MIT di Boston dove entrambi stavano operando nel momento in cui ricevono la commessa dal rettore Risieri Frondizi. Il risultato della loro proposta, progressivamente semplificata fino alla singola ripetizione di un blocco tipo su una superficie astratta, viene accolta con entusiasmo tra i commentatori locali che ne esaltano più che altro la sua concezione *sistemica*. La ripetitività del modulo strutturale abbinata alla gestione del processo costruttivo hanno propagandato l'astrattezza del calcolo come qualità distintiva di un'architettura che, in realtà, esplorava una condizione spaziale molto precisa e piuttosto inedita in campo educativo: il blocco tipo è scavato al suo interno per tutta la sua altezza, rivelando un territorio inesplorato fino a quel momento per l'esercizio delle capacità relazionali di un progetto educativo completamente rinnovato. *L'atrio interno* diventa la struttura spaziale privilegiata da esplorare architettonicamente, in dialogo con alcuni precedenti della modernità, nel momento in cui il mondo esterno sembra non essere più sotto il controllo dell'architetto che lavora in condizioni di assoluta imprevedibilità.

Ringraziamenti.

Verso una nuova circolazione di idee

In conclusione, l'accoglienza che mi è stata riservata nelle sedi estere è risultata fondamentale per la costruzione di questo percorso. La collaborazione a supporto di questo studio si è consolidata a seguito dei soggiorni come visiting researcher presso le istituzioni cilene che hanno previsto la partecipazione al ciclo di seminari della Scuola di Dottorato in Arquitectura y Estudios Urbanos coordinato dal professor José Rosas Vera (Pontificia Universidad Católica di Santiago), con il professor Roberto Fernández come visiting professor invitato dall'Argentina (Universidad de Buenos Aires). Questa opportunità, è stata accompagnata dal preziosissimo supporto offerto dal professor Claudio Galeno-Ibaceta (Universidad Católica del Norte di Antofagasta) iniziato nell'ambito dei corsi

di Cátedra Latinoamericana e proseguito per tutta la durata della ricerca, anche nei periodi più difficili causati dall'emergenza pandemica. Tutto ciò ha favorito la prima elaborazione del percorso di ricerca dottorale su fonti primarie e materiale inedito, grazie a una fitta rete di archivi e interlocutori esperti sul tema dello spazio educativo attivi nel contesto locale. Il programma aveva previsto un ultimo soggiorno come visiting researcher presso la Pontificia Universidad Católica di Santiago annullato a seguito dell'emergenza pandemica. La collaborazione è proseguita a distanza, beneficiando della possibilità di proroga per rimodulare il programma delle attività senza inficiare il lavoro e proseguire il rapporto con archivi, istituzioni e i vari interlocutori coinvolti nonostante la situazione complicata e incerta.

Tra questi ringrazio il professor Roberto Fernández e il professor Alberto Pérez-Gómez per i loro suggerimenti iniziali sulla costruzione di un percorso di ricerca tra due continenti, offerti in occasione dei seminari organizzati rispettivamente a Santiago de Chile e Antofagasta. Per gli approfondimenti sul contesto specifico i professori Daniel Talesnik, Horacio Torrent, Franco Marigliano, Alejandra Sella, Maria Claudina Blanc, Maria Pilar Pinchart, Alejandro Beals, Loreto Lyon, Augusto Angelini, Cristián Berríos, Roberto Lombardi, Mario Marchant, Pablo Fuentes Hernández, Alejandro Rojo Martínez, Rodrigo Aguilar, Macarena Ibarra, Jorge Fiori, Roberto Franciosi, Carlos Caminos, Ximena Bruna, Ana Amora, Sharif Kahatt, Patricia Ciriani Espejo, Helena Capkova, Massimo Palme, Ernesto Sferrazza Papa, Giuliano Vivinet e Aldo Hidalgo. In particolare quest'ultimo, per i suoi preziosi commenti relativi al contributo presentato in occasione del convegno di Teoría y Historia de la Arquitectura (4°ENTHA) e quello successivo per la rivista "Arteoficio". In particolare, ringrazio il professor Claudio Galeno-Ibaceta, che ha accolto con grandissimo entusiasmo questo percorso di ricerca favorendo fin da subito la maggior parte dei contatti menzionati, a cui si aggiunge la mia gratitudine rivolta anche al preside della Universidad Católica del Norte Carlos Miranda per avermi offerto la preziosa opportunità di accompagnare la mia esperienza ad Antofagasta con il coordinamento dei laboratori di *urban design* in dialogo con il tema di questa ricerca. Per le stesse ragioni sono immensamente grato a Francesco Zuddas, che ha continuamente stimolato i miei ragionamenti offrendomi

la preziosa opportunità di un confronto continuo e appassionato su un tema di ricerca a lui caro e mi ha accolto a Londra come visiting researcher presso la Anglia Ruskin University. Sempre a Londra, presso la Architectural Association, ho potuto espandere le mie attività di ricerca in occasione dei seminari coordinati da Pier Vittorio Aureli e Maria Giudici e delle lezioni/revisioni aperte nei corsi affini al mio tema di ricerca (Unit 15 "The School of Athens" coordinata da Xristina Argyros e Ryan Neiheiser).

Infine, come detto, la tesi fonda il suo rigore scientifico sull'incrocio di fonti bibliografiche verificate grazie alla ricerca di fonti primarie presso gli archivi che ha consentito non solo di reperire inedite informazioni sui progetti e i loro autori inseriti in un contesto socio-politico così esteso e articolato. Ma anche, e soprattutto, di avanzare una loro originale interpretazione. Per questo motivo ringrazio Isabel García Pérez de Arce che dirige l'Archivo de Originales Centro de Información y Documentación Sergio Larraín García-Moreno della Facultad de Arquitectura, Diseño y Estudios Urbanos Pontificia Universidad Católica de Chile, per l'estrema disponibilità e i materiali messi a disposizione con l'aiuto di María del Pilar Lira e Camilo Meneses Ferrada (soprattutto per i Capitoli 2 e 3); Alejandra Sella per aver favorito l'accesso ai materiali originali conservati presso la Facultad de Arquitectura y Diseño della Universidad di Mendoza (utili per la redazione del Capitolo 4); MIT Archive Distinctive Collections, North Carolina State University Special Collections Research Center Libraries e la Biblioteca Sociedad Central de Arquitectos de Buenos Aires (per alcuni materiali relativi al Capitolo 5); Archivio Progetti dell'Università IUAV di Venezia, London Metropolitan Archives e infine Edward Bottoms del Architectural Association (AA) Archives (per alcuni aspetti relativi al Capitolo 1). Un particolare ringraziamento ai revisori di questo lavoro, Davide Deriu e Sabrina Puddu, che hanno fornito uno stimolo ulteriore grazie ai loro commenti puntuali e risolutivi per il completamento del lavoro, insieme alla mia profonda gratitudine verso i professori del Dottorato in Ingegneria Civile e Architettura dell'Università di Cagliari, Giorgio Peghin, Antonello Sanna, Marco Lecis e Pier Francesco Cherchi, che hanno offerto il loro costante supporto come supervisor durante questi tre anni.

NOTES

1. The 'Memorandum on education and lifelong training' (Lisbon, 2000) introduces this distinction as a recommendation in the European context. This concept is reaffirmed in the 'Common European Principles for Teacher Competences and Qualifications' document which introduces "learning outcomes" (2010) and again in the 'European guidelines for the validation of non-formal and informal learning' drawn up by Cedefop (2016). More generally, reference is made to the transformation process that began with the Bologna Declaration of 1999 in which knowledge was reinterpreted as a training tool in the hands of a student-entrepreneur able to implement his own education to a higher level. See the chapter 'Virtuosity' in Gert Biesta (2013), pp. 119-124.
2. "Radical Pedagogies" is the title given to the multi-year research project conducted by Beatriz Colomina with a team of researchers from Princeton University who have reconstructed, thanks to a large number of contributions from all over the world, an alternative cartography of paradigmatic cases based on the role of radical pedagogies in the evolution of architectural, political and social discourse.
3. In the framework of scientific methods applied to contemporary education, the setting is often traced back to numerical parameters. On the scientific shift towards informality, see for example Graham Walton and Graham Matthews (eds.), *Exploring Informal Learning Space in the University: A Collaborative Approach* (Oxford: Routledge, 2018).
4. It should be considered that an interesting critical reflection on the project of the contemporary university space was already underway before the pandemic emergency. Take for example the special issue of the magazine "Architecture and Culture" edited by Igea Troiani and Claudia Dutton (Call for Papers activated in February 2019 with the title 'Space to Learn / Think / Work: The Contested Architectures of Higher Education').
5. Professor of History and Theory of Architecture at Columbia University, Reinhold Martin has repeatedly investigated the subject of the university in the course of his research, partially contained into his latest work *Knowledge Worlds. Media, Materiality, and the Making of the Modern University* (New York: Columbia University Press, 2021).
6. Reference is made to the texts of Paul Venable Turner, *Campus: An American Planning Tradition* (Cambridge: MIT Press, 1987), Jonathan Coulson, Paul Robert and Isabelle Taylor. *University Planning and Architecture: The Search for Perfection* (London: Routledge, 2010), and finally by the same authors *University Trends: Contemporary Campus Design* (London: Routledge, 2018).
7. Sharon Haar. *The City as Campus. Urbanism and Higher Education in Chicago* (Minneapolis: University of Minnesota Press, 2010).
8. Francesco Zuddas. *The University as a Settlement Principle. Territorialising Knowledge in Late 1960s Italy* (London: Routledge, 2019).
9. The trajectory described by Vittorio Gregotti on that occasion puts in sequence the university projects for Palermo (1967), Florence (1971), Calabria (1974), Milano Bicocca (1988).
10. The inhabited portico designed for the new Chieti campus will in fact be demolished. See *Il Campus Universitario di Chieti* edited by Giuseppe Barbieri, Del Bo Adalberto, Manzo Carlo et. al. (Milan: Electa, 1997). These principles are also enunciated in the essays by Antonio Monestiroli collected in *L'Architettura della Realtà* (Milano: CLUP, 1979).
11. The contribution titled 'Three urban projects. Tribute to Antonio Monestiroli' was presented by Raffaella Neri as keynote speaker in the occasion of the "1st International Conference on Architecture" (Roma, 18-19 Dicembre 2019). See also Domenico Chizzoniti, Luca Monica, Tomaso Monestiroli and Raffaella Neri 'Bovisa: A Park for Work and Research', in *Buildings for Education. A Multidisciplinary Overview of The Design of School Buildings* (Springer, 2020).
12. Joseph Rykwert wrote 'Universities as Institutional Archetypes of our Age' in "Zodiac" (no.18, 1968). James Ackerman contributed to the special issue of "Harvard Educational Review" (no.4,

NOTE

1. Il 'Memorandum sull'istruzione e la formazione permanente' (Lisbona, 2000) introduce questa distinzione come raccomandazione in ambito europeo. Concetti ribaditi nel documento 'Common European Principles for Teacher Competences and Qualifications' che introduce i "learning outcomes" (2010) e di nuovo nelle 'Linee guida europee per la convalida dell'apprendimento non formale e informale' redatte dal Cedefop (2016). Più in generale si fa riferimento al processo di trasformazione iniziato con la Dichiarazione di Bologna del 1999 in cui la conoscenza era reinterpretata come strumento di formazione nelle mani di un soggetto imprenditoriale in grado di implementare in maniera autosufficiente la propria istruzione. Si veda il capitolo 'Virtuosity' in Gert Biesta (2013), pp. 119-124.
2. "Radical Pedagogies" è il titolo dato al progetto di ricerca pluriennale condotto da Beatriz Colomina con un team di ricercatori della Università di Princeton che hanno ricostruito, grazie a un gran numero di contributi da ogni parte del mondo, una cartografia alternativa di casi paradigmatici basati sul ruolo delle pedagogie radicali nell'evoluzione del discorso architettonico, politico e sociale.
3. Nell'ambito dei metodi scientifici applicati all'educazione contemporanea il "setting" è spesso ricondotto a parametri numerici. Sulla svolta scientifica verso l'informalità si veda ad esempio Graham Walton and Graham Matthews (eds.), *Exploring Informal Learning Space in the University: A Collaborative Approach* (Oxford: Routledge, 2018).
3. Si tenga presente che una interessante riflessione critica sul progetto dello spazio universitario contemporaneo era già in corso prima dell'emergenza pandemica. Si prenda ad esempio il numero tematico della rivista "Architecture and Culture" edito da Igea Troiani and Claudia Dutson (Call for Papers attivata nel Febbraio 2019 con il titolo 'Space to Learn/Think/Work: The Contested Architectures of Higher Education').
4. Professore di storia e teoria dell'architettura alla Columbia University, Reinhold Martin ha indagato il tema dell'università in maniera ricorrente nel corso dei suoi studi in gran parte confluiti nel suo ultimo lavoro *Knowledge Worlds. Media, Materiality, and the Making of the Modern University* (New York: Columbia University Press, 2021).
5. Si fa riferimento ai testi di Paul Venable Turner, *Campus: An American Planning Tradition* (Cambridge: MIT Press, 1987), Jonathan Coulson, Paul Robert and Isabelle Taylor. *University Planning and Architecture: The Search for Perfection* (London: Routledge, 2010), e infine dagli stessi autori *University Trends: Contemporary Campus Design* (London: Routledge, 2018).
6. Sharon Haar. *The City as Campus. Urbanism and Higher Education in Chicago* (Minneapolis: University of Minnesota Press, 2010).
7. Francesco Zuddas. *The University as a Settlement Principle. Territorialising Knowledge in Late 1960s Italy* (London: Routledge, 2019).
8. La traiettoria descritta da Vittorio Gregotti in quella occasione mette in sequenza i progetti universitari per Palermo (1967), Firenze (1971), Calabria (1974), Milano Bicocca (1988).
9. Il portico progettato per il nuovo campus di Chieti verrà infatti demolito. Si veda *Il campus universitario di Chieti*, a cura di Barbieri Giuseppe, Del Bo Adalberto, Manzo Carlo et. al. (Milano: Electa, 1997), faceva riferimento ai principi enunciati nei saggi di Antonio Monestiroli contenuti in *L'Architettura della Realtà* (Milano: CLUP, 1979).
10. Il contributo dal titolo 'Three urban projects. Tribute to Antonio Monestiroli' è presentato da Raffaella Neri come keynote speaker in occasione della "1st International Conference on Architecture" (Roma, 18-19 Dicembre 2019). Si veda anche Domenico Chizzoniti, Luca Monica, Tomaso Monestiroli and Raffaella Neri 'Bovisa: A Park for Work and Research', in *Buildings for Education. A Multidisciplinary Overview of The Design of School Buildings* (Springer, 2020).
11. Joseph Rykwert scriveva 'Universities as Institutional Archetypes of our Age' nella rivista "Zodiac" (no.18, 1968). Mentre James Ackerman contribuiva al numero speciale di "Harvard

1969) denouncing the current situation in the following words: “In most Western societies, building is the prerogative of individuals with economic power [...] In the Middle Ages, colleges like those at Oxford looked like monasteries because the Establishment was theocratic; today, our high schools look like factories and regiment students like the labor force because the Establishment is commercial and industrial. It is those institutions to which modern architecture gives form, and if they are inclined at all to build for the less privileged, it is their concepts of what the others need or ought to have that determines what the others get”.

13. This work is curated by the Mexican architect Carlos Garcíavelez Alfaro. *Forma y Pedagogía: El Diseño de la Ciudad Universitaria en América Latina* (Applied Research & Design, 2015). On the other hand, one of the most interesting studies conceived as a critical investigation consisting of a non-linear sequence of micro-stories reconstructed by the various authors who return the vision of the other South American modernism, is curated by Patricio del Real e Helen Gyger, *Latin American Modern Architectures. Ambiguous Territories* (London: Routledge, 2013).

14. Reference is made to MoMA survey curated by Hitchcock, whose exhibition and catalogue will be titled *Latin American Architecture since 1945* (New York: MoMA Publications, 1955). A more recent survey will be curated by Barry Bergdoll, Carlos Eduardo Comas, Jorge Francisco Liernur e Patricio del Real under the title *Latin America in Construction: Architecture 1955–1980* (New York: MoMA Publications, 2015).

15. Patricio del Real is among the researchers who have deeply investigated the relationship between the United States and the South American continent. See ‘Building a Continent: The Idea of Latin American Architecture in the Early Postwar’, PhD diss. Columbia University, 2012.

16. Valerie Fraser reconstructs in detail the events related to these two projects in *Building the New World: Studies in the Modern Architecture of Latin America, 1930–1960* (London: Verso, 2000).

17. This interpretation is offered by Clelia Pozzi ‘Latin America Made in Italy. The Editorial Construction of a Domesticated Modernism’, in “Abe Journal” no.7, 2015.

18. Jorge Francisco Liernur deeply explored the external visions applied to the South American continent in the various eras. He was the founder of the Escuela de Arquitectura y Estudios Urbanos de la Universidad Torcuato Di Tella and is currently an associate professor in the Doctoral School of the Pontifical Universidad Católica de Chile. In addition to having edited the *Diccionario de Arquitectura y el Urbanismo en la Argentina en la Argentina of the Siglo XX*, he is the author of several writings on the relationship between Italy and South America such as *Latin America. Architettura, gli ultimi vent'anni* (Milan: Electa, 1990) and the contribution ‘Architetti italiani nel secondo dopo guerra nel dibattito architettonico della nuova Argentina 1947-1951’, in “Metamorphosis. Quaderni di architettura” no.24 / 25, 1995. In collaboration with Pablo Pschepiurca he published *La Red Austral. Obras y proyectos de Le Corbusier y sus discípulos di lui en la Argentina* (Buenos Aires: Prometeo, 2008), from which this quote is taken.

19. In the specific case of Argentina, a first University Reform was achieved signed by the “Manifiesto Liminar” (1918), which declared the principles of ‘autonomía, cogobierno y extensión’. This last term, in particular, required the university to develop a concrete integration with the context in which it operated, while receiving from it the necessary inputs to plan its research activities. In the case of Chile, on the other hand, the FECH (Federación de Estudiantes de Chile) founded in 1906 as the first national student organization in the Hispanic-speaking countries) played a leading role in the overthrow of the regime of Carlos Ibáñez del Campo (1931) and already in the following government of Juan Esteban Montero the university autonomy was sanctioned and incorporated in the statutes of the Universidad de Chile.

20. The definition of ‘institutional flexibility’ can be found in the letters written by Rudolph P. Atcon who works in several South American countries, including Chile where he will test the ‘Concepción Experiment’ as a consultant to UNESCO in the field of higher education.

21. Paulo Freire spent his exile in Chile between 1964 and 1969, involved in the state project of Agrarian Reform where he promoted the development of educational programs for the inhabitants of rural areas. His well-known work, *Pedagogy of the Oppressed* (first English edition of 1970), was elaborated in this period and enriched by the continuous exchanges with the Brazilian philosopher Ernani Maria Fiori, also exiled to Chile and chosen as deputy by Fernando Castillo Velasco when in 1967 he obtained the post of rector of the Universidad Católica (from conversation between the author and Jorge Fiori, son of Ernani Maria Fiori and professor at the Architectural Association in London). Meanwhile, Ivan Illich who mostly worked in Mexico would have published *Deschooling Society* in 1971.

22. In one of her articles from 2011, Daniela Fabricius articulates an interesting counter-argument against informality assumed as a paradigm of economic de-regulation, reconsidering its real benefits in contemporary South American architectural production with respect to the principles that governed the project of modernity started in the second postwar period. See Daniela Fabricius ‘Looking Beyond Informality’, in “Architectural Design” no.211, 2011.

Educational Review" (no.4, 1969) denunciando la situazione con le seguenti parole: "In most Western societies, building is the prerogative of individuals with economic power [...] In the Middle Ages, colleges like those at Oxford looked like monasteries because the Establishment was theocratic; today, our high schools look like factories and regiment students like the labor force because the Establishment is commercial and industrial. It is those institutions to which modern architecture gives form, and if they are inclined at all to build for the less privileged, it is their concepts of what the others need or ought to have that determines what the others get".

12. Il lavoro è curato dall'architetto messicano Carlos Garcavelez Alfaro. *Forma y Pedagogía: El Diseño de la Ciudad Universitaria en América Latina* (Applied Research & Design, 2015). Uno degli studi più interessanti impostati invece come investigazione critica, costituita da una sequenza non lineare di microstorie ricostruite dettagliatamente dai vari autori che restituiscono la visione di un altro modernismo sudamericano, è curata da Patricio del Real e Helen Gyger, *Latin American Modern Architectures. Ambiguous Territories* (London: Routledge, 2013).

13. Si fa riferimento al sondaggio del MoMA curato da Hitchcock, intitolato *Latinamerican Architecture since 1945* (New York: MoMA Publications, 1955). Un sondaggio più recente sarà invece curato da Barry Bergdoll, Carlos Eduardo Comas, Jorge Francisco Liernur e Patricio del Real sotto il titolo *Latin America in Construction: Architecture 1955–1980* (New York: MoMA Publications, 2015).

14. Patricio del Real è tra gli studiosi che hanno maggiormente approfondito il rapporto tra gli Stati Uniti e il continente sudamericano. Si veda 'Building a Continent: The Idea of Latin American Architecture in the Early Postwar', PhD diss. Columbia University, 2012.

15. Valerie Fraser ricostruisce nel dettaglio le vicende legate a questi due progetti in *Building the New World: Studies in the Modern Architecture of Latin America, 1930–1960* (London: Verso, 2000).

16. Questa lettura è offerta da Clelia Pozzi 'Latin America Made in Italy. The Editorial Construction of a Domesticated Modernism', in "Abe Journal" no.7, 2015.

17. Jorge Francisco Liernur si distingue tra i più profondi conoscitori delle visioni esterne applicate al continente sudamericano nelle varie epoche. È stato preside fondatore della Escuela de Arquitectura y Estudios Urbanos de la Universidad Torcuato Di Tella e attualmente professore associato nella Scuola di Dottorato della Pontificia Universidad Católica de Chile. Oltre ad aver curato il *Diccionario de Arquitectura y el Urbanismo en la Argentina en la Argentina del Siglo XX*, è autore di un diversi scritti sul rapporto tra Italia e Sudamerica come *América Latina. Architettura, gli ultimi vent'anni* (Milano: Electa, 1990) e il contributo 'Architetti italiani nel secondo dopo guerra nel dibattito architettonico della nuova Argentina 1947-1951', in "Metamorfosi. Quaderni di architettura" no.24/25, 1995. Con la collaborazione di Pablo Pschepiurca pubblica *Red Austral. Obras y proyectos de Le Corbusier y sus discípulos en la Argentina* (Buenos Aires: Prometeo, 2008), da cui è tratta questa citazione.

18. Nel caso specifico dell'Argentina si ottenne una prima Riforma Universitaria siglata dal "Manifiesto Liminar" (1918) che dichiarava i principi di 'autonomia, cogobierno y extension'. Questo ultimo termine, in particolare, prevedeva che l'istituzione universitaria sviluppasse un'integrazione concreta con il contesto in cui operava, ricevendo al contempo gli input necessari per programmare le sue attività di ricerca. Nel caso del Cile invece, la FECH (Federación de Estudiantes de Chile fondata nel 1906 come prima organizzazione studentesca nazionale nei paesi di lingua ispanica) ebbe un ruolo di primo piano nel rovesciamento del regime di Carlos Ibáñez del Campo (1931) e già nel successivo governo di Juan Esteban Montero fu sancita l'autonomia universitaria incorporata negli statuti della Universidad de Chile.

20. La definizione di 'institutional flexibility' si ritrova nelle lettere di Rudolph P. Atcon che lavora in diversi paesi sudamericani, tra cui il Cile dove testerà 'the Concepción Experiment', come consulente dell'UNESCO nel campo dell'educazione superiore.

21. Paulo Freire trascorre il suo esilio in Cile tra il 1964 e il 1969, coinvolto nel progetto statale di Riforma Agraria dove promuove lo sviluppo di programmi educativi per gli abitanti delle aree rurali. Il testo che lo renderà celebre, *Pedagogy of the Oppressed* (prima edizione in inglese del 1970), viene elaborato in questo periodo e arricchito dai ripetuti scambi di opinioni con il filosofo brasiliano Ernani Maria Fiori, anch'egli esiliato in Cile e scelto come vice da Fernando Castillo Velasco quando nel 1967 otterrà l'incarico di rettore della Universidad Católica (da conversazione tra l'autore e Jorge Fiori, figlio di Ernani Maria Fiori e professore alla Architectural Association di Londra). Nel frattempo, Ivan Illich che operava prevalentemente in Messico avrebbe pubblicato *Deschooling Society* nel 1971.

22. In un suo articolo del 2011, Daniela Fabricius articola una interessante contro-argomentazione nei confronti dell'informalità assunta come paradigma della de-regolamentazione economica riconsiderando i suoi reali benefici nella produzione architettonica Sudamericana contemporanea rispetto ai principi che regolavano il progetto di modernità iniziato nel secondo dopoguerra. Si veda Daniela Fabricius 'Looking Beyond Informality', in "Architectural Design" no.211, 2011.

PART I

(Chapter 0)

Radical Exchanges.

A design trajectory behind a project of informal education



FIG. 17
*Opening of the exhibition "Latin American Architecture Since 1945" (Arthur Draxler on the left margin).
The Museum of Modern Art Archives, New York IN590.18D. Photo by Barry Kramer.*

1. *Architect as educator.*
A prototypical figure in the post-war architectural discourse

As object and interpretation, the modern building
and the architectural survey that describes it lead
independent but interrelated existences.
The architectural photograph pictographically bonds the
building to the book, strengthening – and complicating –
their connection.
A mechanical recording of light, the photograph
has an undeniable objective capacity.
It captures visual qualities of a building that words cannot.
The photograph gives form to aesthetic relationships,
legibility to theoretical arguments, materiality to construction
technologies and visibility to society.¹

Chris Barker, 2009

Architectural modernism from Latin America is most commonly experienced from secondary historical sources, and particularly from architectural surveys conducted by the English-speaking ‘First World’. The survey unifies its objects into a seemingly complete history. But surveys, as Chris Barker points out, must exclude more than they can include, and the architectural photograph rhetorically evokes more than it literally records. On November 23, 1955, the exhibition ‘Latinamerican Architecture Since 1945’ opens to the public. The opening was actually scheduled for March, as one of the key events of MoMA’s 25th anniversary celebrations. This postponement, however, did not affect the success of a show acclaimed by the most influential media in the city despite the uncertainties about the final setting and the title, besides its schedule. “The New York Times” review by Aline Saarinen speaks of a ‘handsome and eye-filling exhibition’,² originally intended for the MoMA ground floor gallery and later moved to the third floor ‘simply because of physical limitation of size’ as Arthur Drexler wrote to editor Henry-Russell Hitchcock, since the latter could not be there to attend the inauguration due to his previous commitments in

1 Chris Barker, in “Hunch” no.12, 2009, pp.6-19. This from the text accompanying the visual essay titled ‘Illustrated Throughout: Reconsidering the Role of Photography in the Survey of Modern Architecture’, a selection by Chris Barker and Eric Sigge reconsidering the role of architectural photographs in the production and the reception of historical surveys of modern architecture.

2 Aline Saarinen, ‘Museum of Modern Art sets forth impressive Latin-American Show’ in “New York Times”, November 27, 1955.

London. The third floor gallery consisted of two communicating spaces, with a long rectangular hall called the *Corridor* and a smaller room that opened like a niche in its long side. The installation curated by Arthur Draxler provided for a suspended ceiling of Synskin panels that nebulized pure light onto the large-scale black-and-white photographs taken by Rollie McKenna and standing out in the *Corridor*, while the three walls of the niche-like small room covered with cork panels imitated a masonry wall with smaller photographs were inlaid in various format.³ In fact, what had set the tone to Aline Saarinen's review for "The New York Times" was precisely that dramatic contrast between the dark and cork-textured room echoing 'some rich Mexican organic decorative material', and the luminous ceiling as a tribute to the most up-to-date American corporate architecture.

Suffice to say that, a short walk from MoMA, the same translucent plastic ceiling had recently been celebrated as an extraordinary innovation combined with the glass skin of the 510 Fifth Avenue Manufacturers Trust Company by SOM and interior designer Eleanor H. Le Maire (1953-54). Each floor is covered with a false ceiling of translucent panels marked by a metal grid, above which the artificial lighting systems of cathode ray tubes are arranged to be invisible from below while giving a sense of a single light source, uniform and homogeneous. This effect produced within an all-glass display case literally revolutionized the concept of banking space towards a commercial image, so as to arouse the prompt interest of magazines like "Interiors".⁴ Although the luminous ceiling of MoMA installation did not respect the degree of 'millimeter precision' needed for a building that was trying to replace total safety with a 'symbol of a self-confidence',⁵ this seemingly insignificant detail might be crucial to for a better understanding of the context in which the most important survey on Latin America was being developed and formalized by the cultural institution of MoMA.

3 The exhibition was completed with three stereo viewers that contained 49 three-dimensional images, the only evidence supporting the importance of color in Latin American architecture. The exhibition is thoroughly described in Patricio del Real, 'Building a Continent: The Idea of Latin American Architecture in the Early Postwar', PhD Diss. Columbia University, 2012.

4 "The Manufacturers Trust Company: the interiors are the show in a new glass bank", in "Interiors" (January 1955). Before, in "Architectural Record" (November 1954) and "Architectural Forum" (September 1953), with this last celebrating the fact that 'Big banking and modern architecture finally connect'. In fact, 510 Fifth Avenue is the first International Style bank building in the United States. At the time of the building's construction, banks focused on marketing their services, where previously they had focused on security. Gordon Bunshaft (SOM) compared the high-capacity layout to that of a store.

5 "Architectural Forum" described the building as an example of 'a dynamic new kind of prestige design for large financial institutions', through the 'lavishness' of its architecture". The vault in particular proved to be more secure than traditional bank vaults, since thieves were deterred by its placement facing the street and other banks started using visible vault doors after 510 Fifth Avenue was completed.

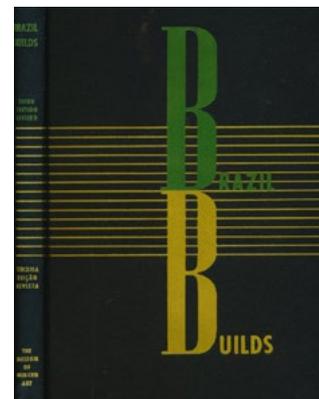


FIG. 20
*Installation view and catalogue of the exhibition "Brazil Builds" (1943).
 The Museum of Modern Art Archives, New York. IN213.5. Photo by Soichi Sunami.*

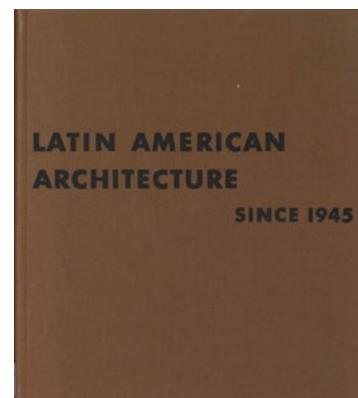


FIG. 21
*Installation view and catalogue of the exhibition "Latin American Architecture Since 1945" (1955-56)
 The Museum of Modern Art Archives, New York. IN590.1. Photo by Ben Schnall*

Porter McCray, the then head of MoMA's International Program, was the one who commissioned in 1953 the survey of eleven Latin American countries – including the U.S. protectorate of Puerto Rico – to the American historian Henry-Russell Hitchcock and photographer Rosalie Thorn McKenna, in collaboration with the Department of Architecture and Design directed by Arthur Drexler.⁶ Just a year before, Hitchcock and Drexler collaborated on the MoMA exhibition 'Built in the USA: Post-War Architecture', which went far beyond the consecration of International Style identifying in the Americans the legitimate 'heirs of Western civilization [...] in architecture, as in many other things'.⁷ In their attempt to de-emphasize differences in architectural styles to promote the surprising homogeneity of American production can be found the guideline to be applied to the following survey, or rather, to the unmissable opportunity to reveal this surprising homogeneity was effectively extended to the wider post-war geography which included Latin America.

The region's architecture had traditionally been presented as an intertwined relationship between sun, place and form. The very first MoMA survey dating back almost ten years earlier, 'Brazil Builds' (1943), packaged this message manifestly enhanced, once again, by the exhibition setting. Space within rooms was literally redefined by 1:1 scale mock-ups of brise-soleil variants from Brazil, interspersed with a unique botanical sample of tropical plants and reproduced in a luxurious 200-page catalogue that made the intent of the exhibition even more effective: it was clear to everyone that 'Brazil Builds', in fact, was a strategical effort promoted by the then MoMA president Nelson Rockefeller to get closer to the South American giant.⁸

Hitchcock's first encounter with Latin American architecture coincided with the review of 'Brazil Builds' exhibition, he did not hesitate to define 'much more than the various clichés of brise-soleil, shell vaults and azulejos' with the clear intention of attenuating the euphoria towards Brazilian protagonism

6 The selected countries were Mexico, Panama, Colombia, Peru, Chile, Argentina, Uruguay, Brazil, Venezuela and Cuba. Porter McCray (1908–2001) was the first director of the International Program at MoMA – founded in 1951 – until 1961. Trained as an architect at Yale, he worked for Wallace K. Harrison of Harrison & Abramovits, through whom he met Nelson Rockefeller. When Rockefeller became chairman of MoMA, McCray was brought in as head of the International Program – a programme developed through the Rockefeller Brothers Fund.

7 Henry-Russell Hitchcock and Arthur Drexler edited *Built in USA: Post-War Architecture* (New York: Simon & Schuster, 1952). Previous MoMA's surveys are *Modern Architecture* (1932) curated by Hitchcock e Philip Johnson and *Built in the USA: 1932-1944* curated by Elizabeth B. Mock e Philip Goodwin (1944).

8 In Goodwin's introduction to the catalogue *Brazil Builds. Architecture New and Old, 1642-1942* (New York: MoMA, 1943) is made clear both MoMA and the American Institute of Architects interest in establishing closer relations with Brazil, 'a country that would be our future ally'. This happened in a moment in which president Getúlio Vargas was on the verge of aligning itself with the Italo-German bloc in the midst of WWII.

by inducing the public to admire a diametrically opposite idea of progress in harmony with the revision of the post-war architectural discourse,⁹ even though Hitchcock did not appear to be particularly enthusiastic when he received the commission from MoMA to organize a six-week trip ‘to a place where people called beer *cerveza*’.¹⁰ The travel itinerary was prepared on the basis of secondary sources that have led Hitchcock to deal with a region that is more imagined than real. On the one hand, he took advantage of the Harvard class meeting to visit the library and hypothesize a preselection through architectural magazines and publications, while on the other hand asked the MoMA for a list of people who had connections with South America to catch anecdotes, observations and recommendations, besides encouraging on-site meetings with local architects. This happened, for instance, in the case of John McAndrew’s warnings about Mexican institutions’ unreliability which will be ignored by Hitchcock due to the surprising international response received by the *monumental* campus project for the national University City.¹¹

The Universidad Nacional Autónoma de México (UNAM) was a powerful revision of CIAM’s functionalist planning principles, bordering El Pedregal original experiment conceived in the same years by Luis Barragán on the lava fields south of the city. Historians have celebrated the massive collective work which included more than seventy architects with Juan O’Gorman and Mario Pani among them, who organized the university campus along monumental axis guiding both the slow detail-oriented perception of pedestrians and the large-scale from vehicle. This reflected a space gradient from the large open spaces to the inner courtyards of the classrooms and the more intimate spaces of the never completed residential district along the only diagonal axis of the entire complex. The giant scale of university buildings stands up to the distant view of the volcanoes on the Mexican plateau, distinguished by the ‘integración plástica’ originated in the muralist educational program launched after the 1920s Mexican Revolution by the Minister of Education José Vasconcelos assuming the role of

9 Henry-Russell Hitchcock, ‘Review: Brazil Builds. Architecture New and Old, 1642-1942 by Philip Goodwin; G. E. Kidder Smith’, in “The Art Bulletin” no. 4 (1943), p. 384. See Patricio del Real, ‘Building a continent: MoMA’s Latin American Architecture Since 1945 Exhibition’, in “Journal of Latin American Cultural Studies”, Vol. 16, no.1, 2007, pp. 95-110.

10 The Museum of Modern Art commissioned the survey to photographer Rollie McKenna and the North American historian in 1954, with the latter rather occupied with academic commitments and upcoming publications. However, though Latin America was not his main concern he had already proposed some interventions on the region’s architecture at the Carnegie Institute, Georgia Tech, and in New York for the eighth meeting of the Society of Architectural Historian. See Patricio del Real, ‘Un gusto por la cerveza. El descubrimiento de Henry Russell Hitchcock de la Arquitectura Latinoamericana’, in “Trace” no.7 (2013), pp.60-67.

11 “Watch out very much for the University City boys and the group around the Casa del Arquitecto... terrific log-rollers” warned McAndrew who had recently visited Mexico. Quoted in Del Real (2013), p.64.

visual arts for civic purposes.

Contextually, Venezuela will be the country to which Hitchcock would have attributed the greatest architectural success in Latin America, once again motivated by a remarkable university project. The Universidad Central de Venezuela (UCV) commissioned the campus project to the young architect Carlos Raúl Villanueva who organically colonized the land of a former hacienda transformed into the new university city. Architectural gesture became the protagonist against the coherent perception of the overall complex, shaped by external-internal paths almost empirically designed according to the informal movements of inhabitants and then translated into expressive structural experimentations, such as the famous Aula Magna (1955) which included Alexander Calder artworks for the campus' internal landscape. The alternation of arcades, wide ramps and perforated masonry dictated the optical rhythm of Villanueva's architectural experience between circulation and stasis, random meetings and confined learning spaces:

“The university Aula Magna with the adjoining Plaza Cubierta together with its Estadio Olimpico, are among the most vigorous examples of modern architecture that can be admired. Indeed, to many accustomed in associating Latinamerican architecture with the grace and lyricism of the Carioca architects, the vigour of Villanueva's exposed concrete can appear almost brutal”.¹²

This statement could only be explained by positioning the MoMA survey in Latin America within the internal debate on modern architecture, specifically within the crisis of functionalism, and the reception of CIAM discourse in non-European territories. In fact, Hitchcock's essay continues:

“Architecture is still very much an art in Latin America. The articulated elements in the community expect more from architects than purely 'functional' solutions. Public authorities in particular clearly turn to architecture as a principal expression of cultural ambition [...] Most notably evidencing the high standards of official taste are the public housing projects and the University Cities, both clear expressions of the sociological and cultural aspirations of the various presidents and their regimes”.¹³

12 From the exhibition catalogue edited by Henry-Russel Hitchcock *Latin American Architecture since 1945* (New York: MoMA, 1955), p.48.

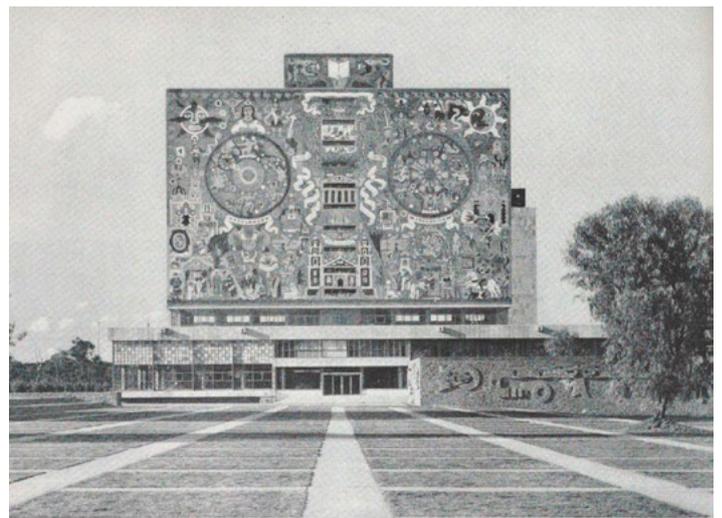
13 *Ibid.*, 29.



FIG. 22
*Aerial view of Ciudad Universitaria de la Universidad Nacional Autónoma de México completed in 1952.
Fundacion ITA (image from Garcavelez-Alfaro 2015)*



FIG. 23
*UNAM Biblioteca Central, designed by Juan O'Gorman,
Gustavo María Saavedra and Juan Martínez de Velasco.
Image from Hitchcock (1955)*



6 Juan O'GORMAN, Gustavo SAAVEDRA, and Juan MARTÍNEZ DE VELASCO
BIBLIOTECA CENTRAL (CENTRAL LIBRARY), CIUDAD UNIVERSITARIA, MEXICO, D.F. 1951-53



FIG. 24
*Aerial view Ciudad Universitaria de Caracas, designed by Carlos Raul Villanueva (early 1950s).
Fundacion Villanueva (image from Garcavelez-Alfaro 2015)*

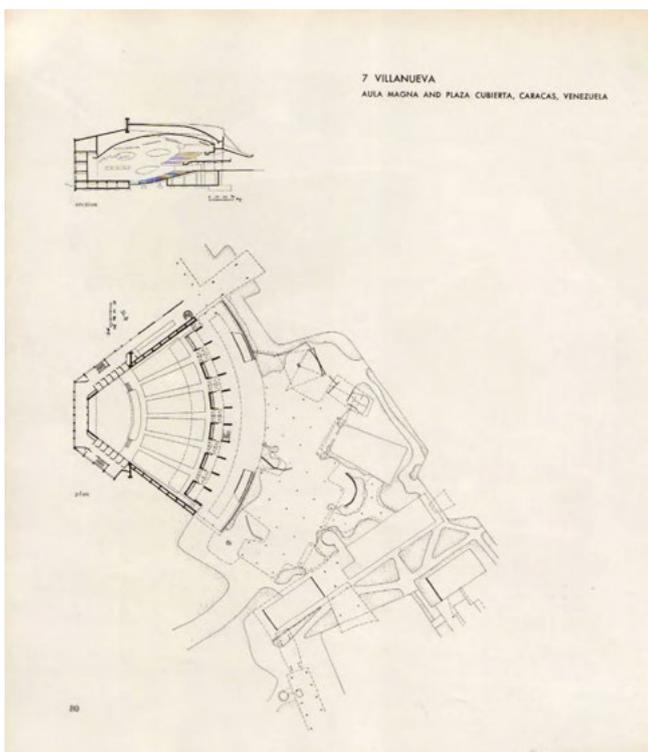


FIG. 25
*Ciudad Universitaria de Caracas, Aula Magna and Plaza Cubierta designed by Carlos Raul Villanueva.
Image from Hitchcock (1955)*

Certainly, any political consideration was left in the background with some notes on the human scale that sometimes got lost in those ‘tremendous educational plants’. In contrast, all the admiration and recognition went for:

“The scope and the homogeneity of these projects, whether they are the work of teams of architects as in Mexico, or of single men as in Caracas”.¹⁴

This reflected one of the most subtle but fundamental arguments of Hitchcock’s presentation, namely to demonstrate that ‘an impersonal anonymous architecture’ was diligently pursued in Latin America. Even when the projects appeared absolutely unique and inimitable as in the case of those ‘tremendous educational plants’, they were narrated in favour of the process of revision of post-war architectural discourse.

This recalls a previous article by Hitchcock himself for the British magazine “Architectural Review”, ‘The Architecture of bureaucracy & the Architecture of genius’ (1947), where the North American historian described a *de facto* situation: the traditional profile of the individual creative *genius* now coexisting with a new form of professional practice epitomized in what may be called the architecture of *bureaucracy*.¹⁵ The term ‘bureaucratic’ did not necessarily imply a negative connotation for Hitchcock, just referring to a different *attitude* in architectural production from that special expressive power legitimately provided by architects working as individuals – like European modernism great masters including Frank Lloyd Wright atelier-image cultivated in Taliesin’s studios. Hitchcock identified bureaucratic architecture as ‘the product of large-scale architectural organizations, from which personal expression is absent’, with the production of such an architectural firm as Albert Kahn, Inc., settled in Detroit and primarily known for the Packard and Ford Motor Company factories, depending:

“Not on the architectural genius of one man, but in the organizational genius which can establish a fool-proof system of rapid and complete plan production”.¹⁶

Such a system-based working method was conceived on the basis of anonymity,

14 Ibid., p.29. From these considerations, it can be understood the intent to overshadow the irrational contribution of the Carioca school embodied in Neymeier’s work uniqueness.

15 Henry-Russel Hitchcock ‘The Architecture of bureaucracy & the Architecture of genius’, in “Architectural Review” no.101, 1947.

16 Ibid., p.4.

enabling different sets of design information to ‘meet on the site with as perfect mutual co-ordination as machine parts come from the various sections of a factory to be joined first into sub-assemblies and then into the finished product on the final assembly line’.¹⁷ However, unlike the two categories defined by Hitchcock as stable and opposite, there are three aspects to consider.

The first is that Fordist industrial production in 1947 was already an anachronistic model for large-scale post-war organizations.¹⁸ In contrast to the assembly-line production embodied by the Ford Motor Company, a year before Hitchcock’s influential article, sociologist Peter Drucker identified the *corporation* as the only American social institution that would emerge as the dominant post-war organizational form.¹⁹ Drucker argued that the managerial principles that would have characterized the impending economic boom would emulate the imperative of flexibility already incorporated within General Motors organizational, which replaced the assembly line with independent divisions intangibly coordinated by decision making and control processes. Intangibility was represented by information provided by a mix of specialists travelling both upwards and downwards the production chain increasing efficiency from the factory floor to the management office.²⁰

The second aspect concerns the decentralization imperative performed through flexibility and teamwork also permeating other areas besides industrial production. In fact, *collective work* became a watchword for a generation of architects educated in the belief that anonymity and teamwork would have been fundamental to serve the broadest scale of action adequate to architectural production and its urgent problems in post-war time. This in contrast to formalist tendencies protracted within academic education, as demonstrated the short critical paper circulating in Harvard Graduate School of Design then directed by Joseph Hudnut, signed by Bruno Zevi and other students under the title ‘An Opinion on Architecture’ (1941):

17 Ibid., p.4.

18 Albert Kahn system-based working method is inextricably related to Ford model T designed for mass production, which came out of the market due to its lack of malleability to customized needs and definitively interrupted in 1927. The reciprocal relations between modes of production and Albert Kahn’s industrial architecture was one of the topics of the seminars attended by the author at the Architectural Association organized by Pier Vittorio Aureli and Maria Shéhérazade Giudici “On the Origins of Capitalist Urban Space”. Among the recent monographs see ‘Albert Kahn’s Industrial Architecture: Form Follows Performance’ edited by Thorsten Burklin and Jurgen Reichardt (Basel: Birkhäuser Architecture, 2019).

19 Peter Drucker, *Concept of the Corporation*, New York: The John Day Company, 1946.

20 See Michael Kubo, ‘The Concept of the Architectural Corporation’, in *OfficeUS Atlas*, Lars Müller, 2015.

“We see only one solution for the future of architecture as an expressive and social activity: COLLECTIVE WORK among architects, engineers, contractors, and the working class”.²¹

In these pages, Walter Gropius’ call for anonymity and teamwork known as Harvard method seems to prevail against Wright’s ‘dark genius clouded by his own personality’,²² with the students’ paper containing a very clear statement:

“We are treating the problem of the position of the architect in modern society from two points of view: the educational and the professional”.²³

And in fact, it was precisely on the complicity between education and profession that the discourse on bureaucratic architecture could be articulated. In 1945, Walter Gropius joined The Architecture Collaborative (TAC) with Harvard Square forming the core of a vibrant professional culture which gathered a number of fresh graduate designers around this acronym.²⁴ TAC approach was inextricably linked to its network-based organization which adopted flexible, discursive and informal mode of work rather than parcelling tasks among specialized practitioners.²⁵ Gropius understood that this reflected a significant change in architectural pedagogy, that is to develop a new *attitude* for architects in practice no longer influenced by authorship and personal attributes, since the historic task of the next generation of architects would be to overcome the ‘ideology of the past century which taught us to see in the individual genius the only embodiment of true and pure art’.²⁶ Not occasionally, the strong belief in this anonymous collectivist model permeated their works descriptions titled ‘TAC’s Teamwork’ or ‘The Idea of Anonymity’ from the office’s monograph

21 ‘An Opinion on Architecture’ (Boston: The Century Press, 1941), was addressed to Joseph Hudnut, dean of the Harvard Graduate School of Architecture, by John B. Bayley, Robert Hays Rosenberg, Bruno Zevi, John Taylor Moore, Jr., Warren H. Radford, Frank C. Treseder, Arthur Koon Hing Cheang, Wm. Joseph, Dahong Wang, T.J. Willo.

22 This a few years before, as a well-known fact, Wright became the first champion of Zevi’s *opinion on architecture* on his return to Italy, while Gropius’ principles were assumed as an example for the social and political reconstruction of post-war Italy by Giulio Carlo Argan.

23 See ‘An Opinion on Architecture’, 1941.

24 All these connections and academic-personal network are investigated by Michael Kubo, ‘The Concept of the Architectural Corporation’, in *OfficeUS Atlas*, Lars Müller, 2015.

25 “This structure was formalized through a weekly meeting in which all the partners gave shared criticism of each others’ projects, Gropius among them. Working at other team-based firms meant suits and ties, a time clock, and a rigid chain of command; TAC meant corduroy and jeans, wild (occasionally scandalous) office parties, and a messy environment of shared investigation closer to an atelier than a corporate office”. In Kubo (2015), p.42.

26 Walter Gropius, ‘The Architect Within Our Industrial Society’, in *Scope of Total Architecture*, p. 86.



FIG. 26
Walter Gropius surrounded by GSD Harvard students (1946).
Image from Pearlman (1997)

published in 1966 monograph.²⁷

Finally, a third aspect appears essential to reposition this tendency against the backdrop of Latin America context surveyed by Hitchcock about seven years after his seminal article. As Sylvia Lavin recently argued, it might seem inevitable that offering architects the choice of becoming bureaucrats or geniuses would lead to a profession in which every architect aspires to be recognized as a genius. And indeed, within the two decades since Hitchcock had made his argument for the balance between the two categories, the balance would have shifted towards the exclusive competence of geniuses in the design of libraries and museums, but also hospitals, residential complexes, and universities.²⁸ Meanwhile, within these two decades – which correspond to the timeframe of this research – some peripheral regions of Latin America that had received very limited attention in Hitchcock’s MoMA survey showed a peculiar process of bureaucratization at work, challenged by a figure that is difficult to situate in one of the two opposing categories governing the post-war architectural production. At the time of the survey preparation, Chile and Argentina had shared the common fate of not having received enough recommendations, of being underrepresented in international journals and architectural magazines, and perhaps, of representing the kind of *bureaucracy* that Hitchcock had excluded from his comments as early as 1947:

“By the architecture of bureaucracy I do not mean merely such building as is designed by civil servants, nor even the building which is closely controlled by the regulations of one or more ministries [...] Indeed the type of bureaucratic architecture *par excellence* is not that of government ministries, which have as a matter of fact been on the whole up to now rather feebly organized”.²⁹

However, what was not taken into account was that Chile and Argentina had shared the same fate in instigating a transformation of the university institution between the 1910s and the 1930s, obtaining in the case of Argentina the establishment of the principles of ‘autonomía, cogobierno y extensión’ proclaimed in *Manifiesto Liminar* (1918). This activated a circulation of ideas in the field of education that stimulated in this peripheral region a process of internal revision of the post-war modern architectural discourse, here alternatively conveyed by the prototypical figure of the architect-educator committed in the realization

27 See *The Architects Collaborative* (Teufen: Arthur Niggli, 1966).

28 Sylvia Lavin *Architecture Itself and Other Postmodernization Effects*, CCA Spector Books, 2020.

29 Hitchcock (1947), p.4.

of revolutionary educational projects conducted from within the bureaucratic apparatus of the university institutions that intended to renew their programs, their relationship with the surrounding context, and give a new form to the educational spaces that would have favoured these changes.

The architect-educator outlined as the prototypical figure of this thesis, is one that operates in the aftermath of WWII in a marginal condition with respect to the official distribution centers of architectural debate, and for this reason they evidently do not have the influence to carry out the cultural colonization in the minds of the post-war CIAM leaders. At the same time, they do not fit the traits of those revolutionary figures voluntarily detached from the real context in which they operate as often depicted in certain rhetoric of *radical pedagogies*. The architect-educator is rather a peripheral exponent often working in the scarcity of means and nothing but obvious availability of economic resources, and for this reason extremely introduced in the real context in which they operate. Even if, paradoxically, that *real context* hardly corresponds to the context of origin.

In fact, some recurring traits concern their mobility, as they very often operate in conditions of temporariness and precariousness; their practice, as they work almost exclusively in the field of educational architecture with design proposals aimed to investigate the space where they themselves are supposed to work; their pedagogy, as they participate in the construction the modern discourse by means of their course briefs, articles in local journals and conference contributions rather than treatises or seminal books. Finally, it is interesting to note the university institution did not work as a real *client* for them, since institution makes use of their contribution not so much to influence the modern debate entrusting their educational projects to eminent personalities such as Le Corbusier, Giedion, or Josep Lluís Sert. On the contrary, a more pragmatic sense was adopted to trigger reforms from within their bureaucratic apparatus by entrusting the architect-educator with the task of creating the condition for stimulate endogenic educational projects which progressively incorporate relational, occasional, flexible and informal practices in their organizational complex far from being intercepted in the idea of *essential* Latin America that Hitchcock was looking for in 1955.

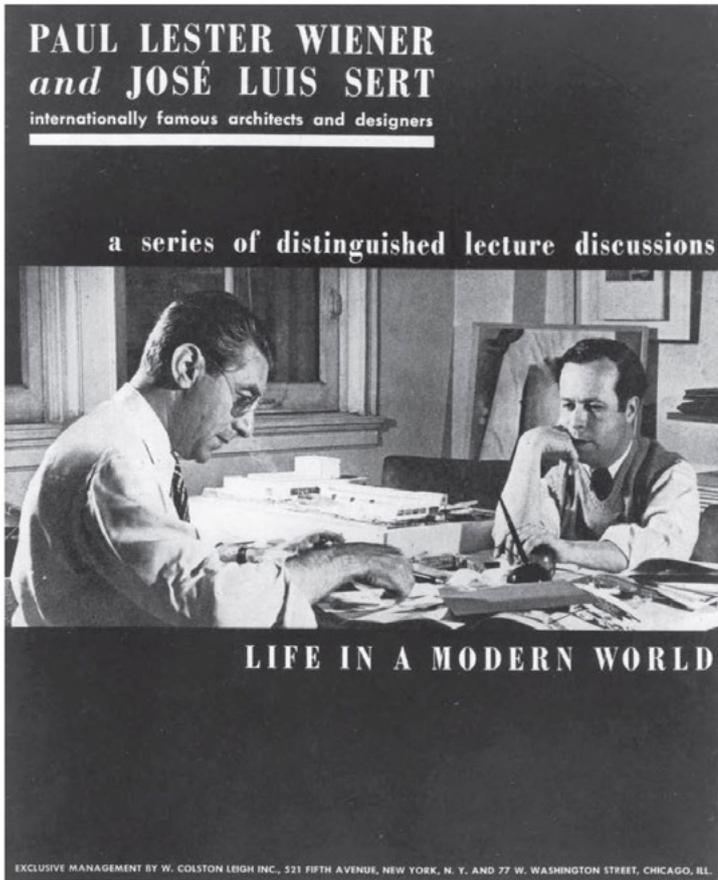


FIG. 27
*Town Planning Associates brochure
showing Wiener and Sert at work (1952)*
Image from E. Mumford (2015)



FIG. 28
*Argentinean architects Horacio Caminos and
Eduardo Catalano at School of Design, North
Carolina USA (mid-1950s).*
NCSU Special Collections Research Center



FIG. 29
Editorial meeting of "Casabella-Continuità".
Fondazione Aldo Rossi

2. 1950s.
Italy-Latin America transnational relationships

En la génesis de la crítica de arquitectura en Latino América durante el siglo XX ha existido una fuerte influencia europea, esencialmente italiana. De hecho, entre los años cuarenta y sesenta, los vínculos con los arquitectos italianos y con revistas como *Casabella* fueron especialmente intensos.³⁰

Joseph Maria Montaner, 1999

The post-war architectural discourse oscillates between the re-examination of the recent past obscure events and the affirmation of continuity with respect to the project of modernity. Within the framework of this long and strenuous operation that will culminate in the CIAM dissolution in 1959, just to mention one of the most striking facts, the reciprocal influences between Italy and South America have had some relevance especially in the context of migration of ideas conveyed by individuals committed in the internal revision of modern postulates. This means, therefore, not only looking at those ideas migrating from Italy to Latin American continent, but also reporting on Italy as a context of reception by considering the tone of narrations concerning South American continent adopted by the same architectural magazines simultaneously committed in the struggle for the survival of modernity. Joseph Maria Montaner, one of the most authoritative critics on the subject, argues that this circulation of ideas has been dominated by the shift from the conception of universal *space* into the specific idea of *place*. This occurred as a successful attempt undertaken by Christian Norberg-Schulz in overcoming the prevailing concept elaborated by his master Siegfried Giedion.³¹ In making his argument, Montaner suggests that among the different interpretations around the idea of place – which include Aalto and

30 Josep Maria Montaner 'La crítica de la arquitectura en América Latina', in "DC Papers" no.2, 1999, pp. 7-11. From the same author see *Arquitectura y crítica* (Barcelona: Ed. Gustavo Gili, 2011), and *Arquitectura y crítica en Latinoamérica* (Editorial Nobuko S. A, 2011).

31 Josep Maria Montaner 'La Experiencia Del Lugar Ernesto Nathan Rogers, Enrico Tedeschi, José Antonio Coderch y Lina Bo Bardi', in "El lugar. Cuadernos de Proyectos Arquitectonicos" no.2, 2011, pp.39-45: "Norberg-Schulz, que lo tomó como interpretación fenomenológica de la idea aristotélica de lugar y lo propuso como "espacio existencial", con la voluntad de ampliar y superar el concepto moderno de espacio de su maestro Siegfried Giedion [...] concluyendo que el espacio existencial consiste siempre en lugares". See Christian Norberg-Schulz *Genius loci. Paesaggio, ambiente, architettura* Milano: Electa, 1979) and 'Il concetto de luogo', in "Constrospazio" (June, 1969).

Barragán strand – the Mediterranean roots are the ones that have most influenced Latin American cultures with ‘modern archetypes capable of incorporating contributions from specific places’.³² The second and complementary hypothesis attributes this experience to some architectural critics operating in the decade of 1950s, such as Ernesto Nathan Rogers, Enrico Tedeschi, José Antonio Coderch and Lina Bo Bardi all considered members of what is known as the second modern generation – with the first two particularly involved in the migration of ideas investigated in this research.

Ernesto Nathan Rogers’ radical contribution in this sense explored the concept of ‘preesistenze ambientali’ through a long theoretical itinerary that originates in the very first years of the second post-war period to then become the issue most inextricably connected to the figure of the Milanese architect. Rogers’ ideas were mostly expressed by means of his editorial project “Casabella-Continuità” – the magazine he directed between 1953 and 1964 – with a number of essays also collected in the book *Esperienza dell’architettura* (1958) and *Editoriali di architettura* (1968).³³ Although in the spirit of ‘continuità’, Rogers distanced his idea of architecture as much from the metaphor of the machine as from that of a pure art or sculpture. Difference could be only made by understanding the lesson of place as a specific environment with its structural values, in which new forms have been historically and organically introduced. This produces a given space-time situation which should be assumed as the privileged territory for modern architecture, since ‘ser moderno significa simplemente sentir la historia contemporánea en el orden de la historia total y, por lo tanto, aceptar la responsabilidad de los propios actos [...] como una tarea conjunta que, con nuestra contribución, aumenta y enriquece la perenne actualidad de todas las posibles combinaciones formales de relación universal’.³⁴ What follows is that reality, that remains the field of action of the modern architect though revitalized by memory and imagination inherently belonging with a specific place, oscillates between ‘invención y ambientación’ with the architect called to build a system of relationships between the two in order to give a virtuous contribution to that specific place conceived as the result of all ‘preexistencias ambientales’.

If Montaner refers to the text ‘Le preesistenze ambientali e i temi pratici contemporanei’ (1955) to emphasize the notion of cultural environment, moving

32 Ibid. p.40.

33 It is not by chance that the concept of ‘experience’, coming from his proximity to the Italian phenomenological philosophy of Enzo Paci and Antonio Banfi and interpreted in the sense of historical consciousness, is the one that gives the title to his first compilation of editorials. See Ernesto Nathan Rogers *Esperienza dell’architettura* (Torino: Einaudi, 1958), *Editoriali di architettura*, (Torino: Einaudi 1968), and also Antonio Monestiroli, *Ernesto Nathan Rogers. L’architettura come esperienza*, Baiesi, 2009.

34 Spanish translation in *Experiencia de la arquitectura*, Buenos Aires: Ediciones Nueva Visión, 1965.

from the mere sensitivity towards the natural environment that was already present in the work of great masters,³⁵ other studies on this complex system of relationships enunciated by Rogers shift the attention towards an alternative way of conceiving a dense urban image rather referring to the text ‘Necessità dell’immagine’ (1963), where a proposal of a stratified and unitary image of the city survives as opposed to the quantitative instruments pervading contemporary urban planning solutions. However, there is a short but very intense moment in which Rogers articulates for the first time this broad and experiential concept of *environment* corresponding with his involvement in the ambitious educational project of Tucumán and its Ciudad Universitaria on top of the Andes. This experience, which began in 1948, must be considered quite influential for two reasons.

On the one hand, Rogers was stimulated by an exceptional condition in a totally different place very far from that of origin, to the point that the lecture he gave at the Universidad San Marcos de Lima under the title ‘Il dramma dell’architetto’ (1948) has been repositioned as the true trigger of Rogers’ reasoning behind ‘preesistenze ambientali’,³⁶ in a closer dialogue with the emerging issues of the post-war CIAM architectural discourse. Among these, the conversation around the notion of monument became pervasive with Tucumán university project rather underestimated in terms of its critical contribution in this discourse.³⁷

On the other hand, the same short and intense experience consisted of a collective experiment, namely the Instituto de Arquitectura y Urbanismo (IAU), which became the privileged territory for an open conversation not only between Argentines and Italians architects-educators in the aftermath of WWII, but also between Italians with different backgrounds who found in that peripheral context an unprecedented occasion for discussion on some questions that, travelling backwards to Europe and Italy, would become crucial in the late-modern architectural discourse in 1960s and 1970s. Jorge Francisco Liernur (1995) argues that Italian influence in conceiving the city and the territory as project was crucial in post-war Latinamerican context, thanks to those architects with urban planning ambitions who travelled and sometimes settled in the region.³⁸

35 Ernesto Nathan Rogers, ‘Le preesistenze ambientali e i temi pratici contemporanei’ in “Casabella continuità” no. 204, 1955.

36 In *Esperienza dell’architettura* (Torino, 1958), pp. 165-171. On this period see also Serena Maffioletti (ed), *Ernesto N. Rogers. Architettura, Misura e grandezza dell’uomo. Scritti 1930-1969* (Padova: Il Poligrafo, 2010).

37 For an in-depth analysis on this episode see Chapter 1.

38 Francisco Liernur, ‘Architetti italiani nel secondo dopo guerra nel dibattito architettonico della nuova Argentina 1947-1951’, in “Metamorfosi. Quaderni di architettura”, 1995.

Certainly, Enrico Tedeschi was among the protagonists of this moment, working with Rogers in Tucumán appointed as a professor of History of Architecture and later inheriting the course of Theory of Architecture from Rogers himself when this latter decided to return to Italy followed by Piccinato.³⁹

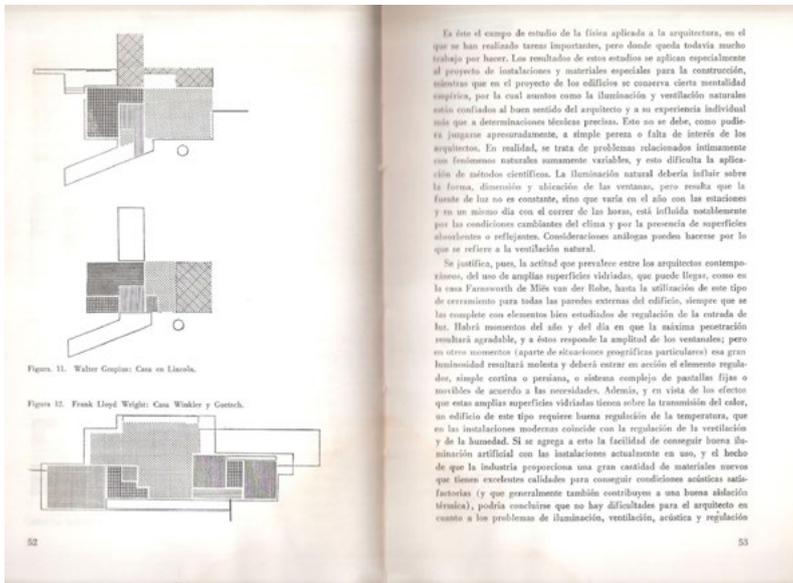
Enrico Tedeschi's most influential book, *Teoría de la arquitectura* (1962), was preceded by another written work elaborated as soon as he begins his experience in Tucumán. In *Una introducción a la historia de la arquitectura* (1951),⁴⁰ Tedeschi established three fundamental concepts at the basis of an authentic post-war Latinamerican discourse: (1) re-foundation of historical and critical studies on architecture; (2) recognition of architectural attributes to define urban, territorial and regional scale; (3) re-signification of architecture around the notion of 'espacio'. The book's sixth chapter was eloquently entitled 'espacio externo, urbanismo y paisaje', specifying the intention of integrating 'urbanismo y arquitectura en una necesaria relación con el ambiente natural'. And in fact, just two years after his arrival in Tucumán, Tedeschi applied these concepts to the specific context of Noroeste Argentino proposing a regional approach in the report *Urbanismo con legislación. El problema legislativo de la planificación urbana y rural* (1950), edited with Ciro Calcaprina.⁴¹ Obviously, the new Ciudad Universitaria de Tucumán would have represented a field test to fully achieve direct contacts between its 20,000 inhabitants, with natural landscape and real problems of the territory.

These interpersonal and informal contacts should be recovered against the prevailing euphoria towards the *machine society*, and this passes through the notion of *space* inherently belonging with Tedeschi's thoughts. However, despite he was among the founders of the Italian A.P.A.O. (Associazione per l'Architettura Organica) and the architectural magazine "Metron" before emigrating to Argentina in 1948, Tedeschi's defence of *space* goes well beyond the role of emissary of organic architecture in Latin America, moving away from Bruno Zevi's theoretical categorizations. But what was meant by *space*? And how could it be positioned with respect to the concept of *place* mentioned by Montaner or the sophisticated one of *environment* conceived by Rogers? In making his argument for the specificity of architecture as its spatial condition,

39 Alejandra Sella (Universidad de Mendoza) together with Noemi Adagio coordinate a research group on the little-explored work of Enrico Tedeschi in Latin America, whose first results were presented in *Enrico Tedeschi. Work in progress* (Mendoza, 2012). A small contribution in this area was provided by the author of this thesis with the paper "Giuseppe Pagano y Enrico Tedeschi. El intermedio que construye el espacio de la educación" presented to 4° Encuentro de Teoría y Historia Arquitectura (Antofagasta, 27-28 Jun 2018).

40 Enrico Tedeschi, *Una introducción a la historia de la arquitectura. Notas para una cultura arquitectónica*, (Universidad Nacional de Tucumán, 1951).

41 In the same year, the Universidad Nacional de Tucumán published Calcaprina's *Planificación regional. Enfoque de un plan para la vida de Nordeste Argentino* (1950).



Es éste el campo de estudio de la física aplicada a la arquitectura, en el que se han realizado tareas importantes, pero donde queda todavía mucho trabajo por hacer. Los resultados de estos estudios se aplican especialmente al proyecto de instalaciones y materiales especiales para la construcción, mientras que en el proyecto de los edificios se conserva cierta cantidad empírica, por la cual asuntos como la iluminación y ventilación naturales están confiados al buen sentido del arquitecto y a su experiencia individual más que a determinaciones físicas precisas. Esto no se debe, como pudiera juzgarse aporriadamente, a simple pereza o falta de interés de los arquitectos. En realidad, se trata de problemas relacionados íntimamente con fenómenos naturales sumamente variables, y esto dificulta la aplicación de métodos científicos. La iluminación natural debería influir sobre la forma, dimensión y ubicación de las ventanas, pero resulta que la fuente de luz no es constante, sino que varía en el año con las estaciones y en un mismo día con el correr de las horas, así influida notablemente por las condiciones cambiantes del clima y por la presencia de superficies absorbentes o reflejantes. Consideraciones análogas pueden hacerse por lo que se refiere a la ventilación natural.

Se justifica, pues, la actitud que prevalece entre los arquitectos contemporáneos, del uso de amplias superficies vidriadas, que pueden ligarse, como en la casa Farnsworth de Mies van der Rohe, hasta la utilización de este tipo de cerramiento para todas las paredes externas del edificio, siempre que se las complete con elementos bien estudiados de regulación de la entrada de luz. Habrá momentos del año y del día en que la máxima penetración resultará agradable, y a éstos responde la amplitud de los ventanales; pero en otros momentos (aparte de situaciones geográficas particulares) esa gran luminosidad resultará molesta y deberá entrar en acción el elemento regulador, simple cortina o persiana, o sistema complejo de persianas fijas o móviles de acuerdo a las necesidades. Además, y en vista de los efectos que estas amplias superficies vidriadas tienen sobre la transmisión del calor, un edificio de este tipo requiere buena regulación de la temperatura, que en las instalaciones modernas coincide con la regulación de la ventilación y de la humedad. Si se agrega a esto la facilidad de conseguir buena iluminación artificial con las instalaciones actualmente en uso, y el hecho de que la industria proporciona una gran cantidad de materiales nuevos que tienen excelentes calidades para conseguir condiciones acústicas satisfactorias (y que generalmente también contribuyen a una buena situación térmica), podría concluirse que no hay dificultades para el arquitecto en cuanto a los problemas de iluminación, ventilación, acústica y regulación

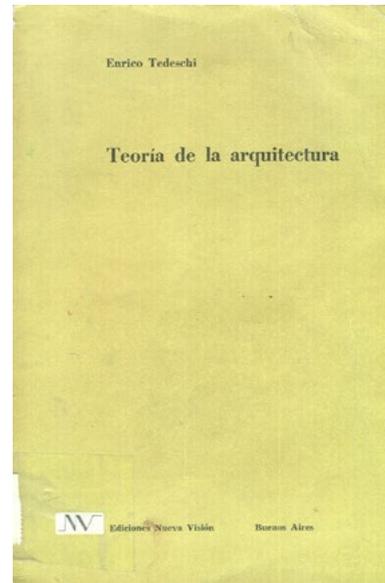


FIG. 30
 Enrico Tedeschi's "Teoria de la Arquitectura" (1962)
 and "Una Introduccion a la Historia de la Arquitectura" (1951)
 where the Italian-born architect questions the concept of space.

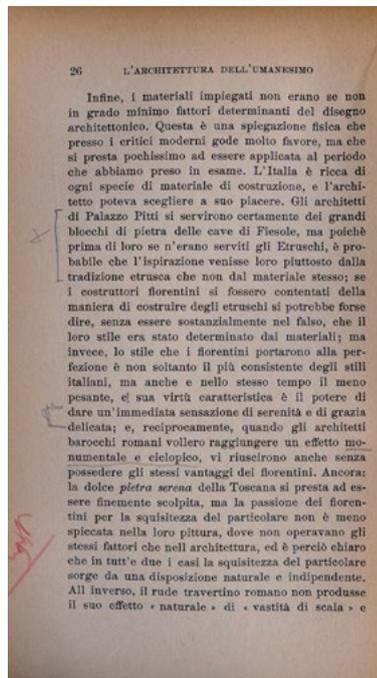
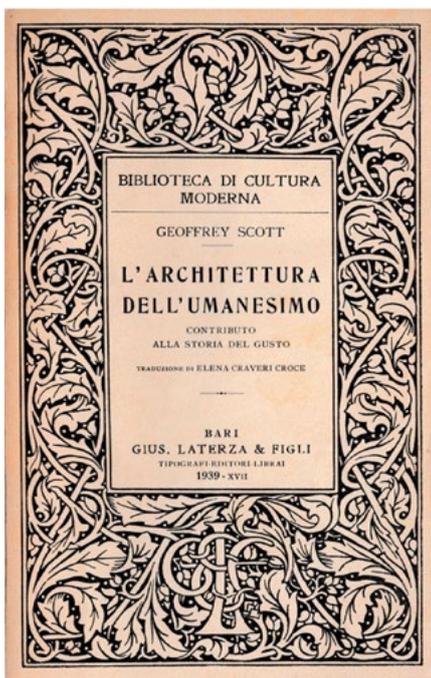


FIG. 31
 "L'Architettura dell'Umanesimo"
 translated by Elena Croce in 1939
 with annotations by Bruno Zevi.
 Image from Martinez (2019)

Enrico Tedeschi was operating an internal critic to those dogmatic speculations, associated with early modernist formalism, which originates in his complex biography between Italy, the U.K. and Latin America.⁴²

The introduction of the concept of *space* as an element of architectural analysis has been a significant contribution to the field of post-war architecture. Even if, in Colin Rowe's opinion, Geoffrey Scott's *The Architecture of Humanism: A Study in the History of Taste* (1914) should be considered as the most important contribution in this sense with the British author identifying the specificity of architecture with the peculiar connotation of space as a *void*, as a negation of the solid.⁴³ Scott's works have had an important influence in British circles, and it is most probably in those circles that Zevi and Tedeschi read Scott for the first time: the former while attending the Architectural Association of London where he moved in 1939, the latter during his travels in 1947 as the only Italian delegate to the Architectural Association centenary celebrations propitiated by Tedeschi's publication *L'Architettura in Inghilterra* positively reviewed by Nikolaus Pevsner – still one of the few Italian-speaking language insights into British architecture.⁴⁴ In addition, 1939 is the same year of the first Italian translation of Scott's written work curated by Elena Craveri Croce, daughter of philosopher Benedetto Croce, into *L'Architettura dell'Umanesimo*.⁴⁵ It is through the accurate reading of this text, demonstrated by the number of annotated phrases and notes, that Bruno Zevi will introduce and diffuse Scott's forgotten masterpiece in many non-English-speaking countries becoming the 'Italian architectural historian who defended a critical methodology based on spatial, empirical, and sensory analysis of architectural works'.⁴⁶ In Zevi's persistent search for differentiations between architecture and other forms of art within the aesthetic discourse, since his earliest works tracing the history of the different conceptions of space such as

42 For an in-depth analysis on this episode see Chapter 4. The references to Croce and Venturi will be equally important not only for the importance they had in post-war Italian discourse, but also because they were the ones that allowed Tedeschi to establish the sequence that connects the autonomy of the aesthetic sphere (Croce), with a method in the history of art (Venturi) and the discussion on the specificity of architecture. For Venturi, as for Croce, the history of art must advance by passing through particular studies for which critical analysis is essential to establish the aesthetic judgment. This is what Tedeschi underlined in theory, focusing on the author (architect) and his work: "qué ha realizado, luego por qué de tal manera y, por último, si bien o mal". Tedeschi (1951), p.9.

43 Geoffrey Scott, *The Architecture of Humanism: a Case in the History of Taste* (London: Architectural Press, 1980) is mentioned in these terms by Colin Rowe, 'The Present Urban Predicament', in Alexander Caragone (ed), *As I was Saying* (Cambridge, MIT Press, 1996), p. 219.

44 Enrico Tedeschi, *L'Architettura in Inghilterra* (Firenze: Edizioni U, 1947).

45 Elena Croce, *L'Architettura dell'Umanesimo*. Bari: Giuseppe Laterza e Figli Editori, 1939.

46 According to Martínez (2019), the wide dissemination of Berenson and Scott's ideas in the Western world is unimaginable without the work done by Zevi in Continental Europe, with his persistent effort to spread this attitude to understand, analyse, and judge architecture through *space*. See Raúl Martínez Martínez 'Bruno Zevi, the continental European emissary of Geoffrey Scott's theories', in "The Journal of Architecture" no. 24:1 (2019), pp.27-50,

Saper vedere l'architettura (1948), the peculiar connotation of *void* provided by Geoffrey Scott became crucial to Zevi's distinction between 'internal space' and 'external space':

“Il fenomeno dello spazio diventa una realtà concreta solo nell'architettura e, quindi, ne costituisce il carattere specifico”.⁴⁷

However, Elena Croce's preface oscillates between calculated observations related to her father's interests in aesthetics and biographical references to Scott's connections with his mentor's theories, that is Bernard Berenson's new methods of pictorial analysis focusing on 'tactile values, movement and space-composition' as the principal, if not the only, sources of 'life-enhancement'.⁴⁸ Hence, this radical interpretation was not only transferred to architecture from its original context, Renaissance painting, by Berenson's pupil Geoffrey Scott. But Scott's attribution of space as a *void* and a necessary medium for movement profoundly conditioned Tedeschi's autonomous theoretical framework, since he was convinced that a work of architecture 'cannot be dismissed as a mere construction simply because it does not shelter a clearly distinct internal space':

“No se puede rechazar de la arquitectura una construcción, sólo porque no está dotada de espacio interno [...] El espacio estético es algo menos rígido, menos categórico, menos tangible. Puede expresarse con un volumen de aire, limitado por superficies sólidas, o también por medio de relaciones espaciales, capaces de crear espacio sin delimitarlo materialmente: un espacio que podemos llamar externo en contraposición al otro interno. El espacio externo se origina por medio de relaciones entre edificios, y entre edificio y naturaleza”.⁴⁹

Essentially, Tedeschi recognizes equal dignity and design ambitions towards the

47 Bruno Zevi, *Saper vedere l'architettura* (Turin: Einaudi, 1948) pp. 27-28. Zevi's methodological vocation was already recognised by authors such as Giulio Carlo Argan: 'A proposito di spazio interno', in "Metron" no. 28 (1948).

48 Bernard Berenson, *Aesthetics, ethics and history in the arts of visual representation* (Florence: Electa, 1948). From the Italian translation curated by Mario Praz: "I valori tattili si trovano nelle rappresentazioni di oggetti solidi allorché questi non sono semplicemente imitati (non importa con quanta veridicità) ma presentati in un modo che stimola l'immaginazione a sentirne il volume, soppesarli, rendersi conto della loro resistenza potenziale, misurare la loro distanza da noi, e che ci incoraggia, sempre nell'immaginazione, a metterci in stretto contatto con essi, ad afferrarli, abbracciarli o girar loro intorno". Zevi's original reading and modern interpretation of Scott's text paved a foundation upon which he would build his architectural thoughts. Annotations on the back cover of the 1978 and 1999 Italian reprints of *The Architecture of Humanism* posed the question: "Is it possible to understand painting without knowing Bernard Berenson? Similarly, you cannot understand architecture without reading Scott's book". See Martinez (2019).

49 In Enrico Tedeschi, *Una Introducción a la Historia de la Arquitectura* (1951), pp. 99-100.

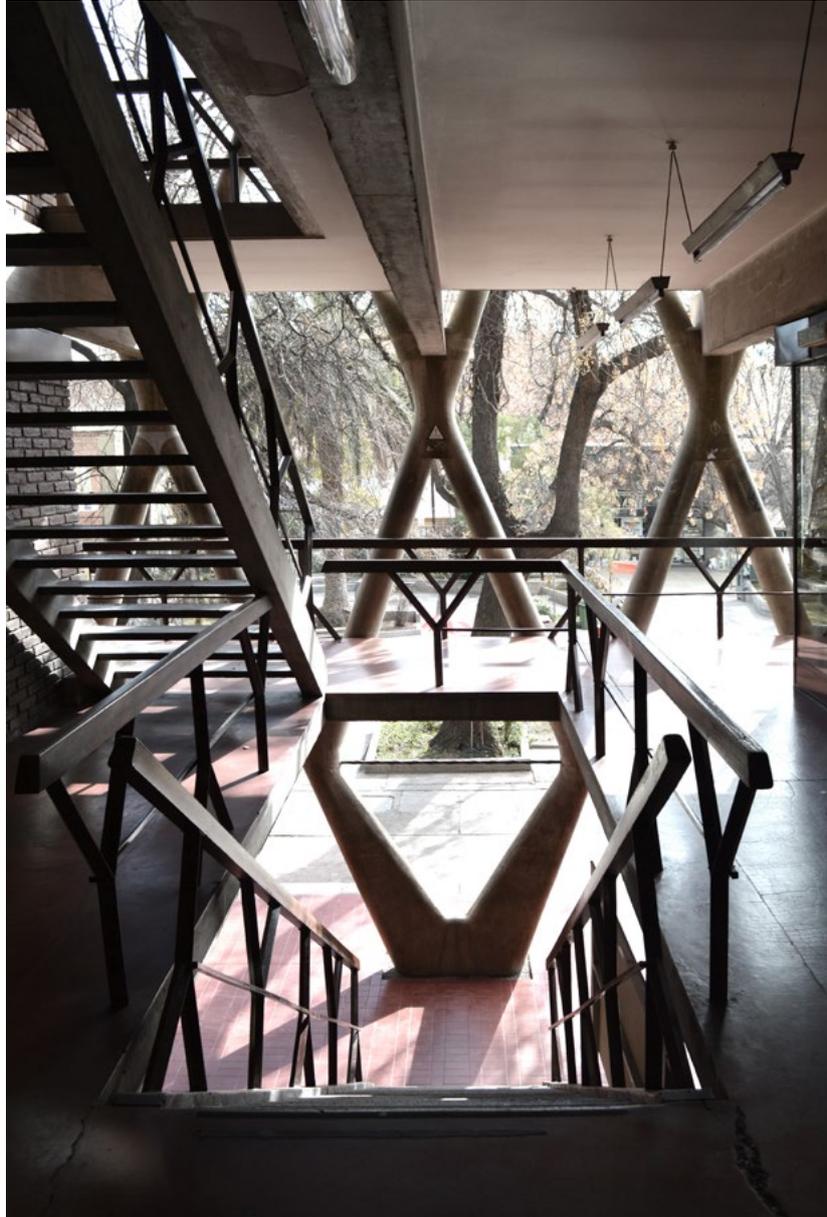


FIG.32
Enrico Tedeschi's university building
for Universidad de Mendoza (1960-62).
Photo by the author

external space, including in this definition both the most immediate surroundings such as the urban space, and the broader one such as the regional. In fact, despite his close relationship with Zevi and the early 1950s network generated in the capital city of Buenos Aires around the reception of ‘spatialism’ (Federico Deambrosis, 2011),⁵⁰ Tedeschi created his own circuit between Tucumán-Córdoba-Mendoza axis which reached maximum visibility with the foundation, together with Francisco Bullrich and Marina Waisman, of the Instituto Interuniversitario de Historia de la Arquitectura (IIDEHA) giving a sense of disruption in the supposed centre-to-periphery distribution of official culture. A second aspect to be considered in following what can be called a process of *de-zevisation* of Tedeschi’s thoughts, apart from his personal notion of *space* experienced in the specific context of Latin America, would concern Tedeschi’s dismissal from any political interpretations frequently associated with *organic* architecture. To the point that even his reading of Wright’s work was strongly depoliticized in favour of the autonomy of architecture intended as a work of art.⁵¹

This attitude marks a distance from what has been observed in some recent studies, focused on of tendentious narratives that perform an act of *Italianization* of Latin American post-war architecture with arbitrary reconstructions and speculative vindications from the Italian architectural magazines.⁵² If the tendency to show developments in the region as a mere derivative of European movements emerged to prevent the exuberant and irrational ‘Latin American style’ from contaminating Western Modernism, the greatest concerns of Italian magazines’ directors are still the affirmation of political positions in favour of a democratic and liberal future. Certainly, “L’Architettura Cronache e Storia” founded in 1955 by Bruno Zevi best exemplifies the privileged platform from which the Italian historian would launch the fiercest invectives against figures and events belonging with the South American continent, first of all the foundation of Brasilia:

50 Starting from the 1940s, the art scene from Rio de la Plata focused on spatial and non-figurative conceptions, supported both by the editorial project of Tomas Maldonado “Nueva Vision” and by Romero Brest’s “Ver y Estimar”. Secondly, the increasingly generalized critique against ‘functionalism’ found some fundamental references in the organic architecture designed by Frank Lloyd Wright and commentators of his works such as Bruno Zevi, invited in Buenos Aires in August 1952 for a cycle of seven lectures. See Francesco Deambrosis, *Nuevas Visiones* (Buenos Aires: Ediciones Infinito, 2011).

51 This from Sebastián Malecki, ‘Historia y Crítica. Enrico Tedeschi en la Renovación de la cultura arquitectónica argentina, 1950-1970’, in Adagio N. and Sella A. (eds.), *Enrico Tedeschi. Work in progress*, Mendoza: EDIUM, 2012.

52 See Clelia Pozzi, ‘Latin America Made in Italy. The Editorial Construction of a Domesticated Modernism’, in “ABE Journal” no.7, 2015. Latin American architecture is comprehensively discussed only in the fifth edition of Zevi’s *Storia dell’architettura moderna* (Turin: Einaudi, 1975). In the four previous editions and in *Verso un’architettura organica* (1945), Latin American architecture generally receives a minimum interest and relatively pessimistic. Nikolaus Pevsner did the same in his *An Outline of European Architecture* (1942), just mentioning weak connections between Brazilian architecture and Le Corbusier’s postwar expressionist phase.

“Going against the grain, going against the international rhetoric that magnified Brasilia, we have criticized its program, its master plan and its architecture. We have defined it a Kafkian city, showing how its construction would have fatally resulted in an anti-democratic product”.⁵³

However, if Zevi’s tone suggests a political reaction derived from a reluctance to accept the disintegration of democratic ideals in architecture ‘especially when this shadow is revived by a passionate communist like Niemeyer’, it is equally true that there was another recurring editorial strategy as much influential as the editors’ political-ideological beliefs: the attention to domestic space, the assimilation of Mediterranean materials, the compromise between vernacular and modern languages are all rather instrumental ingredients to the re-foundation of post-war Italian architectural discourse, rather than disinterested insights into Latin American context.

In fact, staying in the specific case of “L’Architettura Cronache e Storia”, it is not surprising that the only report on Enrico Tedeschi’s work will consist of five projects of single houses he designed in Argentina without ever mentioning his fundamental contribution within the South American architectural discourse, and even less, his primary role in the foundation and construction of the new campus for the Universidad de Mendoza – except for a brief comment on the ‘anti-conformist criteria’ adopted for the university building’s quakeproof performance.⁵⁴ What makes this tendency instrumental the production of a national architectural discourse and its institutionalization, is the fact that it was not limited to the new magazines that gave the greatest voice to the emerging line of research of organic architecture such as “L’Architettura: Cronache e Storia” or “Metron” – this last founded by Bruno Zevi too in 1945 – but it would also explain the editorial strategy of the long-standing architectural magazines like “Domus” and “Casabella” that have been transformed into real ‘institutions of architectural culture’ in the post-war period, both for the re-foundation of architecture as a discipline and to guide the profession.⁵⁵

53 Except then later reposition his opinion in favor of oppressed groups: “I giovani sbagliano a credere nel mito di Brasilia. Ma se si tratta di combattere i generali, siamo pronti anche a difendere Brasilia”, in Bruno Zevi, ‘In difesa di Brasilia’, in “L’Architettura: Cronache e Storia”, no.109, 1964.

54 ‘Reticolo anti-sismico di Enrico Tedeschi’, in “L’Architettura Cronache e Storia” (no.92, 1963). This brief mention on Tedeschi’s campus project for the Universidad de Mendoza was preceded by ‘Enrico Tedeschi. Un Italiano sulle Ande’, in “L’Architettura: Cronache e Storia” no.17, 1957, pp. 658-9, and ‘Quattro residenze unifamiliari in Argentina’ in “L’Architettura: Cronache e Storia” no.49, 1959, pp. 452-9.

55 See Ezio Bonfanti ‘La cultura architettonica a Milano: strumenti e istituzioni’, in Luca Scacchetti (ed.), *Ezio Bonfanti: Scritti di architettura* (Milan: Clup, 1981).

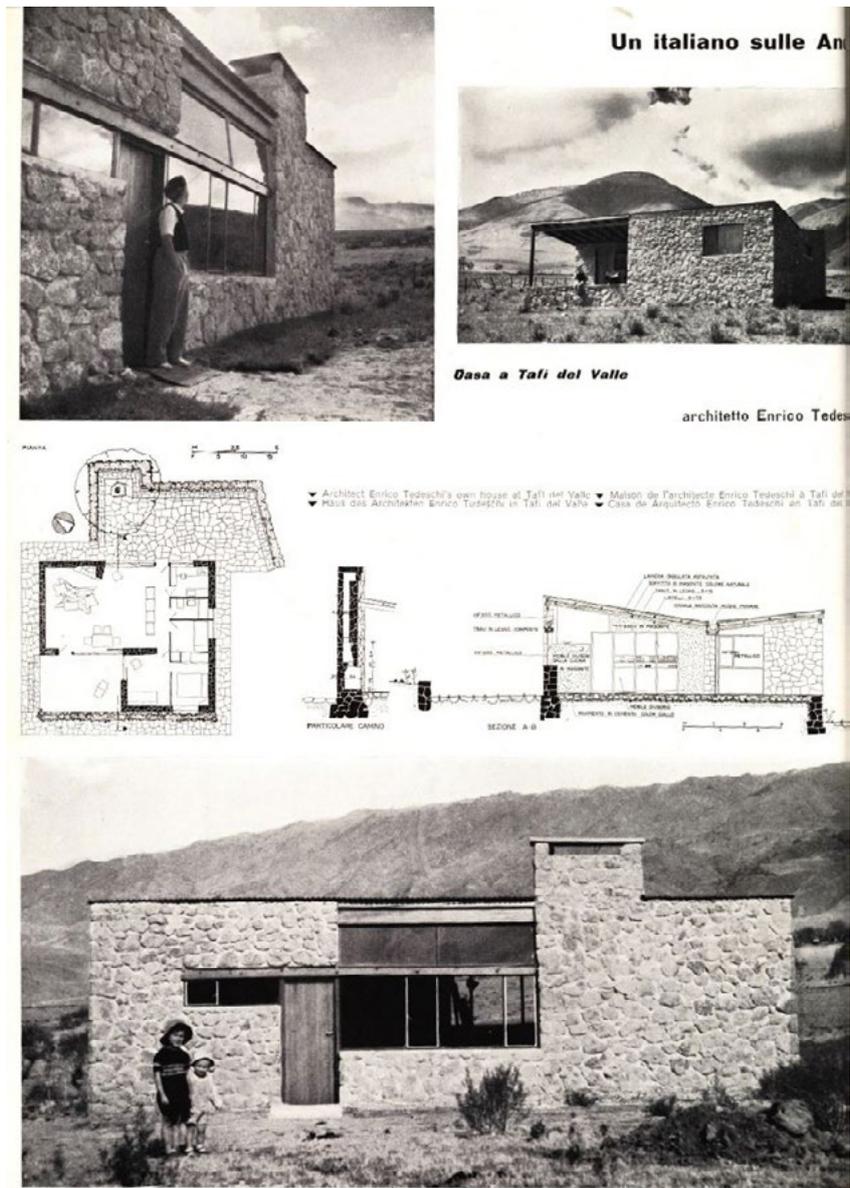


FIG. 34
 Page from "L'Architettura cronache e storia" (no.15, 1957)
 showing Enrico Tedeschi's own house in Tafi del Valle,
 Argentina.

In fact, Latinamerican architecture will be presented both in Rogers' and Ponti's directorship of "Domus" as a problem of domestic space, since the most urgent problem for a devastated country like Italy in the aftermath of the WWII was 'la casa dell'uomo'. Thus Rogers, who served as director of "Domus" from January 1946 to December 1947, significantly subtitled the magazine featured by an open, lively and dynamic editorial project which, while raising hopes and expectations for Italian architecture, aims to form a sensitive and educated clientele. Hence, it is not a surprise that Brazilian architecture appears in "Domus" pages as an opportunity to study 'architects who build their own houses'.⁵⁶ This happened just before the beginning of Rogers' adventure in the South American continent, among the promoters of Tucumán's educational project and among the consultants of Estudio del Plan de Buenos Aires in Argentina. Thus, the direction of the Italian magazine will be entrusted to Gio Ponti in 1948. Based on the intuition that the analogy of climatic conditions could resonate with the spatial qualities of the Mediterranean house, this served as a medium to promote an alternative discourse on Latin American architecture. In an attempt to domesticate it to bring Italian architecture to sympathize and reconcile with modernism, the greatest emphasis was invested in those familiar characteristics rooted in the spontaneity of construction rather than in the region's architectural production identified with concrete and technological progress.

Finally, a few years after returning from his South American experience, Rogers would assume the direction of "Casabella" notoriously marked by his wish for 'continuità' (1953-1965), though from its pages will be also conducted a gentle and sophisticated internal criticism towards the most rigid postulates belonging with architectural modernism. If the fascinating dispute over Neo-Liberty certainly represents one of the most commented affairs in this sense, it is worth mentioning here the only monographic issue dedicated by an Italian magazine to a Latin American country in which Rogers makes a subtle reference to the pervasiveness of some modern ideas which would need more mediation with respect to the receiving context, or even better, to its *environment*.

In March 1964 issue, Argentina has been described as an 'ambiguous and fascinating country', and the account of its modern architecture is permeated with a sense of nostalgia mixed regret for the country's inability to overcome modern postulates by 'proceeding from its own history to question the present', as denounced in Aldo Rossi's words:

⁵⁶ This is the case of two houses by Rino Levi and Alvaro Vital Brazil presented by Carlo Pagani in 'Due Ville in Brasile', "Domus", no.222, 1947. Quoted in Pozzi (2015).

“Le Corbusier’s 1936 plan for Buenos Aires sums up in architectonic terms what I have said [...] Many younger man drew from this project [...] but it looks as if European architecture had not in the least been transformed, as if it had been reproduced here in parts, in a city whose elements were imported from other Latin countries [...] The heavy lines drawn by Le Corbusier on the regular pattern of the Spanish “cuadras” are very much in evidence, and it hardly seems likely that any other alternative will spring up from the life of the city”.⁵⁷

Ultimately, punctuated by personal considerations and editorial strategies instrumental to the construction of a national architectural discourse, even the external vision applied by the Italian magazines taken as a post-war cultural institution resonates with the surveys conducted by MoMA, albeit with different means and other specific intentions: the search for a homogenous and impersonal attitude towards modern architecture belonged to the United States, while the occupation of the ambiguous discourse around the concepts of place, space and environment seemed to provide the field test for its domestication. For this reason, one of the objectives of this research is to reconsider the impact caused by the migration of ideas circulating in the post-war period which undoubtedly illuminated the decade of 1950, even if, according to Jorge Francisco Liernur ‘it was an ephemeral fact and for its protagonists it was barely the light of a moment’.⁵⁸

In fact, in mid-1950s, a severe crisis strikes most of the South American countries leading to the failure of the expansion projects. And also those expectations placed on the just described circulation of ideas begin to fade when pragmatism that starts dominating the politics of the period caused the failure of the radically modern proposal. But it is precisely in these intricate plots that a project of informal education will be revealed, uncovering an alternative trajectory punctuated by interwoven design episodes distinguished by their architectural ambitions applied to the (r)evolution of educational spaces they conceived according to the principles of flexibility and openness, well before they became banners for university revolution or neoliberal knowledge economy.

57 Aldo Rossi, ‘Argentina, Buenos Aires’, in “Casabella-Continuità” no.285, 1964, p.5. See also Ernesto Nathan Rogers, ‘Note sull’Argentina’, p. 3.

58 In Jorge Francisco Liernur (1995), p.80.

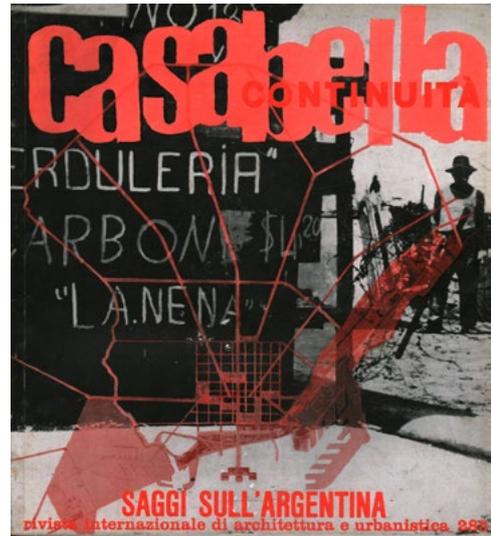


FIG. 35
Special issue of "Casabella-Continuità" (no.285,1964)

FIG. 36
Esplanade dei Ministeri, Brasilia 1958.
Photo by Paolo Gasparini in "Zodiac" (no.8, 1992)



3. *Forms of Reforms.*
The informal as an ambiguous argument in a freedom discourse

Lo que caracteriza a la América Latina de hoy en el plano de la cultura es el súbito descubrimiento de que todo es cuestionable, de que hay que repensarlo todo. Esta lucidez, de repente lograda, no es probablemente una conquista de nuestra racionalidad, sino una proyección sobre la conciencia latinoamericana de alteraciones estructurales que le abren nuevos umbrales de percepción.⁵⁹

Darcy Ribeiro, 1973

Within the context of circulation of ideas that have crossed Latin America and have shaped its external perspectives, the concept of informality occupies center stage. In the late-1960s, Latin American architects were operating in poor urban communities, usually without any institutional support, and their colleagues from the rest of the world became even more fascinated in this new kind of debate around unplanned interventions after the pioneering issue of “Architectural Design” (n.33, 1963), focused on the question of housing in response to the massive expansion of South American cities resolved as informal settlements. Rediscovered as a distinctive quality of a post-utopian future, informality was seen as a way to overcome the failure of ideas attributable to the Modern Movement, and a way to criticize the ideology of state-controlled planning. This counter-modernist approach to the project has increasingly taken on the connotation of a paradigm, as informality represented a condition that offers its own set of solutions:

“Informal urbanism, previously the domain of political economists and social scientists, has recently seen a revival in interest in both mainstream architecture as well as geography, urban studies and critical literature. Informality, or that which exists outside of formal legal-judicial frameworks, has been viewed in myriad ways since its emergence in the early 1970’s in the published works of Keith Hart. Too many to be summarized here, however it is commonly understood as ‘a state of exception and ambiguity’ or as a dynamic that releases energies’ within the urban landscape – slums, pavement-

59 Darcy Ribeiro. *La universidad nueva: un Proyecto*. Buenos Aires: Ciencia Nueva, 1973.

hawkers, self-organising urban services [...] Informality may be also defined as ‘a mode of production of space defined by the territorial logic of deregulation’ as a symptom of neoliberal economics or ‘a survival strategy and [...] a way of evading or manipulating power’ traditionally associated with the urban poor”.⁶⁰

Although architects were not the only ones to discover informality, their complicity with this concept is persistent and controversial. The Peruvian economist Hernando de Soto is internationally renowned for his writings on the informal economy, but it is interesting to note how his vision is permeated with architectural features emerging from the conversations with the former Peruvian president Fernando Belaúnde, who was among the supporters of the ambitious PREVI project by inviting the late-modernist star architects to Lima to propose their habitational solutions:

“He was a trained architect and an eminent public housing specialist, and he brought out a big picture and said, ‘This is something I’ve done – the Torres de San Borja – and this is the kind of thing that you’re promoting’. He showed me an informal settlement, a Lima shantytown, and said, ‘What do you think about these two pictures?’. I replied, ‘Well you’re looking for a fight...so I like the informal settlement better’. He asked why, to which I responded: ‘To begin with, the thing that you did before, Residencial San Felipe, you did it for these people – supposedly the poorest – and after two years 90 per cent of them had moved out ... because you didn’t figure out right the social housing. It was too expensive for them. They would have rather had part of that income go towards a smaller house, probably not so well located, but also have an automobile, or have some education. So that’s why 90 per cent moved out in two years. That’s a lot of moving out. So the question is, how much demand can you satisfy according to a government’s idea of what looks like

60 The term *informal* enters public vocabulary in the early 1970s to designate all unregulated activities, largely through the work of economist Keith Hart who derived the concept from his field research in Ghana. After a series of global crises in the 1970s that led to the retreat from planned economies, the notion of the informal economy was embraced as a development strategy for the so-called Global South. Camillo Boano has recently investigated the evolution of this concept of informality, referring in this concise text to: A. Roy, *Urban Informality. Toward an Epistemology of Planning*, in “Journal of the American Planning Association” (no. 2, 2005); C. Balmond, ‘Informal’, in M. Gausa et al. (eds.), *Metapolis Dictionary of Advanced Architecture: City, Technology and Society in the Information Age* (Barcelona: Actar 2006); Daniela Fabricius, ‘Resisting Representation: The Informal Geographies of Rio de Janeiro’, in “Harvard Design Magazine” (no.28, 2008).

an orderly city? But I tell you, I don't go into those things. What I do go into is the general idea that you've got to ask what [people] want, and it's never exactly what you would like them to have".⁶¹

For this reason, De Soto advocates the development of mass housing for through economies of scale, where inhabitants could build more for less cost, and receive titles and utilities from the inception of their project.⁶² However, tolerance towards informality became an instrument of consensus even within the architectural discourse, since for those architects who chose to work with, and not against, informality was considered the only paradigm able to accomplish the true desires and choices of their clients in designing their living environments. As claimed by the illustrious architects invited to PREVI:

"Without malleability you cannot have cultural expression – all you can get is a top-down notion of how people should live".⁶³

Hence, the role of the architect is reassessed as a facilitator for people's potentials, enabler of processes and translator of inputs into space. This against the government standard logic and mass housing uniformity, replaced by non-programmed possibilities for housing, public spaces, infrastructures and economic activities. Consequently, following Daniela Fabricius' counterpoint:

"An undocumented worker, once called *unemployed*, then 10 years later *illegally employed*, had by the 1980s become an *entrepreneur*. Rather than resisting informality, this new approach allowed it to become a defensible and self-sustaining concept".⁶⁴

61 See Angus Laurie, 'Formalisation: An Interview with Hernando de Soto', in "Architectural Design" no. 211, 2011. In 1966, president-architect Fernando Belaúnde held an international competition in conjunction with the United Nation to devise a solution to the Lima's housing problem. The list of participants included James Stirling, Aldo van Eyck, the Metabolists, Charles Correa, Christopher Alexander and Candilis, Josic and Woods, among the others. There were 13 international teams and 13 Peruvian, but PREVI was just a chapter in a long story about modern planning in Peru. See Sharif S. Kahatt, *Utopías construidas. Las unidades vecinales de Lima*, Lima: Pontificia Universidad Católica del Perú, 2015.

62 De Soto argued that the self-built informal cities of Latin America were admirable and beautiful, but very expensive for their inhabitants. The cost of informal self-construction is three times as high as the same construction carried out by a developer. For a deep examination on this theme see Helen Elizabeth Gyger. 'The Informal as a Project: Self-Help Housing in Peru, 1954–1986', PhD Diss. Columbia University, 2013.

63 Charles Correa quoted in Justin McGuirk, *Radical Cities: Across Latin America in Search of a New Architecture* (London: Verso, 2015).

64 Daniela Fabricius, 'Looking Beyond Informality', in "Architectural Design" no.211, 2011, pp. 144-9. In making her argument, Fabricius refers to the fact that the 'wageless life' of an informal worker has no more solved previous problems of unemployment than slums have 'solved' the question of housing. The most successful projects in informal communities, she argues, seem to be the ones that help to integrate these neighbourhoods into the city and provide residents with services comparable to those in the 'formal' city. In

In this acceptance to ‘live informally’, Fabriucius continues, it is all too easy to forget that it corresponds to ‘live precariously’, and therefore informality should ‘not represent a solution or an end, but a new set of conditions and challenges’.⁶⁵ However, rather than dwell on the overall evolution of the concept of informality which continues to offer thought-provoking reflections in the contemporary debate,⁶⁶ this research is most interested in exploring the emergence of such entrepreneurial *attitudes* that came under different names and formulations to be incorporated into university institutions since the late-1940s in Latin America, also intersecting with other radical thoughts in the field of education.

As said, university was considered a driving force of the Modern Movement agenda and campus design represented the epicenter of urban and architectural development in South America since the early decades of the twentieth century, materialized in magnificent and iconic examples in the region’s capitals like Caracas, Bogotá and Mexico City. Before the worldwide movements against authoritarianism and conservatism as identified in the power-structure of university institutions would explode in the late-1960s, concepts such as flexibility, adaptability, openness, spontaneity were used to design university campus in Tucumán, Santiago, Concepcion, Mendoza, and Buenos Aires, that is to say, a project of informal education dispersed in the nodes of an alternative map where latent utopias were conceived, designed and – partially – built by peripheral exponent of post-war modernism. These universities and their architects faced academic reforms as a pretext to drive forward the experimentation of a critical thought about informality by revealing South America as a laboratory of ideas still giving prominence to their architectural ambitions in considering formal implications in the design of education spaces – and beyond the overworked set of survival strategies for self-organization at the base of the much-acclaimed duo South America-informality.

It is a well-known fact that the abovementioned pioneering issue of “Architectural Design”, was curated by the Chilean editor Monica Pidgeon who invited John F.C. Turner as co-curator after meeting him in Lima in 1962, while the British architect was already working in the informal settlements of Peru since 1957. Turner’s central thesis was that housing is best provided and managed by

other words, these interventions do not insist on preserving informality, but work towards regularising and formalising these neighbourhoods.

65 Fabriucius (2011), p. 48.

66 See Camillo Boano and Giorgio Talocci, ‘Inoperative design ‘Not doing’ and the experience of the Community Architects Network’, in *CITY* no. 21, 2017. The authors describe the CAN experience via Agamben’s theoretical framework, as a network of practices whose operations attempt to render inoperative, to profane, those processes and projects that are the typical product of the operations of National Housing Authorities and commercial developers.

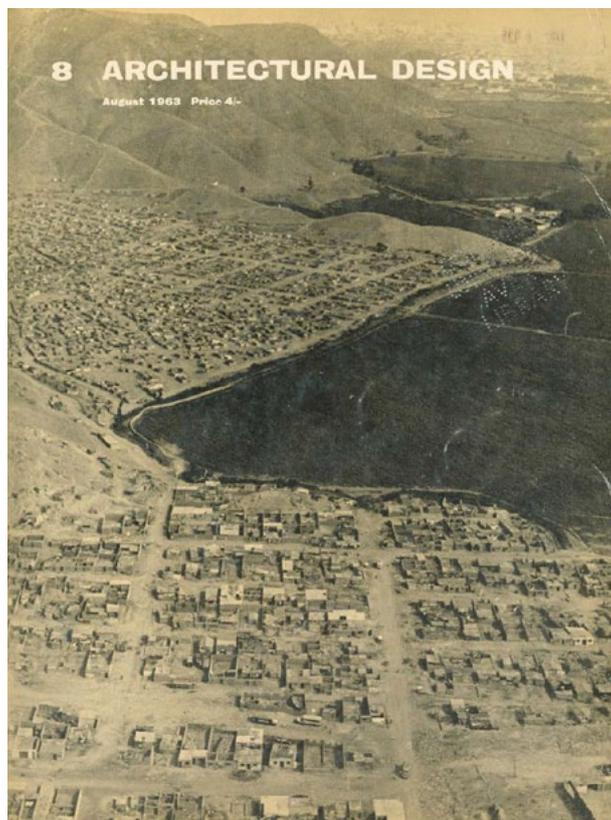


FIG. 37
“Architectural Design” no.8 (August 1963)

those who are to dwell in it, rather than being centrally administered by the state. Through a number of empirical studies, he demonstrated that neighbourhoods designed with local groups worked better since people were experts on their own situations, and thus what should be given to them is the ‘freedom to build’, a phrase that became the mantra for a future generation of architects.⁶⁷ In addition, in the self-building and self-management of housing and neighbourhoods Turner asserted that the global North had much to learn from the rapidly developing cities of the global South, an objective that will be pursued through the institution of study programs in London and Boston MIT. In contrast with the *aided self-help* policies supported by the World Bank, for which Turner is frequently credited, his thinking shift was not only about prioritizing experience and local know-how over technocratic and professionalized forms of knowledge. But that residents should also have control over their neighbourhood’s finances and management.

What is lesser known, but extremely relevant in tracing the climate of circulation of ideas, is that before John F.C. Turner embarked on his career in Latin America he had graduated from the Architectural Association in London, where the two Argentine architects-educators Horacio Caminos and Eduardo Catalano were also called to teach for some time immediately after having initiated the ambitious educational project in the peripheral region of Tucumán (1947). A connection that will recur years later, when Turner would have thought the Development Planning Unit (DPU) in Boston MIT, that is where the two Argentine architects were already invited to teach in conjunction with their second educational project: the project for the new Ciudad Universitaria de Buenos Aires supported by the rector Frondizi’s dream for a distinguished ‘research university’.⁶⁸

Admittedly, use of the word *informality* in the field of education is mainly due to radical thinkers and educators – not architects. Paulo Freire’s instigations to dialogical practices and Ivan Illich’s sense of conviviality to replace a schooled societies, were among the most influential ideas that shared the same conducive environment with those ‘peripheral exponents’ of the modern architectural discourse selected in this research. Certainly, this circulation in the case of thinkers, intellectuals and educators was strictly dependent on significant

67 John F.C. Turner, *Freedom to Build: Dweller Control of the Housing Process*, New York: The Macmillan Company, 1972.

68 For the connections between John F.C. Turner with Horacio Caminos and Eduardo Catalano see Chapter 5, which includes notes from a conversation between the author of this work and Carlos Caminos, son of Horacio Caminos. In 1969, Horacio Caminos, John F. C. Turner, and John A. Steffian edited *Urban Dwelling Environments An Elementary Survey of Settlements for the Study of Design* Determinants, Cambridge Mass.: MIT Press. For insights into Turner’s network see Roberto Chavez with Julie Vilorio and Melanie Zipperer, ‘Interview of John F.C. Turner, World Bank, Washington DC, 11 September 2000’, in “La Collective”, 1 March 2010.

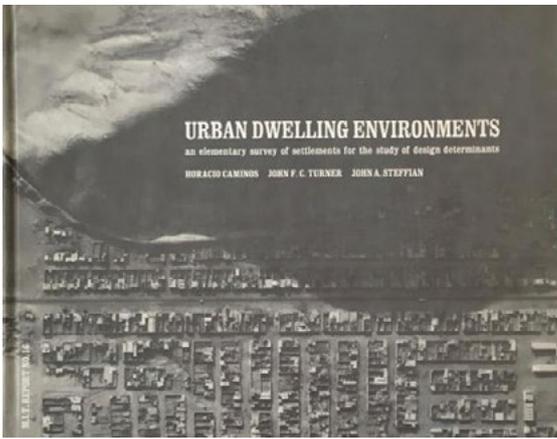


FIG. 38
John F.C. Turner and Horacio Caminos (Chapter 5)
will coordinate the research project "Development Planning
Unit (DPU)" at MIT University in the mid-1970s.

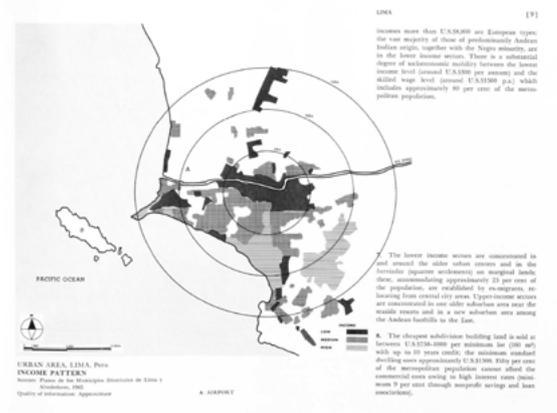
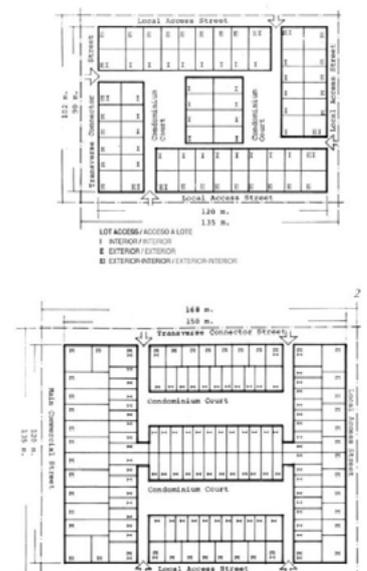


FIG. 39
Horacio Caminos schemes (mid-1970s)
demonstrate the search for a precise formal
organization for the urban development.
Courtesy of Carlos Caminos



differences between countries that accepted and those that strongly rejected their ideas. Paulo Freire's exile in Chile between 1964-1969 best exemplifies this condition. Freire lived in Chile during the presidency of Eduardo Frei, working for Movimiento de Reforma Agraria Demócrata Cristiano and Organización para la Alimentación y la Agricultura (UNESCO).

Freire defines 'conscientização' as to become aware of social, political and economic contradictions and to act against the oppressive elements of reality. In making this argument, education develops its full potential as 'práctica de liberación' best achieved by practicing dialogue between peers. These tactics on collaboration between students and teachers which eradicate distinctions between work, study and life are discussed in his famous *Pedagogy of the Oppressed* (1970). While considered 'perhaps the most significant educator in the world during the last half of the century' in the words of Herbert Kohl,⁶⁹ the relative marginality of Freire's work in the school-of-education curricula is partly due to the fact that most of those schools were informed by models that characterize the very culture of ideologies and practices to which Freire was in opposition all his life. This did not happen in Chile, the place where Paulo Freire elaborated his first manuscript of *Pedagogía del Oprimido* during his exile in constant dialogue with the intellectual circle that was favouring academic reforms at the Universidad Católica de Chile.⁷⁰

In fact, as a lesser known fact, Freire spends his time in Santiago de Chile in contact with Fernando Castillo Velasco, one of the most prominent personalities in the Chilean post-war architectural scene. Together with some of his university colleagues – Carlos Bresciani, Héctor Valdés and Carlos Huidobro – they established the architectural office BVCH which produced some of the most remarkable experimentations on modern architecture in Chile, such as the Unidad Vecinal Portales (1954-1966) and the new campus for the Universidad Técnica del Estado in Santiago (1957-1965).⁷¹ After being appointed full professor at the Universidad Católica de Chile in 1958, Fernando Castillo Velasco would become rector of the same institution between 1967 and 1973 – forced into exile

69 Herbert Kohl, 'Paulo Freire: Liberation Pedagogy' in *The Nation*, May 26, 1997, p. 7.

70 From a conversation between the author of this thesis and Jorge Fiori, son of Ernani Maria Fiori and currently professor at the Architectural Association in London (December 2019). Fiori's contribution can be recognized in the prologue of the Chilean version of *Pedagogía del Oprimido*, dated 1967 and titled 'Aprender a decir su Palabra'. See Chapter 2 for a better understanding of this episode.

71 Both built on former university agricultural research lands, the slender five-storey housing blocks of Unidad Vecinal Portales were designed to minimise their impact on the site: open bridges and ramps develop a network of public pedestrian circulation enhanced by a street within the blocks through which cars can circulate. It will be mentioned by Banham as the only brutalist example from Latin American architecture in Reyner Banham, *The New Brutalism: Ethic or Aesthetic?*, New York: The Reinhold publishing Corp., 1966, p.89. Reciprocal implications with adjacent university campus will be explained in Chapter 2.

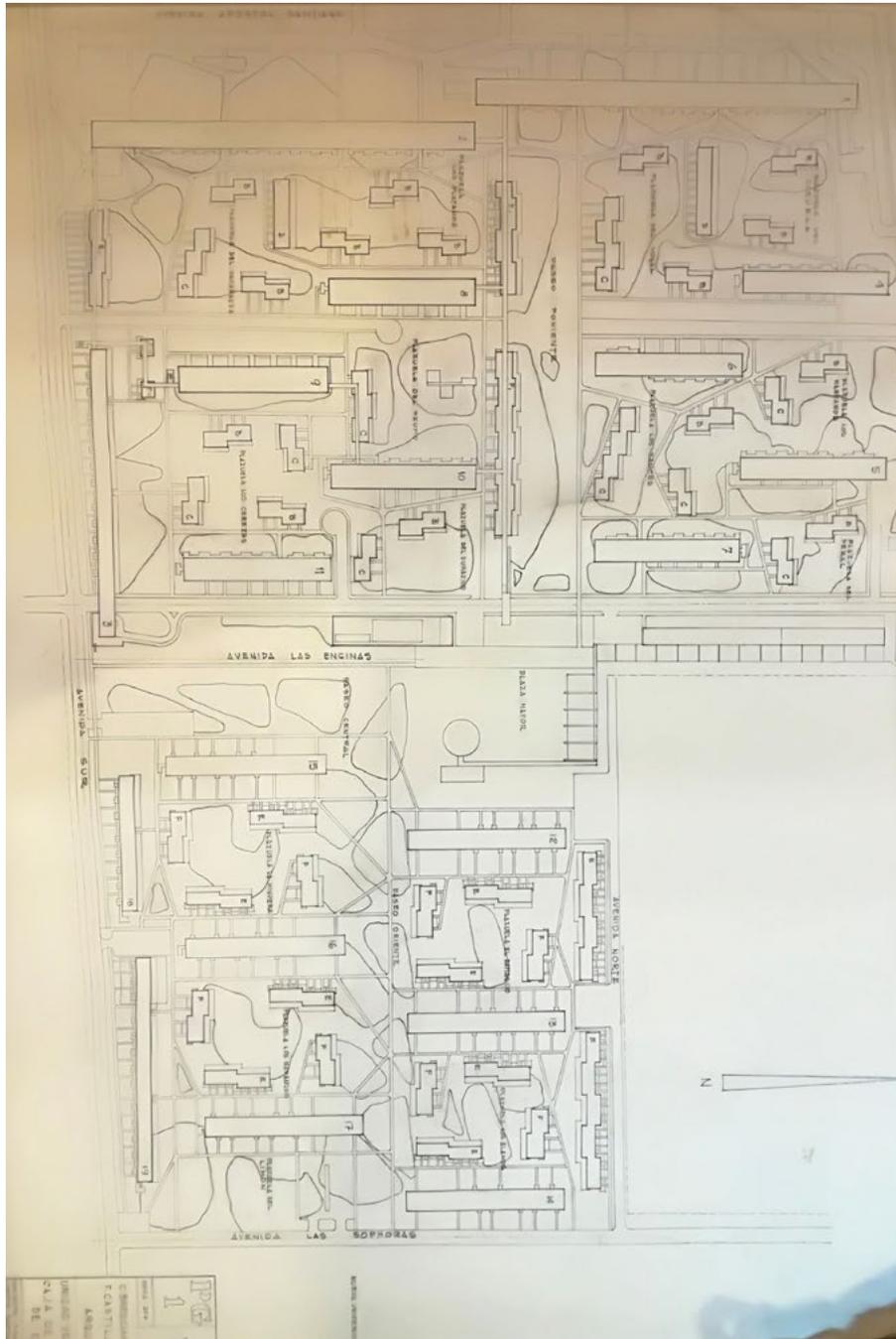


FIG. 40
 Early stages of BVCH design proposal for Unidad Vecinal Portales
 collective housing complex (mid-1950s) in the university land.
 Archivo de Originales, FADEU.
 Pontificia Universidad Católica de Chile

by the new dictatorship. A striking episode in this story is that the reform process he was going to lead had been preceded by an experimental phase within the university that had already produced a revolutionary idea of university campus: a megastructure conceived by German – m young professor of 2nd year design studio – based on relational and immaterial character of education against mere professionalization inputs, something that surprisingly resonates with the Freire’s critical concept of ‘banking’ in which the scope of action allowed students to extend only as far as receiving, filing, and storing the deposits.⁷²

Just one year after Freire’s thoughts began to circulate between Latin American regions and then to the Western world, Ivan Illich will publish his written work which professed deschooling society (1971):

“A radical alternative to a schooled society requires not only new formal mechanisms for the formal acquisition of skills and their educational use. A deschooled society implies a new approach to incidental or informal education.

Incidental education cannot any longer return to the forms which learning took in the village or the medieval town. Traditional society was more like a set of concentric circles of meaningful structures, while modern man must learn how to find meaning in many structures to which he is only marginally related [...] Effective participation in the politics of a street, a work place, the library, a news program, or a hospital is therefore the best measuring stick to evaluate their level as educational institutions”.⁷³

To trace a profile of an educator like Ivan Illich is not an easy task. Placed within a specific historical context characterized by radical criticism against capitalist society and its institutions, Illich is the writer who condemns the school system for exercising anachronistic functions that fail to keep pace with change, serving only to maintain the status quo and protect the structure of the society that produced them.⁷⁴ A lively pedagogical debate between Illich, Freire and other

72 This episode will be the main focus of Chapter 3.

73 Ivan Illich, *Deschooling Society* (London: Marion Boyars, 1971), p.11.

74 Ivan Illich was born in Vienna in 1926 and attended a religious school from 1931 to 1941. After being expelled under the anti-Semitic laws because of his Jewish maternal ancestry, he completed his secondary studies at the University of Florence in Italy and then studied theology and philosophy at the Gregorian University in Rome, later obtaining his doctorate in history at the University of Salzburg. Although earmarked by the Vatican for its diplomatic service, Illich opted for a pastoral ministry and was appointed assistant parish priest to a New York church with an Irish and Puerto Rican congregation. He worked there from 1951 to 1956, when he left to take up the post of Vice Rector of the Catholic University of Ponce in Puerto Rico. See Marcela Gajardo, ‘Ivan Illich’, in “Prospects: the

South American thinkers was connoting education as a life experience to be practiced outside the formal structures that continued to provide mere schooling:

“The alternative to dependence on schools is not the use of public resources for some new device which ‘makes’ people learn; rather it is the creation of a new style of educational relationship between man and his environment”.⁷⁵

If Illich’s contribution in adding a pedagogical component to the political critique of the nexus of city, labour and capitalism will become explicit, especially when his argumentations start to be conveyed to Europe and Italy and to be incorporated into radical movements that were breaking into the architectural discourse since the early 1970s,⁷⁶ what appears underexplored is the relationship with the concept of *environment* applied by the Italian-born architect Enrico Tedeschi to the new educational project for the Universidad (libre) de Mendoza (1960-1965). A peculiar environmental connotation not only supported Tedeschi’s theoretical apparatus, but it would have inspired his architectural project following a principle of dissolution of the university institution in the ecological system of the city of Mendoza and its region initiated in the late 1950s.⁷⁷ In actual fact, Enrico Tedeschi’s campus project for Mendoza results as a radical adaptation to a singular condition of urbanity of the ambitious project of Tucuman – interrupted in the mid to late 1950s – experienced by the Italian architect-educator as a member of the Instituto de Arquitectura y Urbanismo (IAU) founded in 1947.

As mentioned, Argentina and Chile were among the countries held on the sidelines of the post-war architectural discourse but they had instead shared a period of protests and rebellions against the authority of the university system in the first decades of the twentieth century which had propitiated both immediate results and a long path of reform in the field of higher education culminated in the 1940s. In the particular case of Argentina, the Reforma Universitaria sanctioned by the Manifiesto Liminar (1918) proclaimed the acquisition of ‘autonomía, cogobierno y extensión’. If the first two terms are intuitively

quarterly review of comparative education”, no. 3/4, 1993.

75 Illich (1971), p.32.

76 See Francesco Zuddas ‘Radical Notes: Archizoom Re-Viewed via Ivan Illich’, in “Architecture and Culture” no.8, 2020, pp.1-24. In 1973, Andrea Branzi, founder of Archizoom, wrote a short review of Ivan Illich’s book *Deschooling Society*. The review constituted the fourth of 27 “Radical Notes” he published in the journal *Casabella* between 1972 and 1976 that could be read as a coherent pedagogical theory, the practical output of which was *Global Tools*, a counter-school promoted by Branzi and other members of the Italian Radical Movement.

77 This will be the main topic of Chapter 4.

FIG. 41
Urban facade of Tedeschi's university building in Mendoza (1962).
Image from "Summa" (no.17, 1969)

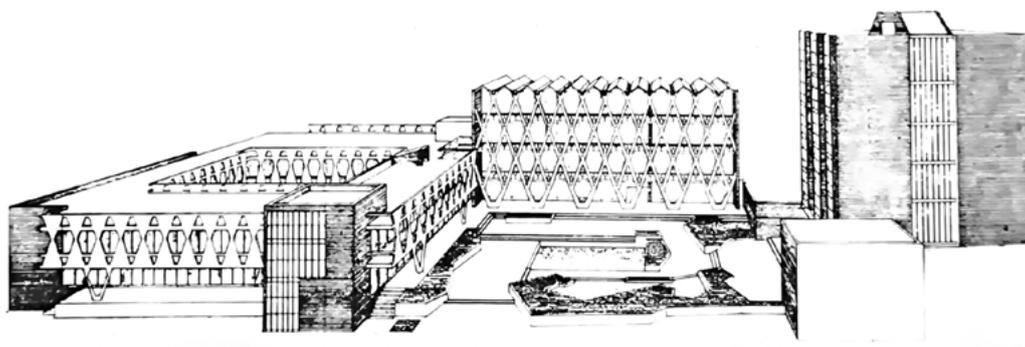


FIG. 42
Tedeschi's university campus within the city of Mendoza.
Image from "Summa" (no.99, 1976)

linked to the political independence, with a public university choosing its own authorities, statutes and programs without interference from state power and claiming the inclusion of students in the university institutional apparatus, the third term arouses the greatest curiosity because it anticipates a precise intention in promoting reciprocal relationships between the institution and the immediate context in which it operate. In fact, 'extensión' emphasizes the sense of extending the presence of the university in the social environment intimately relating its knowledge production to people, that is receiving inputs from the real world outside its enclosure and return widespread knowledge through its concrete actions.

What is worth noting here is how this precise concept of 'extensión' has been constantly reshaped with respect to institutional educational projects during the long reform process mentioned above, starting with the case of Tucuman which functioned as the laboratory of ideas for the figure of the architect-educator outlined in this research. If the State intervention in the ambitious project of Tucuman – which included the reorganization of the university bureaucratic apparatus and the construction of the new Ciudad Universitaria – affected the principles of political autonomy proclaimed in the Manifiesto Liminar, the principle of 'extensión' assumed the primary position within the new educational project encapsulated in role of the Institutes with its essential functions, now required by law, to connect their research with the specific needs of the territory. In other words, the concept of 'extensión' originated from a climate of protests and contestations is institutionalized and incorporated into a new project of education.

Finally, what should be considered in the reciprocal relationships between radical thinkers and architects-educators operating in the same context is the contested territory of a project of informal education. If the pedagogical debate that had emerged in some regions of Latin America demonstrates that the term *informality* applied to the field of education entered the vocabulary of radical thinkers more significantly – although fleetingly – than in the case of architects-educators, the latter were already contributing to the spatialization of radically changed educational projects instigated from within university institutions. In fact, this is where one of the crucial aspects of this research emerges, that is, not just investigating a moment in which education was intended as a project. But to reveal this project as a contested territory between bureaucratic and anti-bureaucratic structures when the still blurred lines made the concept of informality coincide with the most articulated, complex and ambitious object of this dispute.

Peculiarly, a project of informal education arises from within the bureaucratic apparatus of university institutions appropriating relational, collaborative, multidisciplinary, integrational, flexible, and versatile *attitudes* to better understand and effectively respond to the real context in which they operate, in the first instance. Secondly, while assuming university as a platform for change means to adapt the academic organizational structure anticipating the transition towards an increasingly immaterial production of knowledge *horizontally* generated through collaboration and interdisciplinarity that could be better guaranteed by the fabrication of a more flexible subject compared to the one rigidly encapsulated in a technical, professional and hard-skill education.

All these aspects provide a commentary on the contemporary discourse on education and the recent institutionalization of the concept of informality within it. The renovation of pedagogical models and learning according with the new paradigm, finds confirmation in the theoretical discussions and European recommendations that for the ‘successful transition to a knowledge-based economy and society’ claim a broadening of the spectrum of education redefining its scope introducing three categories: formal, non-formal, informal. The last is assumed as the most natural consequence of each individual’s everyday life, generally described as fortuitous, haphazard and non-intentional.⁷⁸ For this reason, ‘informal environments represent a considerable reserve of knowledge and could constitute an important source of innovation’ in order to reshape the whole choreography of *learning environments* where every hierarchical relationship and disciplinary barrier could be effectively dismantled in the spirit of *life-wide learning*, that is, the spatially distribution of learning in every area of the individual’s life completing the already known temporal connotation of *life-long learning*.

Partly, this new mandate has been recently re-discussed as a ‘silent explosion of learning’,⁷⁹ by observing that some consequences should be reconsidered starting from the rise of the ‘new language of learning’ which has now completely replaced the term *education*. This based on the ethos of *learning* as a natural and inevitable process that in replacing teaching with

78 The ‘Memorandum of Lisbon (2000) introduces this distinction as a recommendation in the European context. More generally, reference is made to the transformation process begun with the Bologna Declaration of 1999 in which knowledge was reinterpreted as an instrument in the hands of the student-entrepreneur able to self-implement. Thus leading to a system of validation and recognition of ‘learning outcomes’, described as knowledge-skills-competences acquired in any context, and certified by eight levels of qualifications coming out of different study paths. See the chapter ‘Virtuosity’ in Gert Biesta *The Beautiful Risk of Education* (2013), pp. 119-124.

79 John Field, *Lifelong learning and the new educational order*. Stoke-on-Trent, 2000.

activities or in the fabrication of a neutral profile such as the most generic *learner*, it has not been questioned enough about its individualistic and individualizing tendency:

“To denaturalize the idea of learning – that is, to take it out of the domain of inevitability and necessity – can be understood as an attempt to take the strength out of the idea of learning, not only in order to show that it is a more complicated and contentious notion than many would believe but also to show that learning is not something that has power over us – something to which we should subject ourselves – but rather something that we should have power over”.⁸⁰

To counter the pervading *learnification* and its paradoxical predictions of any jolt of informality, Gert Biesta proposes to rediscover ‘the beautiful risk of education’ in rediscovering, if anything, its ‘weak’ dimension.⁸¹ Thus suggesting the most interesting angle from which to look at the work of those architects-educators incorporating their personal notion of informality within university projects still taking the risk of architectural and urban form.

80 In Gert Biesta, *The Beautiful Risk of Education* (London: Routledge, 2013), p.60. Among those who provide a commentary on contemporary educational discourse, professor of Public Education Gert Biesta is the one who shifts the reflection on the controversial process of *learnification*: “One significant change is the ongoing individualization that [...] can also be found ideologically, for example in the emphasis on the need for individuals to adapt and adjust to the demands of the global economy, in the reformulation of lifelong learning as the acquisition of a set of flexible skills and competencies, and also, of course, in the subtle but crucial semantic shift from “lifelong education” – a relational concept – to “lifelong learning” – an individualistic concept”. See Biesta (2013), p.66.

81 See Biesta (2013), p.137.



FIG. 43
Territorial model of Ciudad Universitaria de Tucuman (1947)
MIT Distinctive Collections Archive

4. *Form and pedagogy.*
A laboratory of design experiences towards the campus and the city

It is worth bearing in mind that informality, the word that was used in the eighteenth and nineteenth centuries to describe the new domestic geography, was not an abolition of formality by an alternative constitution of relations between many diverse things.⁸²

Robin Evans, 1989

To give the framework of the project of informal education, a question remains open about the work of architecture in the mechanism that connects the design of space and its formal implications with a broad concept of informality. In this terms, Robin Evans noted that the *room* became a new subject matter for architectural drawing from the mid-eighteenth century, arousing his interest in scrutinizing representations of interior space that emerged as the privileged territory in which informality comes into play. For Evans, the interior emerged in a spatialized sense in the early nineteenth century when the distribution of furniture became linked to the idea that there were a variety of ways of occupying a room:

“It was the call for variety within the social landscape of the room that broke the hallowed ring of peripheral furnishing”.⁸³

During the last three decades of the eighteenth century, a brief equilibrium was achieved between house planning, the method of representing interiors, and the distribution of furniture. According to Evans, such a shift in distribution both for furniture and for a room's occupants, originates with Humphrey Repton whose call for variation within the rooms corresponds, in the sophisticated analogies offered by the British architectural critic, with the variety of rooms within the house in the case of Robert Adam's architectural explorations around the characteristic circuit of rooms destabilizing the

82 Robin Evans, 'The Developed Surface. An Inquiry into the Brief Life of an Eighteenth-Century Drawing Technique' (1989) in *Translations from Drawing to Building and Other Essays*, London: Architectural Association, 1997, pp. 195-231. On this drawing technique, see also Laura Jacobus, 'On "Whether a Man Could See Before Him and Behind Him Both at Once": The Role of Drawing in the Design of Interior Space in England, 1600-1800', in "Architectural History" no. 31, 1988, pp. 148-65.

83 Evans, 'The Developed Surface', pp. 214-15.

floor plan.⁸⁴ Repton's target was to break the circle of chairs, which kept the furnishings anchored to the walls, producing a redolent, obsequious and outmoded atmosphere still imbued with hierarchical relationships. A target made viable by the fact that the furniture had become lighter and mobile, together with the aesthetic emancipation furniture from the wall surface.

However, at the core of Evans' inquiry was rather the representational technique and its controversial evolution in attempting to illustrate the aforementioned sense of variety. The *developed surface* drawing, the one which shows all of the inside elevations of any given room folded out relative to the room's plan, had hitherto maintained a sense of decorative treatment of internal walls as flat surfaces although outstripping what could be achieved through the traditional architectural section of inside elevations that could only be shown at any one time.⁸⁵ In Charles Rice words, these emerging representations were *interiors* in a historically specific sense,⁸⁶ but what emerged is the inadequacy of the developed surface technique in representing what in Evans' perception is a room converted into 'a miniature internal landscape' where 'the furniture occupies the room and then figures inhabit the furniture':

"The relation between body, dress, furniture, architecture and intercourse attains a truly comprehensive unity in these pictures [...] This littering of the floor breaks up its consistency, giving it a more complex, diverse geography which aids and abets intimacy. [The room] is now a topography of varied elements distributed picturesquely across the floor, without evident formality, but nevertheless with concern for the niceties of subdivided, heterogeneous association. The emphasis had moved from the wall to the floor".⁸⁷

If Adam and his contemporaries challenged the hierarchical organization of the plan, Repton and his contemporaries colonized the open floorspace of the room with the developed surface drawing that kept recording of all mutations in this escaping from the tyranny of hierarchy. However, what Evans noted

84 Evans labels Humphrey Repton a 'belated champion' of variety, since this tendency had been heralded in the 1750s in Paris.

85 "Earlier drawings of a similar kind can be found in relation to town squares or formal gardens with their perimeter elevations folded out, while the novelty of the later application of this technique was that it made actual individual rooms the subject of architectural drawing, rather than the enlarged room-like areas of gardens and squares". From Evans (1989), p. 203.

86 Charles Rice, *The emergence of the interior: architecture, modernity, domesticity* (New York: Routledge, 2007).

87 Evans (1989), p. 219.

FIG. 44
Saxham House by Robert Adam, 1779
Image from Evans (1989)

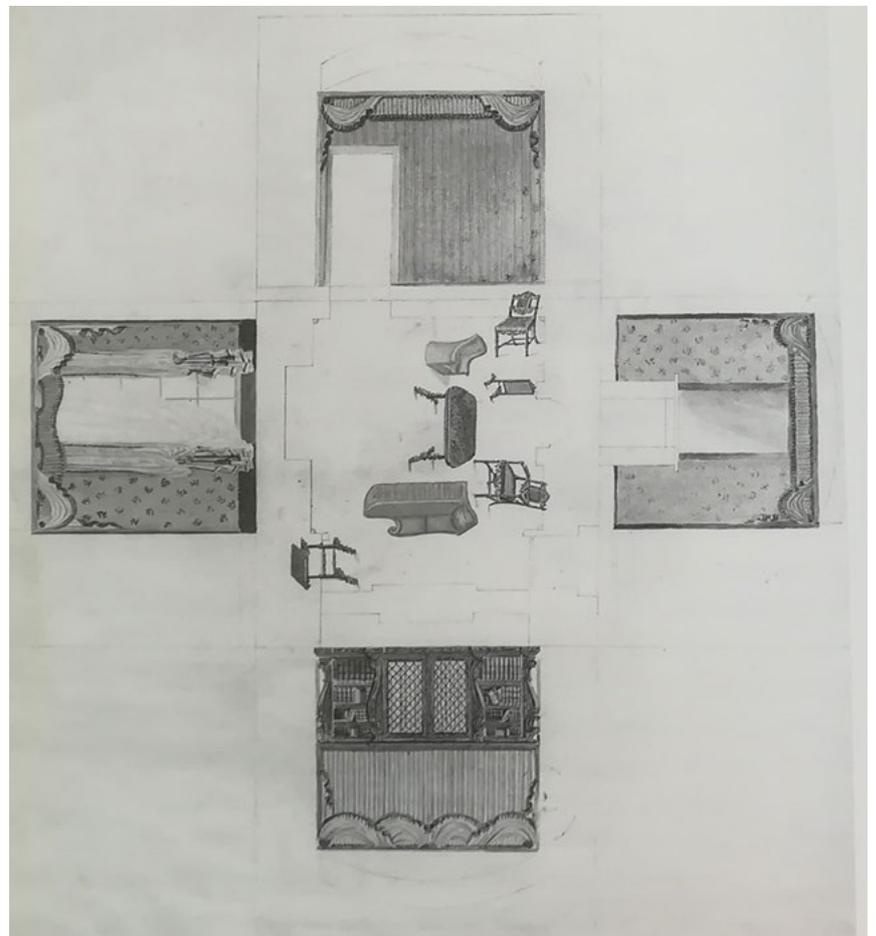
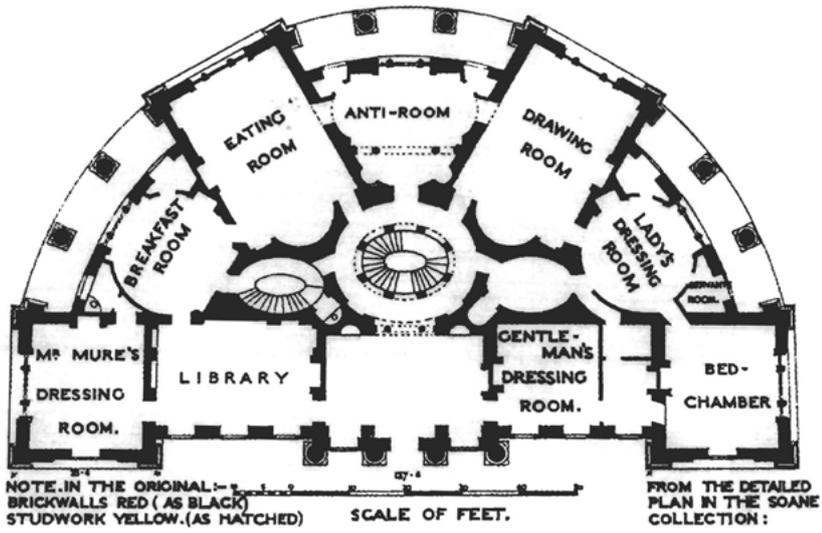


FIG. 45
Furnishings for a small drawing room
Gillows and Co. 1882
Image from Evans (1989)

through the scrutiny of these mutations is that escape was achieved only by ‘mobilizing the furniture, not altering the formation of the space’ and this paved the way for a sort of hierarchy based on the division between circulation and occupation. Therefore, when asked whether the difference between Adam’s work and Repton’s is perhaps the difference between a domination of the idea of circuits, in one case, and informality in the other, Evans is keen to point out that:

“Informality, a word used in the eighteenth and nineteenth centuries to describe the new domestic geography, was not an abolition of formality through an alternative constitution of relations between many different things. For example, to escape the tyranny of obsequious and unitary conversation, the empty space of the room, which offered a kind of freedom of its own, was invaded by furniture which then made the definition of the action much more specific than before”.⁸⁸

Certainly, this episode represents a tangible architecture ambition effectively deployed against authority, even if at the expense of a greater involvement of one’s own intimacy. Especially when we consider that during the same period to which this variegated domestic geography refers explored by means of the developed surface, the great institutions of modern life were being formed with prisons, workhouses, factories and schools architecturally conceived for establishing human relationships.

The case of the school occupied with making the child as a future citizen within a process of social formation, can be also scrutinized according to its spatial implications of two rival models literally exported all over the world: one disciplinary, the other pastoral. That is to say the early 19th century monitorial school, and the mid to late 19th-century moral training school put in contrast by Allen Ansgar under the same principle of ‘examined life’ (2013).⁸⁹ As for the first model, a specific interest in the spatial connotation was shown by Joseph Lancaster (1810) and Charles de Lasteyrie to describe their *educational system* with a main focus on three components: the project of the teaching room, its organization into a larger or major entity articulated in different spaces, the extension of the system to the national scale.⁹⁰ In Foucault’s words, it responds

88 Evans (1989), p.226.

89 See Allen Ansgar, ‘The Examined Life: On the Formation of Souls and Schooling, in “American Educational Research Journal”, no. 2, 2013, pp. 216-250.

90 Joseph Lancaster, *The British system of education* (London: Royal Free School, 1810).

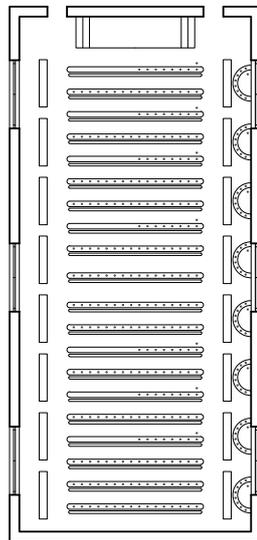
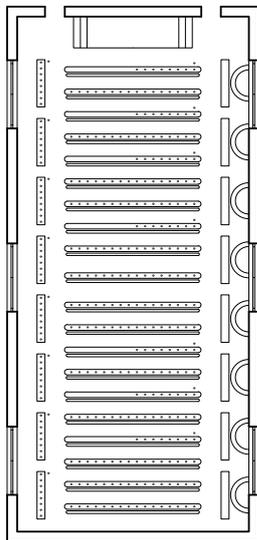


FIG. 46
Monitorial School system.
Redrawn by the author from Lancaster (1810)

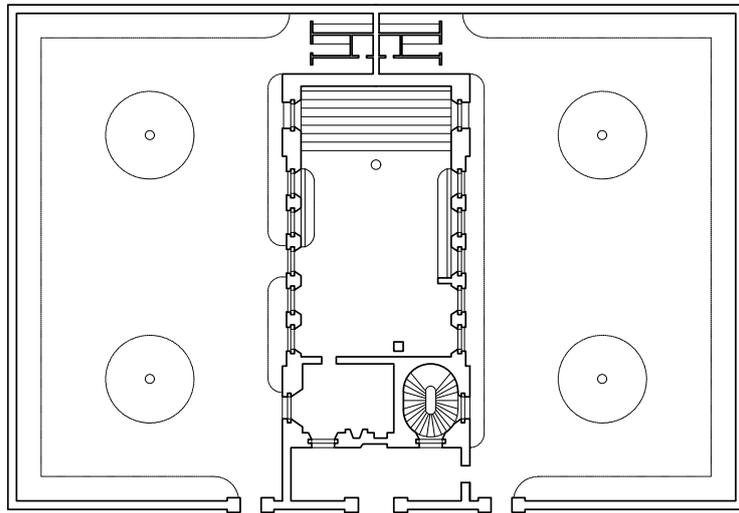


FIG. 47
Training School system.
Redrawn by the author from Stow (1854)

to a precise concept of discipline:

“One of the primary objects of discipline is to fix; it is an anti-nomadic technique. It is for analytic purposes that discipline ‘arrests or regulates movements, clears up confusion, dissipates or compact groupings of individuals wandering about the country in unpredictable ways, and establishes calculated distributions’.”⁹¹

The basic ‘spatial distribution’ of bodies and the coding of bodily movements were the physical techniques to be applied by means of architecture to meet the general objective, that is mass (scholastic) education. The organization of space was clearly integral to the operation of the monitorial system, with a functional location in a hierarchy of progression from the front to the rear of a single large room or hall: windows ‘at least six feet from the floor’ to prevent outside distraction, the master’s desk at one end while benches and desks were ‘fixed firmly to the ground’ occupying the middle of the room. Thus, the anamorphous mass is finally transformed into a legible entity by means of architecture and its spatial organization.

As a counterpart to this model, the introduction of pastoral technique produced a radically different system of relationships within a ‘more intimate space’ where a series of complex moral ties replaced the distributed supervision of the monitorial schoolroom. First of all, it includes a mediation between exterior and interior of the school through a simulacrum of the street, the playground, allowing pupils to be ‘freely play’, having ‘free scope’ and ‘full vent’ in open contradiction with the ‘unnatural restraint of a covered school-room’. Secondly, it increases the *depth* in the relationship between teacher and pupil, in terms of the teacher elevate as moral exemplar and confidante in order to access and enhance the child’s interiority. This was introduced in schools such as those pioneered by David Stow, again supported by precise spatial connotations.⁹² In the playground, pupils would be observed in their natural state and informal behaviours and then encouraged to move the activity to the gallery, where any case of good or bad conduct could be reviewed by the master with pupils arranged in the rising tiers from which they could return the gaze of their moral exemplar.

91 Quoted by Ansgar (2013) from Michel Foucault, *Discipline and punish. The birth of the prison* (London: Penguin, 1999).

92 David Stow. *The training system, moral training school, and normal seminary for preparing school-trainers and governesses* (London: Longman Brown Green and Longmans, 1854).

If monitorial schools were essentially interior spaces, with large groups of children bunched together within a walled perimeter and the urban exterior becoming the lead antagonist, the moral training school privileged the exterior space as a laboratory of real life with interpersonal techniques of supervision and confession able to endure outside the confines of the institution. Even if, once again, within an interior space masterfully designed to produce the sense of theatricality necessary for inner intimation of moral training. Hence, what emerges from the comparison of these two rival models of schooling the modern society has to be found within their complex spatial connotations, in order to scrutinize the fluctuations, as in Evans' meticulous inquiry, of a not yet explicit concept of informality.

Accepting a leap of scale towards the subject matter of this research, that is the reciprocal relationships between higher education environments and a not clearly explicit concept of informality increasingly applied to them, some observations can be made by scrutinizing what was defined campus 'urban model' and the paradigm of movement to which it has been associated (Turner, 1987).⁹³ In fact, far from being a concept of contemporary exclusivity, the urban campus has its roots in the post-war architectural discourse – that is, the context in which the peripheral case examined in this thesis claims a position. Not occasionally, Josep Lluís Sert who was among the most involved CIAM leaders in the events of the South American continent, was *virtually* involved in a discussion concerning the Carpenter Center for the Visual Arts opened at Harvard – the university building designed by Le Corbusier and his first in the United States – arguing that 'a university campus is a laboratory for urban design'.⁹⁴ As a matter of fact, the article published in the pages of "Architectural Forum" (1963) is structured as a fictitious informal conversation around the latest architectural work of the Harvard campus, praised by the commentator "A" for being a definite pattern-quadrangles that open to one another, rectangular buildings and so on, with Corbu deliberately violating the pattern and plunks this strange object smack into the middle of a perfectly fine setting:

"You've got to remember that Jose Luis Sert, who runs the school at Harvard, and whose architectural firm executed the building for

93 In his complete collection of university campus projects, *Campus: An American Planning Tradition* (Cambridge: MIT Press, 1987), Paul Turner devotes one of the final chapters to 'Movement and the Urban Model', p.267-80.

94 See 'Le Corbusier at Harvard: A Disaster, Or a Bold Step Forward?' in "Architectural Forum" (October 1963), p. 105-107.

Corbu, likes to say that a university campus is a kind of laboratory for urban design”.⁹⁵

While the commentator “B” is prepared to support the project, since ‘the building does relate to the Harvard pattern in a much more subtle way than most architects would have tried to relate it’. However, apart from the numerous and frequently commented interventions conceived by Sert especially on the Harvard campus,⁹⁶ and the disputed reception of Le Corbusier’s project, a question remains open on the architectural dimension able to incorporate, shape and dissipate *movement* as that invisible force hitherto considered an urban problem.

A few years later, a 1966 article by Oscar Newman summarized current trends in campus design observing that a new organization based on circulation patterns and ‘hierarchies of activity’ was often replacing the traditional division into various departments or academic disciplines to increase efficiency and flexibility. That is, putting all classrooms together, all the offices together embracing a dense urban character of university.⁹⁷ The design of the Chicago Circle campus of the University of Illinois was widely publicized in the 1960s and elicited the same counter-reactions simulated in the fictitious discussion in the previous “Architectural Forum” issue. After the unsuccessful attempt to acquire the *appropriate* site for a traditional campus outside the city, the university opted for an alternative urban location at a nexus of traffic interchange with Walter Netsch from the architectural firm Skidmore, Owings & Merrill in charge of creating the so-called *micro-environments* within the site restrictions. In the full spirit of what had been noticed by Oscar Newman, the campus was organized by functions, with one tall structure for faculty offices and other buildings for the library, student union, laboratories, and classrooms to be flexibly assigned to any department.

Consequently, it was because of this new organization that circulation, movement and ‘informal social contacts providing the meeting-in-the-corridor on a grand scale’ and a central focal point with stepped exedras named Great Court, where students could relax and meet, although that was actually the roof of a massive structure of lecture halls and thus part of the multilevel organization

95 Ibid., p.105.

96 Sert was involved in the problems of urban universities, such as Harvard and Boston. His design for a large married-student housing complex, sited on the Charles River adjacent to the Georgian-style undergraduate ‘houses’ consisted of three tall towers at the center of the site forming an open space that functioned more like a city square with the rest of the structures stepping down gradually to mediate with the smaller scale of the college. See Turner (1987), p.271.

97 Oscar Newman, ‘The New Campus’ in “Architectural Forum”, May 1966, pp. 44-51.

the whole plan.⁹⁸ However, despite the search for a university campus urban nature was also entrusted to its massive aesthetic that resonated with the adjacent elevated highways, some subtle side effects were observed deriving from the manipulation of the campus hierarchical structure in order to liberate its occupants:

“For the students, Chicago Circle would seem to offer little to allay the sense of alienation that is an inherent danger in a large university. The buildings belong to everyone, and therefore to no one”.⁹⁹

Even if, more concerned about the excessive ‘monumentality’ of the university complex, Oscar Newman accepted and ultimately explained the lack of identity as a price to be paid in exchange for a uniquely urban university:

“Since one of the university’s major functions is to prepare the student for a leading role in society, this separation of professional identity from spatial identity is [perhaps] in fact readying him to face our unstructured world.

Thus the new campus – urban in its scale, density, complexity, and even in its potential for alienation – could be justified as a mirror not only of the current state of higher education, but of modern society in general”.¹⁰⁰

These counter-reactions are anchored to the most frequently commented moment in history that shows the university in the mid-1960s oscillating between a building boom in the field of campus design and educational architectures and the authentic search for a new ‘institutional archetype’ able to interpret the needs of an open society organised around ‘differentiation and disagreement’, as claimed by Joseph Rykwert in 1968:

“Universities, like the temples of ancient Greece, the Roman baths and the cathedrals of the Middle Ages, take on the characteristics of the institutional archetype of the twentieth century, therefore affected by an urgent need for critical reformulation”.¹⁰¹

98 See Turner (1987), p.276.

99 In “Architectural Forum” (September 1965), p. 44.

100 Newman (1966), p.50.

101 Joseph Rykwert, ‘Universities as Institutional Archetypes of our Age’, in “Zodiac” no.18, 1968, pp 61-63. The article by Guido Canella ‘Passé et avenir de l’anti-ville universitaire’ (“L’Architecture d’aujourd’hui” no. 137) and Giancarlo De Carlo’s *La Piramide Rovesciata* were published the same year, while the special



FIG. 48
University of Illinois at Chicago Circle, construction site 1965.
UIC Archives

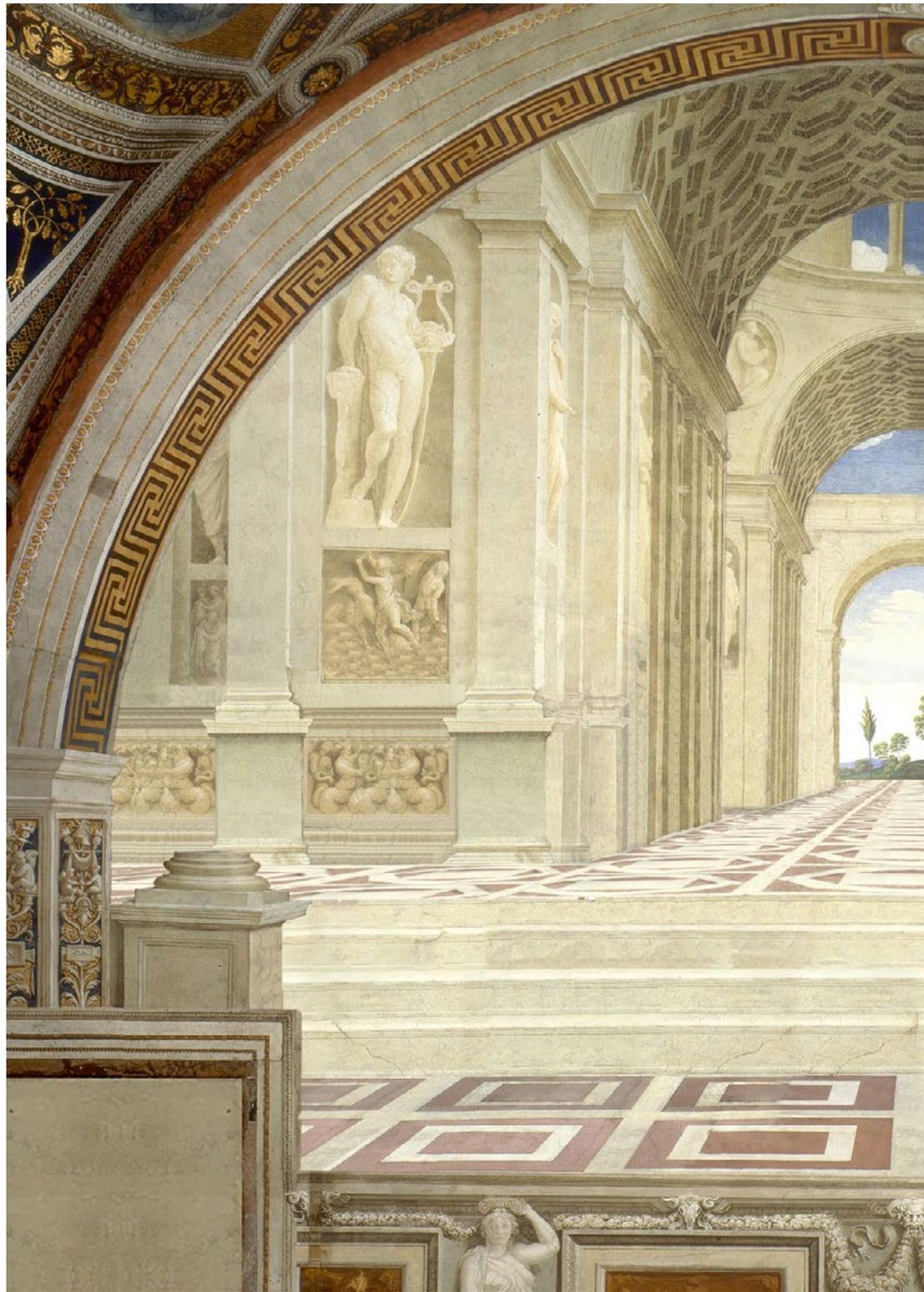




FIG. 49
The School of Athens, collage by Neibeiser Argyros (2019)

However, far from being an exclusive conversation of that emblematic moment in which political and social demands merged with a radical revolution of Western educational, the content of those counter-reactions between monumentality and circulation, between internal and external environment and the contribution of architecture in this set of mediations had already stimulated a more nuanced discussion in the intricate plots and cracks of the immediate post-war modernism, as well as they certainly continue to animate the contemporary architectural discourse due to the emergence of the ostensibly innovative paradigms in the field of education.

Not surprisingly, Adrian Forty's collection of words introduced the term 'flexibility' by quoting an early 1950s contribution from Walter Gropius:

“The architect should conceive buildings not as monuments but as receptacles for the flows of life which they have to serve [...] this conception should be flexible enough to create a background fit to absorb the dynamic features of our modern life”.¹⁰²

Secondly, the same concept is approached by the British historian by mentioning two university buildings, both conceived in the mid-1950s. Although the University of Leicester Engineering Building designed by James Stirling and James Gowan (1958), and Penn University Richards Medical Research Laboratories designed by Louis Kahn (1957) are obviously conceived starting from different assumptions, what unites them is the conceptualization of a flexible educational environment. In the case of Leicester Building we see flexibility at work in the vertical development and articulation of the tower-like academic environment, originated from the adaptation to existing conditions, that is the campus plan previously arranged according to the orthogonal grid traced by Leslie Martin that reserved a triangular residual foot-print for this building.

Declined in two different ways, the concept of flexibility is applied to Louis Kahn's university project in terms of its basic module allowing repetition and expandability of the first intervention without changing the original distribution principles.¹⁰³ Since the early 1950s, the concepts of

issue edited by “Harvard Educational Review” is from the following year (no.4, 1969). The building boom of the Western university is described in Stefan Muthesius *Postwar University. Utopianist Campus and College* (New Heaven: Yale University Press, 2000).

102 Walter Gropius extract from the text ‘Eight Steps toward a Solid Architecture’ (1954), reprinted in Ockman (ed.), *Architecture Culture*, pp.177-80 and quoted in Adrian Forty, *Words and Building: A Vocabulary of Modern Architecture*. New York: Thames & Hudson, 2000, p.142.

103 Among the various descriptions on the Leicester University Engineering Building see Peter Eisenman,

flexibility, adaptability, openness and informality provide the basis for design experimentations which, at the same time, seemed peculiarly interested in investing the most of creative energy on the architectural scale rather than in organizational principles of the general plan. Or better, they seem to invest the most of creative energy on the renegotiation of the urban role of architecture.

Another fact that should not appear a surprise is that one of the most interesting and relatively recent studies on the unsolved problem of the urban campus paradigm has its roots in the abovementioned Chicago experience. In *The City as Campus* (2010), Sharon Haar questions the moment in which university expands its territories of knowledge by advancing the critical reflection on two points:

“First, as it produces new buildings and spaces to produce its work, it must recognize that these too are forms of knowledge. It cannot retreat into nostalgia for a past campus space or form; rather, it must exercise its patronage to advance architectural and urban design. Second, it must be mindful of the potential for conflict between the expansion of the urban mission and the expansion of the physical territory of the campus.

How these physical articulations with the city and with the communities outside the university’s boundaries are accomplished is highly dependent on how the university understands the community within”.¹⁰⁴

One of the most interesting aspects of Haar’s analysis lies in having recalled those counter-reactions that had accompanied the first reception of Chicago Circle as a modern paradigm for urban campuses, also considering the fact that its most distinctive elements would be demolished in the 1990s. Namely, the need for the Great Court, the Circle Forum, and the elevated walkways disappeared when enrolment was nearly halved from the expected 32,000 students. This made the *movement* infrastructure superfluous, compared to when the movement had featured the entire campus and had literally become the privileged mode of representation for any framing of the university campus.¹⁰⁵

Ten Canonical Buildings: 1950-2000, Milano: Rizzoli 2008, while for a precise reconstruction on the project for the Richards Laboratories see Roberto Gargiani, *Louis I. Kahn: Exposed Concrete and Hollow Stones, 1949-1959*, Losanna: EPFL Press, 2014.

104 See Sharon Haar. *The City as Campus. Urbanism and Higher Education in Chicago*. Minneapolis: University of Minnesota Press, 2010, p.197.

105 Most of the images depicting the Chicago Circle place the architectural presence in the background, with respect to the movement of people passing through it, apparently freed from any sense of belonging to

FIG. 50
Plan of Leicester Engineering Building by James Stirling and James Gowan (1958).
Image from CCA Archive

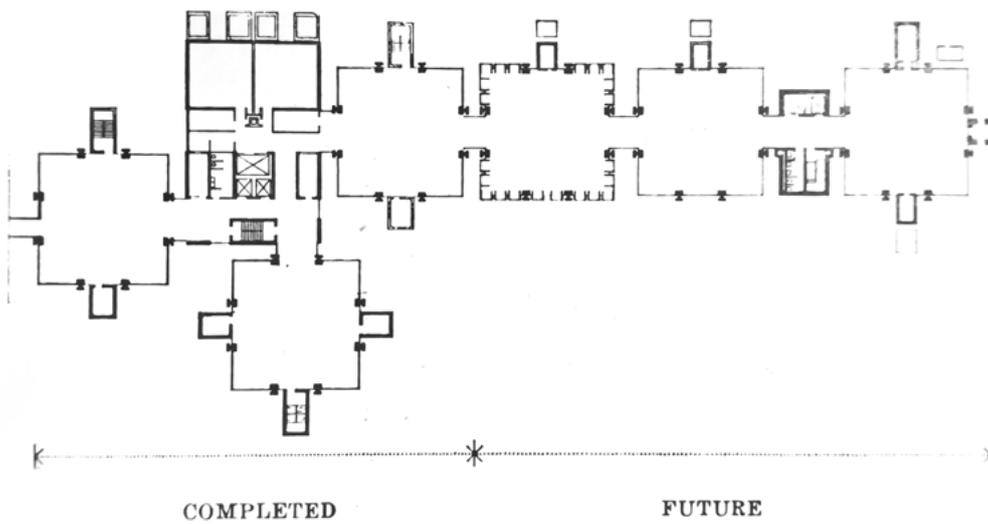
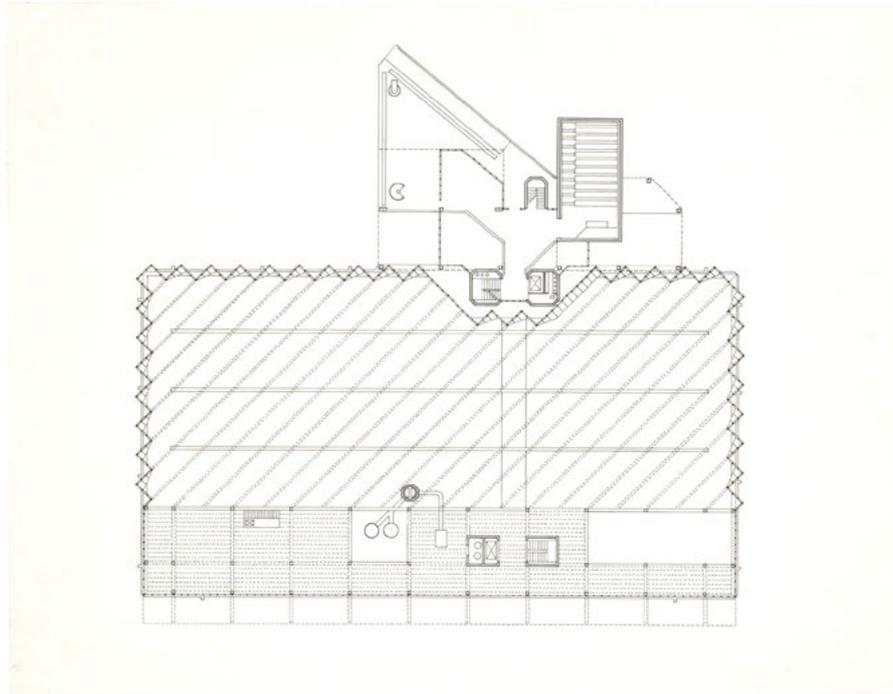


FIG. 51
Plan scheme of Richards Medical Research Laboratories designed by Louis Kahn (1957)
Image from Newman (1961)

However, the gradual dimming of movement did not entail, however, to the failure of the *urban model* to which it was inextricably associated from the very beginning. Indeed, the urban campus continues to be one of the most sought-after and popular metaphors in the design of contemporary educational spaces that assume informality as a new paradigm. This approach is closely related to the way in which the concept of informality has entered the contemporary pedagogical discourse – described above with reference to naturalization and inevitability of *learning* recently questioned by Gert Biesta – yet some observations come up in the field of architecture too:

“The Learning Landscape is the total context for students’ learning experiences and the diverse landscape of learning settings available today – from specialized to multipurpose, from formal to informal, and from physical to virtual.

The goal of the Learning Landscape approach is to acknowledge this richness and maximize encounters among people, places, and ideas, just as a vibrant urban environment does.

Applying a learner-centered approach, campuses need to be conceived as ‘networks’ of places for learning, discovery, and discourse between students, faculty, staff, and the wider community”.¹⁰⁶

At first glance, nothing new compared to the principles already mentioned concerning the urban model of the university campus, except that its ground is not be territorialized by any fixed patterns of occupation. Spaces rather envisaged through a coded set of relationship instigators at the scale of interior furnishings punctuate the everyday routine of the most neutral *homo serendipitous*, as if to predict, paradoxically, every slightest leap of informality. In the words of Douglas Spencers, ‘students are subjected to the same freedoms, having to find for

a closed academic community. On the one hand, it is interesting to note how this interpretation of urban space was also applied to non-university places, as in William H. Whyte’s studies on the Seagram Building plaza. On the other hand, subtle resonances emerge on the technical modes of representing informality going in parallel with Robin Eveans’ inquiry into the developed surface technique mentioned above. On William Whyte, author of *The Organization Man* (New York: Simon & Schuster, 1958) see also *The social life of small urban spaces* (Washington DC: The Conservation Foundation, 1980).

106 Quoted in Douglas Spencer (2016), p.135. This aspect is contested by Douglas Spencer in the chapter ‘Festivals of Circulation: Neoliberal Architectures of Culture, Commerce and Education’ denouncing three-dimensional smoothness aims at softening the perception of a space in which freedom is, paradoxically, an orchestrated activity. The imperative towards ever greater levels of productivity is served, in part, by new managerial strategies arguing for the gains in productivity to be achieved through informality, interaction, cooperation and networking. See Douglas Spencer, *The Architecture of Neoliberalism: How Contemporary Architecture became an Instrument of Control and Compliance* (New York: Bloomsbury, 2016), and also a good number of articles discussing contemporary design projects in the latest issue of “Architecture and Culture” edited by Igea Troiani and Claudia Dutson titled ‘The Neoliberal University’ (Volume 9, 2021).

FIG. 52
Aerial views of walkway
University of Illinois at Chicago Circle, 1965.
UIC Archives

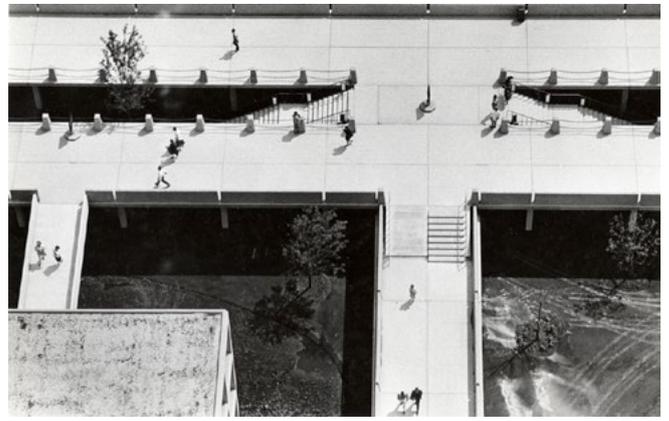


FIG. 53
“Study Cascade” of Vagelos Education Center
Columbia University, New York,
designed by Diller Scofidio + Renfro (2016).
Photo Iwan Baan

themselves areas in which to study' with this 'negotiation of space becoming itself an education in creativity, a skill to become practised in' and students envisaged as 'intelligent nomads'.¹⁰⁷ Architecturally speaking, learning landscapes where everything becomes education run the risk of being a diversion to a growing neutralization of the project in the field of education.

Not surprisingly, Sharon Haar refers to Bill Readings's categorization of the modern university as a 'ruined' institution shaped around a non-well defined global condition. Just when the demolition of the Chicago Circle was underway,¹⁰⁸ Bill Reading provided his commentary on the situation of the modern university now detached from its original intent of creating national subjects through a process of knowledge acquisition: 'excellence' as the most abstract notion of quality has replaced 'the historical project of culture'.¹⁰⁹ In this context, universities and institution of higher education are called upon to create skills, and no longer ideals, becoming a 'transnational bureaucratic corporation'. This should cause the reaction to look beyond the campus, 'to better situate higher education in engaged, cosmopolitan, and global culture, where more and more knowledge will be developed outside of universities, in opportunistic and transdisciplinary settings'.¹¹⁰

In borrowing from Readings's argument about the internal *community of dissensus* to be projected as an alternative to the academic one, Sharon Haar is eager to reposition the spatial connotations belonging with the concept of 'urbanity' based on Chicago urban campus' experience as something that 'cannot be created only within the artificial walls of academic institution', arguing that the contemporary city 'is not only the space in which many of Reading's ruined institutions already dwell, but a space that provides the conditions for the community of dissensus' Readings himself has envisaged against the problematic condition of university at the turn of the 21st century. In this sense, the *urban model* in Haar's idea is turned into a more articulated concept that can be also experienced in local and peripheral contexts.¹¹¹

The main question remains, however, on the fact that nonsituatedness does not become synonymous of the Readings's greatest fear, that is homogenization to the point of irrelevance. And in fact, here emerged the crucial objective of this research, that is, not only to explore a precise moment in which education

107 Ibid., 137.

108 The Great Court, Circle Forum, and elevated walkway system were demolished over a six-year period extending from 1993 to 1999.

109 Bill Readings, *The University in Ruins* (Cambridge: Harvard University Press, 1996), p.13.

110 Thomas Bender, 'Locality and Worldliness', in "American Council of Learned Societies Occasional Paper", no.40 (1997) quoted in Haar (2010), p.198.

111 Haar (2010), p.199.

was intended as a project. But also to investigate how the development of this project worked in a contested territory between bureaucratic and anti-bureaucratic structures, where the concept of informality actually consisted of the most articulated, complex and ambitious object of this contention. If it is true that the recurrent and explicit use of the word *informality* is hardly traceable in the documents relating to the design episodes that structure this thesis, it is equally true that each of them appropriate this concept by experimenting flexibility, adaptability, and openness in order to institutionally establish a radical educational project based on the relational, intangible, experiential, collaborative and occasional components of informal education.

More importantly, while assuming university as a platform for change, in none of these cases was ever adopted a neutral approach. On the contrary, through their significant effort to adapt modern society to the unexpected conditions in the aftermath of the WWII, they operate from within the Modernist architectural discourse, that is to say, without giving up the formal implications of their renowned educational projects by resisting the dissolution of every spatial structure already propagandized to instigate new learning rituals based on informality. Finally, as if it was the result of a *community of dissensus* working from a peripheral region, the sequence of cases exposed in this thesis aims to emphasize architectural and urban ambitions that are anything but neutral. They are instead multiple, bold, and even divergent with respect to an alleged pedagogical mandate. If anything, a trajectory can be traced to evidence a process of negotiation at work, in which the interest in the extended dimension of the campus has progressively shifted towards the innermost content of its architectures.

INFOGRAPHIC

1947-52

Ciudad Universitaria de Tucumán (AR)

collective



1957-65

Universidad de Concepción (CH)

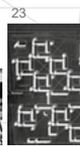
profession



1957-67

Universidad Técnica del Estado de Santiago (CH)

profession



1962-78

Universidad Católica de Chile San Joaquín, Santiago (CH)

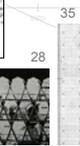
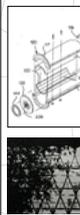
employee



1960-65

Universidad de Mendoza (AR)

entrepreneur



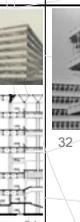
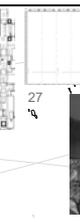
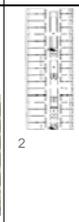
1959-67

Ciudad Universitaria Buenos Aires (AR)

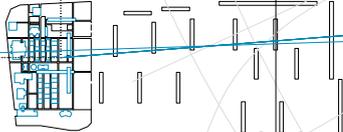
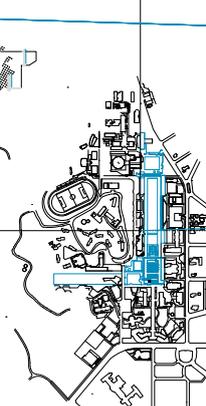
cosmopolite



1 monument



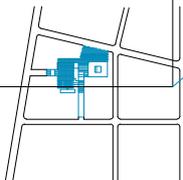
2 ground



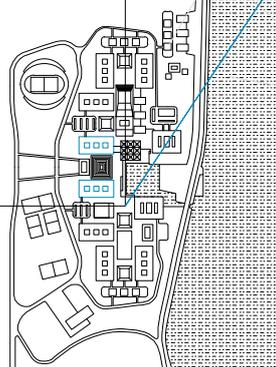
3 megastructure

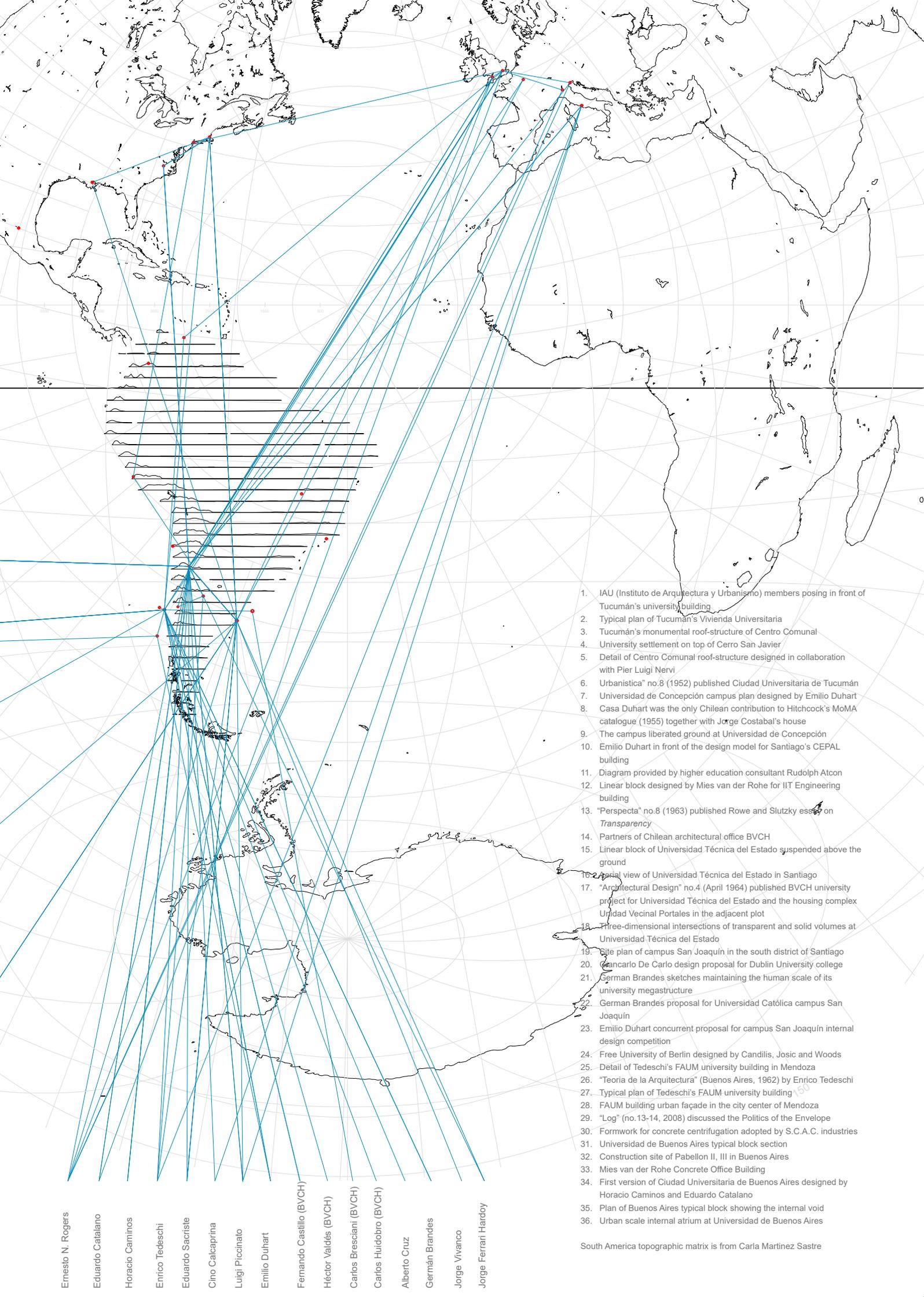


4 envelope



5 atrium





Ernesto N. Rogers
 Eduardo Catalano
 Horacio Caminos
 Enrico Tedeschi
 Eduardo Sacriste
 Cino Calceprina
 Luigi Piccinato
 Emilio Duhart
 Fernando Castillo (BVCH)
 Héctor Valdés (BVCH)
 Carlos Bresciani (BVCH)
 Carlos Huidobro (BVCH)
 Alberto Cruz
 Germán Brandes
 Jorge Vivanco
 Jorge Ferrari Hardoy

1. IAU (Instituto de Arquitectura y Urbanismo) members posing in front of Tucumán's university building
2. Typical plan of Tucumán's Vivienda Universitaria
3. Tucumán's monumental roof-structure of Centro Comunal
4. University settlement on top of Cerro San Javier
5. Detail of Centro Comunal roof-structure designed in collaboration with Pier Luigi Nervi
6. Urbanistica" no.8 (1952) published Ciudad Universitaria de Tucumán
7. Universidad de Concepción campus plan designed by Emilio Duhart
8. Casa Duhart was the only Chilean contribution to Hitchcock's MoMA catalogue (1955) together with Jorge Costabal's house
9. The campus liberated ground at Universidad de Concepción
10. Emilio Duhart in front of the design model for Santiago's CEPAL building
11. Diagram provided by higher education consultant Rudolph Atcon
12. Linear block designed by Mies van der Rohe for IIT Engineering building
13. "Perspecta" no.8 (1963) published Rowe and Slutzky essay on Transparency
14. Partners of Chilean architectural office BVCH
15. Linear block of Universidad Técnica del Estado suspended above the ground
16. Aerial view of Universidad Técnica del Estado in Santiago
17. "Architectural Design" no.4 (April 1964) published BVCH university project for Universidad Técnica del Estado and the housing complex Unidad Vecinal Portales in the adjacent plot
18. Three-dimensional intersections of transparent and solid volumes at Universidad Técnica del Estado
19. Site plan of campus San Joaquín in the south district of Santiago
20. Giancarlo De Carlo design proposal for Dublin University college
21. German Brandes sketches maintaining the human scale of its university megastructure
22. German Brandes proposal for Universidad Católica campus San Joaquín
23. Emilio Duhart concurrent proposal for campus San Joaquín internal design competition
24. Free University of Berlin designed by Candilis, Josic and Woods
25. Detail of Tedeschi's FAUM university building in Mendoza
26. "Teoría de la Arquitectura" (Buenos Aires, 1962) by Enrico Tedeschi
27. Typical plan of Tedeschi's FAUM university building
28. FAUM building urban façade in the city center of Mendoza
29. "Log" (no.13-14, 2008) discussed the Politics of the Envelope
30. Formwork for concrete centrifugation adopted by S.C.A.C. industries
31. Universidad de Buenos Aires typical block section
32. Construction site of Pabellón II, III in Buenos Aires
33. Mies van der Rohe Concrete Office Building
34. First version of Ciudad Universitaria de Buenos Aires designed by Horacio Caminos and Eduardo Catalano
35. Plan of Buenos Aires typical block showing the internal void
36. Urban scale internal atrium at Universidad de Buenos Aires

South America topographic matrix is from Carla Martínez Sastre

PART II

Chapter 1

The problem of a new monumentality.

IAU, Ernesto Nathan Rogers and the new Ciudad Universitaria de Tucumán



FIG. 54
Centro Comunal Ciudad Universitaria de Tucuman, 1947 (model).
Image from "Nuestra Arquitectura" (September 1950)

ABSTRACT (ITA)

All'indomani della Seconda Guerra Mondiale, nel colloquio internazionale sul destino dell'architettura moderna particolarmente interessato all'inclusione di realtà fino a quel momento considerate periferiche, trovano spazio alcune esperienze progettuali concepite in America Latina. La produzione architettonica delle grandi capitali sudamericane come Città del Messico, Caracas, Rio de Janeiro e Bogotá aveva occupato la scena in virtù dei grandi complessi universitari che, agli occhi dei leader dei CIAM, avevano la capacità di polarizzare l'attenzione sui nuovi concetti a cui si stava affidando il profondo processo di revisione interna del discorso architettonico postbellico: la nuova monumentalità, la (quinta) funzione civica e la sintesi delle arti. Il dialogo tra i leader CIAM e il continente sudamericano si intensifica grazie alle molteplici occasioni di consulenza sulla nuova dimensione urbana esplorata nei centri civici di Josep Lluís Sert e Paul Lester Wiener (Town Planning Associates), grazie all'interessamento del MoMA che commissiona il primo importante sondaggio sul continente a Henry-Russel Hitchcock e Rollie McKenna, e in virtù dell'accoglienza dei leader CIAM nelle università statunitensi che attraevano grazie ai nuovi programmi di insegnamento una quantità sempre maggiore di studenti internazionali.

Questo rapporto privilegiato tra le due Americhe coltivato nel primissimo dopoguerra, con i leader CIAM impegnati nel tentativo di accreditarsi come specialisti esperti piuttosto che avanguardisti,¹ relega ai margini un progetto estremamente ambizioso concepito nella regione periferica del Noroeste Argentino. Il piano per la nuova Ciudad Universitaria de Tucumán era iniziato nel 1947, associato alla riorganizzazione del sistema universitario nazionale previsto nel Piano Quinquennale del primo governo presieduto da Juan Domingo Perón. Il Piano prevedeva il rafforzamento delle regioni più periferiche sul fronte della presenza universitaria, e la formazione di Istituti con competenze specifiche che fossero contemporaneamente in grado di riunirsi e integrarsi tra loro per coordinare programmi di sviluppo e intervenire concretamente sulla realtà locale. Pur nelle contraddizioni di una controversa stagione politica, che più tardi avrebbe riconsiderato i termini di alcune conquiste studentesche già ottenute con la Riforma Universitaria del 1918 nel segno di 'autonomía, cogobierno y extensión',² nella piccola regione di Tucumán si produce una condizione favorevole propiziata dal lavoro del suo rettore Horacio Descole, ispirato fin da subito dall'idea di attrarre nella regione il maggior numero di personalità affermate in tutti i campi della conoscenza, che rispettassero al contempo un profilo collaborativo e spiccate capacità relazionali per poter essere incorporate nell'apparato burocratico dell'istituzione riformata e realizzare il nuovo progetto educativo promosso dall'università.

Agli ingenti fondi statali per questa ambiziosa operazione di reclutamento, si univano quelli ancor più consistenti per la costruzione della nuova Ciudad Universitaria affidata ai componenti dello IAU (Instituto de Arquitectura y Urbanismo), un collettivo di architetti-educatori chiamati a riscrivere i piani di studio e rielaborare i metodi pedagogici in funzione di un progetto educativo ispirato all'esercizio delle capacità relazionali in funzione di una maggiore aderenza alle problematiche reali del contesto locale in cui la comunità accademica si proponeva di operare. E al contempo, erano loro stessi i responsabili del ripensamento di uno spazio educativo adeguato ad accogliere il cambio di paradigma stimolato dall'istituzione universitaria.

Nell'ottica di attrarre personalità eminenti in questo campo, l'invito fu rivolto all'architetto italiano Ernesto Nathan Rogers in occasione del CIAM 6 – la prima riunione postbellica ospitata a Bridgewater nel 1947 – dei delegati argentini Jorge Ferrari Hardoy e Jorge Vivanco coinvolti rispettivamente nel coordinamento del Estudio del Plan de Buenos Aires (EPBA) e nel grandioso progetto di Tucumán. L'incoraggiamento ad accettare l'invito arriva dagli stessi leader CIAM, come detto, particolarmente interessati a estendere la loro influenza in territori ancora inesplorati. Così Rogers, insieme a un gruppo di colleghi italiani tra cui Luigi Piccinato, Enrico Tedeschi, Cino Calcaprina e Guido Oberti accetta l'invito che si concretizzerà per tutti quanti sia in occasioni professionali di rilievo, come architetti, sia nelle radicali esperienze pedagogiche condotte dallo IAU, come educatori. In questo contesto, è ancor più importante sottolineare come le oggettive limitazioni di un contesto così periferico produrranno invece la condizione di un ambiente privilegiato su cui esercitare con alto grado di sperimentazione una critica interna ai postulati del modernità, favorendo l'elaborazione di quelle posizioni personali che distingueranno la carriera di chi tornerà in Europa qualche anno dopo, come Rogers e Piccinato, e di chi invece si stabilirà e affermerà la sua posizione in America Latina come nel caso di Enrico Tedeschi.³

La Ciudad Universitaria è un progetto monumentale in cima al Cerro San Javier, con alcune delle sue immagini che saranno più tardi recuperate da Reyner Banham nel suo libro sulle megastrutture (1976).⁴ Per la verità, una discreta circolazione nelle riviste internazionali avviene già negli anni della sua costruzione, documentata sia nelle pagine di "Architectural Review" che in quelle della rivista italiana "Urbanistica". Nel contesto locale invece, un numero monografico della rivista argentina "Nuestra Arquitectura" riporta in buona parte i contenuti della pubblicazione curata dalla stessa università per la divulgazione del progetto. Il tema più ricorrente utilizzato per descrivere il 'Sistema Educacional Residencial' per 20,000 abitanti concepito dallo IAU, è certamente quello della nuova monumentalità esplorata attraverso l'esaltazione del rapporto tra le geometrie razionali delle architetture e il maestoso paesaggio naturale della Cordillera messo in evidenza in tutte le pubblicazioni.⁵

Pertanto, il Capitolo 1 discute l'episodio della Ciudad Universitaria de Tucumán nell'ambito del discorso CIAM revisionato sull'idea di uno 'spazio urbano moderno' rivitalizzato dal ruolo civico dell'architettura, già evidenziato nei primi progetti post-bellici di Le Corbusier rispetto ai quali si evidenzia una discendenza tutt'altro che lineare e piuttosto ambigua se si considera la complessa circolazione di idee di quel momento.⁶ Si consideri, ad esempio, che nelle pagine che descrivevano il progetto di Tucumán, o meglio le sue architetture, comparivano già le immagini evocative di Piazza San Marco che avrebbero accompagnato la riscoperta moderna del cuore della città.⁷

Tuttavia, da un'analisi ravvicinata sul progetto degli edifici più commentati della Ciudad Universitaria de Tucumán, ovvero il Centro Comunal e la Vivienda Universitaria per 4,000 abitanti, ciò che emerge è un posizionamento critico rispetto a un'idea di monumento moderno, come rappresentazione iconica del senso di comunità emancipato dalle quattro funzioni. L'immagine monumentale del Centro Comunal è ottenuta, ad esempio, grazie a una soluzione strutturale che permetteva di coprire l'area collettiva del campus con una macro-copertura originata da un singolo modulo triangolare infinitamente ripetibile – testato nei laboratori del Politecnico di Milano da Pier Luigi Nervi – la cui radicalità risiede piuttosto nelle sottovalutate implicazioni spaziali di questa soluzione, che restituiscono un'idea di monumento ridotto a infrastruttura completamente scarna e liberamente colonizzabile tanto dalla comunità universitaria quanto dalla comunità esterna che aveva libero accesso. Allo stesso modo, la Vivienda Universitaria spesso ricondotta a variante delle unità d'abitazione progettate da Le Corbusier in quello stesso momento, aggiunge al diagramma corridoio-stanze una dotazione di spazi collettivi disposti centralmente e articolati verticalmente, introducendo così un'imprevista dimensione collettiva che ricorda, semmai, gli esperimenti progettuali dei BBPR per il Piano della Valle d'Aosta commissionato da Olivetti a metà degli anni '30.

In questo senso, il capitolo riposiziona il contributo dei componenti italiani dello IAU in questa esperienza, e in particolare il ruolo di Rogers sia come architetto che come educatore. In merito a questo secondo aspetto, nonostante la sua partecipazione relativamente breve al progetto di Tucumán – che resterà comunque inconcluso e tuttora abbandonato – il progetto educativo di Rogers non si ferma in America Latina, ma viaggerà a ritroso passando per le CIAM Summer School transitate da Londra a Venezia nei primi anni '50 assumendo la dimensione regionale alla base dei brief delle edizioni italiane, e il contestuale approdo al Politecnico di Milano, con i primi corsi di Elementi di Composizione che indagheranno lo spazio educativo della scuola come Utopia della Realtà.⁸ Per il resto, anche la carica sperimentale di un progetto educativo rivoluzionario condotto dall'interno dell'istituzione non si fermerà a Tucumán, ma come primo episodio di questa traiettoria progettuale, avrà un impatto rilevante anche nei contesti limitrofi.

NOTE

1. Jorge Francisco Liernur, 'Vanguardistas versus Expertos', in "BLOCK" no.6, 2004, pp. 18-39.
2. Le rivolte studentesche ebbero luogo a Córdoba nella seconda metà degli anni '10, per poi diffondersi in tutta l'America Latina. Contro l'autoritarismo della struttura accademica intrisa di valori conservatori e religiosi, gli studenti hanno conquistato la Reforma Universitaria basata su autonomía, cogobierno y extensión. Quest'ultima parola, è quella che forse meglio incarna la radicalità di quella riforma, poiché il concetto di 'extensión universitaria' spiegato poi nel Manifesto Liminar (pubblicato nel giugno del 1918 in un numero speciale della Gaceta Universitaria) si riferisce alla necessità di trasferire le conoscenze prodotte all'interno dell'università sul contesto sociale in cui l'istituzione opera, da cui ricevere al contempo gli input concreti.
3. La vicenda di Enrico Tedeschi sarà approfondita nel Capitolo 4.
4. Nel capitolo intitolato 'Beginners and Begetters', in Reyner Banham. *Megastructure: Urban Futures of the Recent Past* (New York: Harper & Row, 1976) pp. 36-37.
5. La sua circolazione sulle riviste avviene grazie a "Nuestra Arquitectura" (no.254, 1950), "Urbanística" (no.8, 1951) e "Architectural Review" (no.671, 1952). Tra gli studi recenti più approfonditi si veda invece Franco Marigliano, 'El Instituto de Arquitectura y Urbanismo de la Universidad Nacional de Tucumán. 1946-1955. Modelo arquitectónico del estado y Movimiento Moderno en Argentina', PhD Diss. Universidad Politécnica de Madrid, 2003.
6. Il progetto di Le Corbusier a cui si fa più spesso riferimento è quello della ricostruzione del centro di Saint-Die, commentato tra gli altri da Mary McLeod, 'Saint-Die. A Modern Space Conception for Postwar Reconstruction', in Jean-Louis Cohen (ed.), *Le Corbusier: An Atlas of Modern Landscapes* (New York: MoMA, 2013).
7. Molti leader CIAM si sarebbero espressi in questa direzione fin dalle prime riunioni postbelliche, in particolare si veda Ernesto Nathan Rogers, 'The Heart: Human Problem of Cities', in *The Heart of the city: towards the humanisation of urban life* (London: Lund Humphries, 1952).
8. I risultati dei corsi saranno raccolti nel volume edito da Ernesto Nathan Rogers, *L'utopia della realtà. Un esperimento didattico sulla tipologia della Scuola Primaria* (Bari: Leonardo da Vinci Editrice, 1965).

1.1 *The post-war CIAM discourse* *Experts and avant-garde in a dispersed geography*

Cuando llegaron los arquitectos joven, la diferencia en los talleres estaba en el tipo de ejercicios proyectuales ahora destinados a satisfacer problemas reales de la vida cotidiana del habitante comun: viviendas, centros de salud, escuelas, la ciudad entre otros.

No mas urnas funerarias o templetos a dioses mitologicos. Incorporaron al Instituto el componente humanista que le hacia falta al modelo Bauhaus y a las propuesta de los CIAM, para tener un arquitecto con una superadora base conceptual de su diseño.¹

Cesar Pelli, September 1999

After the fifth edition held in Paris in 1937, the CIAM (Congrès Internationaux d'Architecture Moderne) suffered the impact of the war: their members worked in a dispersed geographical condition, interactions became sporadic and meetings were suspended. A large group of its most representative leaders settled in the United States in the early 1940s - Mies van der Rohe, Walter Gropius, Sigfried Giedion, Ludwig Hilberseimer, Richard Neutra, José Luis Sert, Marcel Breuer to name a few - and the rise of totalitarian regimes made it very difficult for those who remained in Europe to continue the discussion. For this reason, the first book-length history of the organization by architectural historian Eric Mumford, focused on CIAM's discourse to trace the development and promotion of its most influential concepts, argues that to understand their post-war fate one must first look at efforts to modify the basis of modern architecture, and then turn back to Europe and efforts at reconstruction.²

He views official doctrines and pronouncements in relation to the changing circumstances, revealing how CIAMs in the 1930s began to resemble a kind of syndicalist party oriented toward winning over any suitable authority, regardless of political orientation, then looking at CIAM's efforts after World War II to find a new basis for a socially engaged architecture and finally describing the attempts by the 'youngers', as Team X members referred to themselves as the new avant-garde, whose program was to radically revise CIAM's mission promising to abolish any dogmatic or ideological connotation of the Movement

1 'César Pelli', report by Rodolfo Braceti in "Nueva" no. 425, Buenos Aires, September 1999, p. 36.

2 Eric Mumford, *The CIAM Discourse on Urbanism, 1928-1960*, Cambridge: MIT Press, 2002.

to rediscover the path of the 'very' Modern architecture until the organization's final dissolution in 1959 after the last meeting hosted in Otterlo. In this highly complex scenario, some of the most active exponents after the WWII worked to transform the CIAM into a sort of committee of specialists in physical planning abandoning the image of revolutionary 'artists' to establish themselves as reliable 'experts':

“Architects and planners are unknown to political leaders who have a decisive role. This is why a group of important sponsors is needed. I propose to draw up a list of American and foreign leaders [...] Members are needed to extend the original group. Planners, sociologists, engineers, road and construction planners and many other specialists should join or become regular members”.³

One of the fundamental steps to carry out this strategy was to take their organization from the original European scale to the global one, and to do this, CIAM leaders have to meet at least three conditions: (1) to bring the United States into the organization; (2) to incorporate a significant number of non-European groups; (3) to convince the new international leadership of their technical neutrality. It was not by chance that in 1941 Sert set up the firm Town Planning Associates (TPA) in New York with Paul Schulz and Paul Lester Wiener (son-in-law of the State Secretary in Roosevelt's government), and that Richard Neutra, who had lived in the United States since the late 1920s, was the expert chosen by Rexford Tugwell in 1943 for develop the technical aspects of its reform policies in Puerto Rico.⁴ More pragmatic expedients to achieve these goals were 'Capítulo para la Ayuda y Planificación de la Posguerra del CIAM' (CAPP), founded in 1944 by the US group probably in connection with the 'United Nations Relief and Rehabilitation Administration' (UNRRA) created a few months earlier (1943), or the alliance with Association of American Planners to attract large architectural firms such as Skidmore, Owings and Merrill. Even the CIAM 7 (Bergamo, 1949) was postponed to guarantee the participation of the North American partners. However, these huge strategic investments found in the pedagogical sphere one of the most powerful dissemination channels, as it

³ This intention was clear in a first memorandum proposed by Richard Neutra and prepared by Paul Lester Wiener, which states that “it is necessary that the foreign governments responsible for the reconstruction of Europe recognize and accept the ideas and projects of CIAMs”. See Eric Mumford (2000).

⁴ With official support from the State Department, Neutra travelled through several Latin American countries in 1945 as a cultural representative of the United States, attending the first United Nations Organizational Conference in San Francisco and the Pan-American Conference in Rio de Janeiro. See Francisco Jorge Francisco Liernur, 'Vanguardistas versus Expertos', in "BLOCK" no.6, 2004, pp. 18-39.

resounds from Tom Wolfe's words ironically describing the reception of CIAMs in the United States:

“The White Gods! They finally come down from the skies! Gropius had been appointed head of the Harvard School of Architecture and Breuer joined him shortly after. Moholy-Nagy opened the new Bauhaus, which became the Chicago Institute of Design. Albers opened a rural Bauhaus in the hills of North Carolina at Black Mountain College. Mies was installed as the dean of architecture at the Armour Institute in Chicago”.⁵

In fact, despite these satisfactory results for the CIAM veterans, the local sphere was, to say the least, skeptical of their assumptions relegated as a typical European product inadequate for the American context.⁶ But if it is true that in the 1940s and early 1950s the central question remained how to incorporate the most influential North American experts into the CIAM group, this operation had to be supported by a profound revision of the contents of the post-war discourse on modern architecture and urbanism, with the ‘need for a new monumentality’ as one of its greatest strengths.

Sigfried Giedion developed the theme in his famous essay (1944),⁷ clarifying that this need was foreshadowed by the plastic conceptions of modern artists as a response to what they believed were popular aspirations, not to be confused with the ‘pseudomonumentality’ of the nineteenth century or a misinterpreted tendency of reviving classical tradition which remained inadmissible like in the previous CIAM attitudes. It is a well-known fact that this text, published in the collection of essays edited by Paul Zucker under the title *New Architecture and City Planning: A Symposium* (1944), comes shortly after Giedion himself, along with Fernand Léger and José Luis Sert, had been commissioned by the New York-based group American Abstract Artists (AAA) to work on a volume on the collaboration between artists, painters, and sculptors. Their manifesto titled ‘Nine Points on Monumentality’ (1943) not only introduced the issue of monumentality into discussions of modern architecture, but specified it should come about through face-to-face contacts, should flow

5 Tom Wolfe, *From Bauhaus to Our House*, New York: Farrar Straus & Giroux, 1981.

6 It was nearly impossible to incorporate a considerable number of prominent North American architects into the organization for different reasons: first, the European lack of preparation on the long and flourishing experience of institutionally supported local planning in the United States; second, the solid tradition of the American construction industry bounded with architecture as a profession. See Liernur (2004).

7 Sigfried Giedion, ‘The Need for a New Monumentality’, in Paul Zucker (ed.), *New Architecture and City Planning: A Symposium*, New York: Philosophical Library, 1944, pp. 549-68.



FIG. 55
Brazil's inland region of Baixada Fluminense where Paul Lester Wiener
and Jose-Luis Sert settled the Cité des Moteurs.
Image from "L'Architecture d'aujourd'hui" (September 1947)

from the ‘emotional life of the community’ and should consequently materialize in what will be eventually termed ‘community center’, or even better in Sert’s words:

“civic and cultural centers especially planned for public gatherings, the main monuments constituting landmarks in the region, and symbols of popular aspirations”⁸

In fact, Sert is the one who took up the task to infiltrate the new monumentality in the post-war CIAM discourse on urbanism. His essay ‘The Human Scale in City Planning’ (1944) was also included in the same book-symposium curated by Paul Zucker, whose disorienting variety of contributions would have aroused Hilberseimer’s criticism since ‘we are still planning without having a plan’, and ‘without basic principles, the specialized knowledge of even the best expert is misleading’.⁹ Apart from the eclectic composition of the symposium, however, one could expect Hilberseimer’s skepticism towards the fact that the whole problem of the city was solved by the monumentalized image of public functions concentrated in one single *center* – with university buildings, museums, concert halls, theatres, stadiums, public library, and administration buildings – as the city’s ‘brain and governing machine’.¹⁰

In addition, the new planning objectives perhaps sounded all the more discordant with Hilberseimer’s approach when *civic center* was presented with much greater architectural specificity – in contrast to earlier CIAM projects like Le Corbusier and Jeanneret’s Nemours – possibly in response to Lewis Mumford’s comments when asked to write the introduction to *Can Our Cities Survive?* where he had particularly objected to CIAM’s lack of focus on the design of buildings intended to house the political, educational, and cultural functions of the city.¹¹ As is well known, this refusal actually opened Harvard’s doors to Sert with Joseph

8 José Luis Sert, ‘The Human Scale in City Planning’, in Paul Zucker (ed.), *New Architecture and City Planning: A Symposium*, New York: Philosophical Library, 1944, pp. 392-413.

9 Ludwig Hilberseimer, Book Review *New Architecture and City Planning-A Symposium*, in “College Art Journal”, Vol. 6, no. 2 (Winter, 1946), pp. 165-166.

10 José Luis Sert, ‘The Human Scale in City Planning’ (1944).

11 Deputized by CIAM to produce a book expounding its urban concepts during the war years, Sert wrote *Can Our Cities Survive?* Cambridge: Harvard University Press, 1942. Mumford refused to write the introduction as the strict compartmentalization of the city into housing, work, recreation, and circulation was not much appreciated: “They are all important. But what of the political, educational and cultural functions of the city: what of the part played by the disposition and plan of the buildings concerned with this functions in the whole evolution of the city design [...] the organs of political and cultural association are, from my standpoint, the distinguishing marks of the city: without them, there is only a urban mass”. Sert’s book received harsh criticism also in the “Journal of the Society of Architectural Historians” with Carl Feiss underlining its confusing structure. See Eric Mumford (2000), p.155.

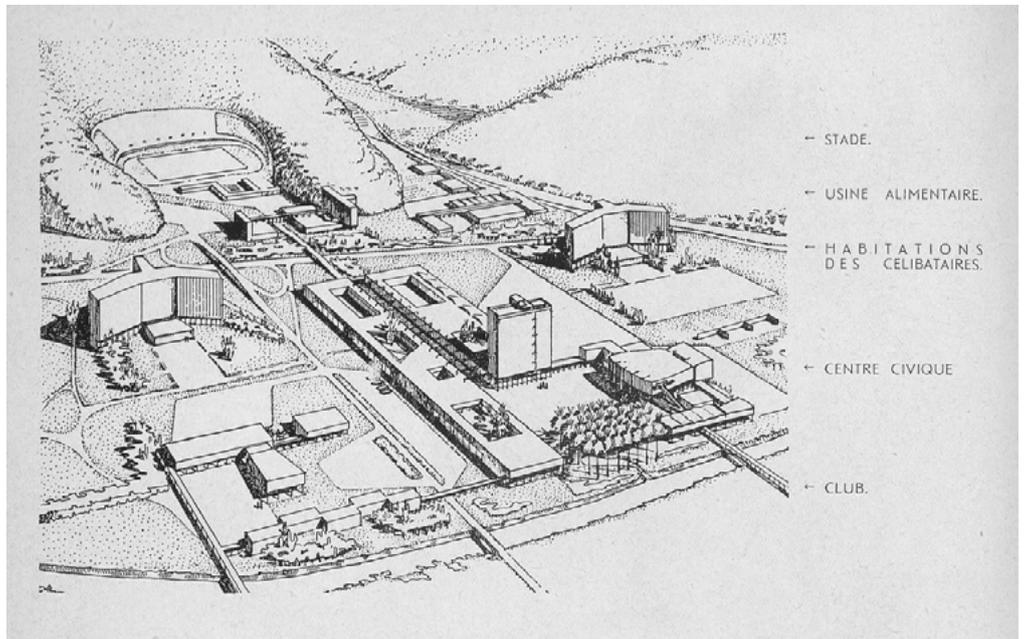
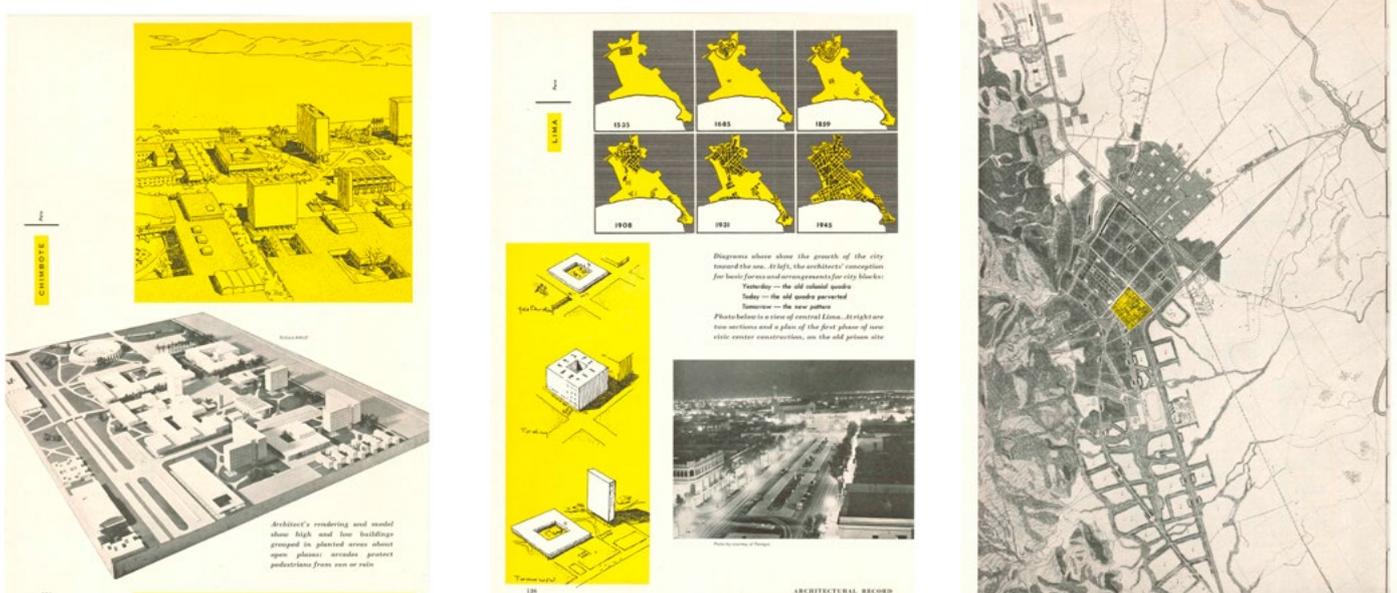


FIG. 56
 Paul Lester Wiener and Jose-Luis Sert Cité des Moteurs "Civic Center".
 Image from "L'Architecture d'aujourd'hui" (September 1947)

FIG. 57
 Civic Centers in South America by Paul Lester Wiener and Jose-Luis Sert.
 Image from "Architectural Record" (August 1953)



Hudnut – GSD’ dean between 1936 and 1953 – first accepting the invitation to write the introduction to Sert’s book and then reiterating his appreciation for Sert’s essay which emphasized the need to ‘plan for human values’ and to design cities based on *civic centers* and compact neighbourhood units,¹² just in contrast to Hilberseimer’s large-scale proposals:

“I have just finished reading the Hilberseimer book [The New City] and I found it exceedingly depressing. The author assumes that practically all urban problems can be solved without the aid of art”¹³

In fact, 1944 is the same year in which Hilberseimer’s *The New City* was published for the first time as an alternative model for decentralization where his predilection for a regional scale ‘pattern’ was incubating,¹⁴ while Sert and Paul Lester Wiener were preparing the plans for the Brazilian ‘Cidade dos Motores’ to accommodate 25,000 industrial and agricultural workers in a site next to an aircraft-engine factory, with the aim to ‘recentralize’ cities that were being drained of their lifeblood by an already-rampant process of suburbanization by means of impressive centerpieces designed by teams of architects and artists.¹⁵ This was the first commission of a series produced over the next years for cities in Peru, Colombia, Venezuela, and Cuba benefiting from the cultural exchanges fostered under the Roosevelt Administration’s Good Neighbor Policy and serving as testing grounds for rethinking the *functional city* from a more humanistic and environmental perspective.¹⁶ When Sert will be named dean of Harvard’s

12 The neighborhood unit was usually defined as an urban sector housing the population necessary to support an elementary school (which usually implied populations ranging from five thousand to eleven thousand inhabitants), and designed so that no child need walk more than a half mile to the school, preferably without ever having to cross a major traffic artery. In the United States the term was first used by Clarence Perry, ‘The Neighborhood Unit: A Scheme of Arrangement for the Family Life Community’, *Regional Plan of New York*, vol. 7 (New York: Regional Plan Association 1829). The concept had been used earlier by Frederick Olmsted at Forest Hills Gardens, Queens (1908), a Garden Suburb based on the British town planning work of Raymond Unwin and Barry Parke.

13 Hudnut to Sert, January 8, 1945 (folder E2, JLS). See Eric Mumford (2000), p. 308.

14 After Ludwig Hilberseimer’s *The New City: Principles of Planning*, Chicago: Paul Theobald, 1944, the author demonstrates the practicability of his planning theories applying these principles on a large scale self-sufficient territory with a low-density system of units separated by uses meticulously articulated in the following *The new regional pattern*, Chicago: Paul Theobald, 1949.

15 This was a clear alternative to Hilberseimer’s work since his arrival in the United States: “Centralization would be replaced by decentralization and dispersal. Industry and agriculture would then come closer together - in truth, be integrated. This integration of industry and agriculture would at once solve some of the gravest social problems we now face. Impossible! This skepticism is very well expressed in the book we review. It is a curious fact how planners make their own obstacles”. In Hilberseimer (1946).

16 Timothy Hyde has shown that unlike other cases, Sert and Winer’s proposal for Havana was the product of the articulation of previous studies made by the same architects in relation to different problems of the city. See Timothy Hyde, ‘Plans, plans and planning: José Luis Sert and the Idea of Planning’, *International Conference José Luis Sert; The architect of urban design*, Harvard Design School, October 2003.

Graduate School of Design in 1953, 'Five Civic Centers in South America' scroll through the pages of *Architectural Record* (August issue) as one of the most influential platform for putting forward his ideas and framing the field of Urban Design. In this sense, the delimitation of a new disciplinary area opened the gaze to peripheral territories towards which to extend CIAM's influence.¹⁷

It should be considered that incorporating countries from the region was rather convenient, especially in the early post-war years, since the Latin American bloc within the new international organizations was gathering a sufficiently large number of votes to condition the most relevant decisions in the field of planning.¹⁸ For example, the Colombian Eduardo Zuleta was in charge of the United Nations commission for the construction of the new headquarters in New York, while the Mexican Manuel Torres Bodet was the UNESCO's general secretary at the time of the construction of Paris office.¹⁹ Not surprisingly, other CIAM leaders were active in the region as mentioned above: Richard Neutra drew up urban proposals for Caracas and built a house in Cuba, Gropius tried to unite former CIAM exiled in Mexico such as Hannes Meyer and Max Cetto with prominent local figures such as Mario Pani and Enrique del Moral - in charge of the colossal project for the Universidad Nacional Autónoma de Mexico (UNAM) - and later collaborate with Amancio Williams to design the German embassy in Buenos Aires, while Le Corbusier with Sert were consultants for the Plano Piloto de Bogotá. Unlike what happened in the North of the continent, the approval of CIAM leaders as 'experts' solidly anchored to modern principles and methods was as a weapon to undermine the undisputed Beaux Arts model, reason why participation of Latin American young architects in post-war CIAMs was enthusiastically growing.

But this was not widespread behaviour, since modernization had already taken hold within the region, especially through the long-standing tradition of housing policies with institutions such as the 'Comisión Nacional de Casas

17 The work of Sert and Wiener in Brazil, Colombia, Venezuela, Peru and Cuba was partly favoured by the personal relationships of the latter with the State Department, but on the other hand triggered by the contacts of the former with a considerable number of Latin American students enrolled at Harvard.

18 The expertise of the CIAMs has been encouraged and required especially in the field of planning and housing. Alva Myrdal, director of the section of the United Nations dedicated to the promotion of welfare policies, already consulted Sert in 1950 to hire experts in housing planning for the United Nations. See Liernur (2004).

19 This was one of the most important opportunities for CIAM leaders to reach an international position, when UNESCO authorities commissioned Walter Gropius to elaborate a proposal together with a CIAM group. But it is in the field of education and the renewal of teaching programs that the influence of CIAM leaders became influential during the 1950s. In March 1947, UNESCO president Julián Huxley had been contacted by a group of CIAM authorities to propose the formation of a UNESCO committee to deal with the teaching of planning and architecture. UNESCO's intention to promote peaceful international interaction in the field of culture coincided with Giedion's ideology, namely the 'synthesis of the arts' on which much of the CIAM discourse was based at the time.

Baratas en Argentina' (1916), 'Banco Obrero' in Venezuela (1927), the 'Comisión de Vivienda Obrera' in Colombia (1932), 'Institutos de Aposentadoría y Pensies' active in Brazil since the 1930s.²⁰ Therefore, even in the South part of the continent there was no lack of cases in which proposal by 'experts' like Sert or Le Corbusier were received as rigid prescriptions of CIAM's functionalist formulas sketched after relatively short studies and weakly supported by limited information. Colombian architects, for example, wrote about Sert's proposal for Bogotá:

“Hace un par de años la municipalidad de Bogotá les encargó el estudio urbano de nuestra ciudad a los señores Sert y Wiener. Los contratistas recibieron doscientos tres mil dólares para: a) dibujos vacíos cuidadosamente realizados y pintados, sin la ayuda de informaciones geológicas y topográficas de la ciudad; b) un manual o reporte descriptivo para el perfecto planificador urbano, sin estadísticas, ni las demográficas correspondientes, ni de otro tipo, indispensables en un caso concreto; c) una inusual explicación verbal de la propuesta en la que cada pregunta o interpretación era aceptada”²¹

The most relevant case of resistance to the CIAMs maneuvers was that of the Brazilian modernists. Although they were invited and considered members in the 1930s, Niemeyer, Costa, Reidy and the rest of the country's leading figures did not attend the meetings despite the insistence of Giedion, Sert, Tyrwhitt and other CIAM authorities on countless occasions.

On the contrary, in the case of Argentinians, the first post-war congress in Bridgewater (CIAM 6, 1947) was essential to restore the links with those local groups operating during the interwar period such as Grupo Austral. In addition, especially between 1946 and 1953, a large group of international architects and educators including a number of Italians was called upon to participate in the construction of an unprecedented educational project, invited to join the newly-founded Instituto de Arquitectura y Urbanismo (IAU) and to design the new Ciudad Universitaria of Universidad Nacional de Tucumán, whose peripheral condition could be negotiated with an unparalleled degree of experimentation to test, on a gigantic hill-top complex in Argentina, the new elements of post-

20 Relationships between the UN and the CIAM in the field of housing and urban planning continued in Latin America thanks to Ernest Weismann, deputy director of the 'Sección de Desarrollo de Vivienda y Comunidad de la Oficina de Relaciones Sociales'. See Liernur (2004).

21 See Liernur (2004), p. 23.

war CIAM propaganda such as the need for a 'new monumentality' and 'civic centers'. Not without controversy, a not clearly defined concept of 'urbanity' to perform togetherness and civicism aroused there, as recalled by Cesar Pelli who took part as a student in Tucumán adventure from 1944 until his graduation in 1949.²²

FIG. 58
The immense presence of Cordillera's natural landscape on the urban environment of San Miguel de Tucuman



1.2 *Ciudad Universitaria de Tucumán.* *A peripheral case of new monumentality*

La Ciudad Universitaria de Tucumán no será una mera inversión de millones, sino el comienzo, la puesta en marcha, de una forma de vida, el ejemplo de cómo debe situarse el hombre frente al medio, descubriendo el sentido, la fuerza y la energía latentes en la naturaleza y extrayendo de ellos la semilla necesaria para su constante perfeccionamiento moral e intelectual.²³

La Universidad Nacional de Tucumán, 1948

Since the early decades of the twentieth century, campus design has represented the epicenter of urban and architectural development in South America. University was considered a driving force of the modernist agenda, materialized in magnificent and iconic examples in the region's capitals: Rio de Janeiro and Bogotá date back to the 1930s, the construction of a university city in Caracas began in 1944 to settle Universidad Central de Venezuela, followed by the new campus for Universidad Nacional Autónoma de México (UNAM) as the 'mythical *topos* for the creation of the new Mexican environment where a modern society would be born'.²⁴ These last two examples will be among the most celebrated in Hitchcock's survey for the MoMA (1955),²⁵ with the North American historian particularly impressed by the *genius* of an extremely promising architect for the continuation of the post-war modern discourse such as Carlos Raúl Villanueva in Caracas, but equally stimulated by the Mexican highly collaborative project with architects Enrique del Moral and Mario Pani in charge of the overall project that involved over 150 architects and a group of students exploring the basis of the university campus first proposal.²⁶

If Hitchcock's dizzying itinerary in Latin America could hardly include a visit on the top of the Andes, it will be the British architectural historian and critic

23 La Universidad Nacional de Tucumán reorganizada (30 de mayo de 1948). Trópico, [Suplemento Cultural], p. 1.

24 See Celia Ester Arredondo Zambrano, 'Modernity in Mexico: The Case of Ciudad Universitaria', in Burian (ed.), *Modernity and the Architecture of Mexico*, p. 92.

25 Henry-Russell Hitchcock, *Latin American Architecture since 1945*, New York: The Museum of Modern Art, 1955.

26 Valerie Fraser, *Building the New World: Studies in the Modern Architecture of Latin America, 1930–1960*. London: Verso, 2000.

VIVIENDA UNIVERSITARIA

UBICACION

Altura sobre el nivel del mar: 1.192 mts. El edificio se desarrolla frente a la zona deportiva. Las distancias medias al Centro Comunal y a la Universidad son de 700 y 600 mts.

DESTINO

Se trata de un edificio destinado a albergar a los estudiantes universitarios varones y a un porcentaje pequeño de personal docente y administrativo (4.000 personas en total).

CRECIMIENTO

El block está constituido por unidades de funcionamiento independiente de una capacidad de 500 ocupantes cada uno. Cada unidad cuenta con cocina y comedor. La Vivienda Universitaria se construirá por etapas. Los planos esquematizados aquí corresponden a la primera etapa de construcción, que comprende dos unidades de 500 ocupantes.

UNIVERSITY RESIDENCE

Site:

Height above sea-level: 1,192 metres. The building is being constructed opposite the sports grounds. The average distances to the Communal Centre are 700 and 600 metres respectively.

Purpose:

The object of the building is to house the men students and a small percentage of the teaching and administrative staff (4,000 people in all.).

Future expansion:

The University Residence will be constructed by stages. The plans shown here represent the first stage of the building, which consists of two units of 500 residents.

LOGIS UNIVERSITAIRE

EMPLACEMENT

Altitude: 1.192 m. au-dessus du niveau de la mer. L'édifice se trouve faisant face à la zone de sports.

Les distances (moyennes) au Centre Communal et à l'Université sont de 700 et 600 m.

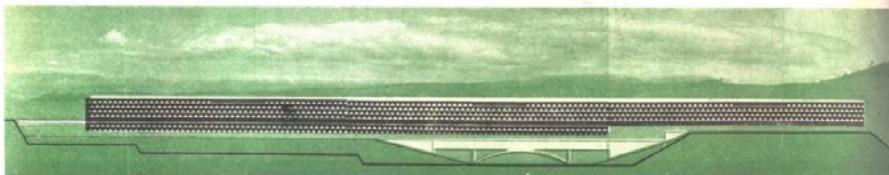
DESTINATION

Il s'agit d'un édifice destiné à loger les étudiants, garçons et personnel enseignant et administratif peu nombreux (4.000 personnes).

ACCROISSEMENT

Le block sera construit par unités de fonctionnement indépendantes, avec une capacité de 500 personnes chacun. Chaque unité a aussi une cuisine et une salle à manger.

Le logis Universitaire sera construit par étapes. Les plans schématiques correspondent ici à la première étape de sa construction, qui comprend deux unités avec une capacité de 500 personnes.



VIVIENDA UNIVERSITARIA MASCULINA

Se trata de un edificio destinado a albergar a los estudiantes universitarios varones y a un porcentaje menor de personal soltero, docente y administrativo.

El block completo servirá de vivienda a unas 4.000 personas aproximadamente.

Programa de construcción.—Dormitorios: las habitaciones de alumnos serán en su mayor parte para tres personas y la proporción menor para una y dos. Los pisos dormitorios dispondrán de: servicios sanitarios, ropería, offices, depósitos, etc.

Los profesores contarán con pequeños departamentos en el último piso vinculados a la terraza-jardín.

Para el personal de servicio que atiende las necesidades del block se dispondrán dormitorios en otro sector del último piso.

Se dispondrán en el tercer piso, llamado plano de circulación (porque en un extremo se conecta directamente con la explanada que conduce al Centro Comunal), el comedor, restaurant, cafetería, bar, cocina, office, salas de estar, peluquería, administración, correos y teléfonos, pequeña librería y venta de útiles, diarios, revistas, cigarrillos, etc.

Otros locales: salas de calderas, depósitos, comodidades de estacionamiento para

bicicletas, motos, automotores, etc.

El edificio es un block de 480 metros de longitud, 21 metros de ancho y 30 metros de altura. Está emplazado siguiendo la dirección este-oeste de manera que ofrezca una cara al norte y otra al sur, que son las orientaciones más favorables a las condiciones climáticas imperantes en la zona.

Además la construcción corre casi paralela al límite de los terrenos de la Universidad con la Villa de San Javier y a unos 200 metros de ese límite. La silueta extendida del edificio y un arbolado adecuado, cerrarán la composición del Casco Principal por el lado sur y formarán una pantalla compacta para ocultar la visión de chalecitos con techo de teja que manchan la montaña en las lomas de la villa.

Más o menos en su parte media, el bloque debe salvar una hondonada. Allí se ha previsto prolongar la construcción hacia abajo, ocupándola con un garage para automotores. Allí se ubicarán también baterías más importantes de ascensores, pues ese punto servirá de acceso al plano más bajo de la zona deportiva.

El edificio está constituido por unidades completas de funcionamiento independiente para una capacidad de 1.200 personas cada una. Se ha tomado este número por considerarse el máximo admisible pa-

ra el funcionamiento adecuado de una organización colectiva de este tipo. Cada unidad cuenta con una cocina y dos comedores de 600 personas cada uno.

La ejecución se ha previsto por etapas, habiéndose adjudicado ya la construcción de la estructura de la primera unidad, que tendrá 160 metros de largo y albergará 1.200 personas.

VIVIENDA UNIVERSITARIA FEMENINA

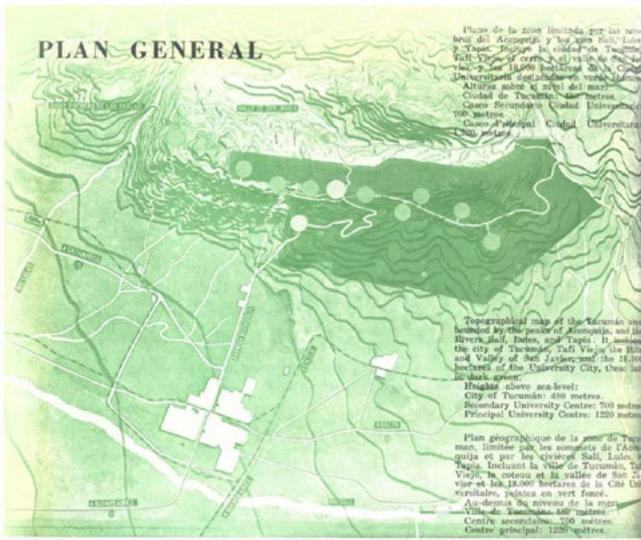
Destinada a estudiantes universitarias y personal femenino, docente y administrativo.

Se emplazará en una lomada, a cota 1.215 sobre el nivel del mar y ubicada al noroeste. Distará de la Universidad y del Centro Comunal 400 y 700 metros respectivamente.

Aunque ya tiene su sitio señalado dentro del plan general de zonización, este edificio no ha sido aún proyectado, pues el problema de vivienda femenina soltera no es inmediato. El reducido número que habitará en la Ciudad Universitaria durante los primeros años, se alojará por grupos en las viviendas individuales en construcción y en una pensión de la primera unidad vecinal.

FIG. 59

Ciudad Universitaria de Tucuman collective housing bulding (above) and university settlement on top of Cerro San Javier (right). Image from "Nuestra Arquitectura" (September 1950)



Comparación del medio físico.

a) La ciudad de Tucumán ofrece:

- 1.º) Casa, falta de horizontes y espacios verdes, clima bochornoso agudizado por la edificación y el pavimento.
 - 2.º) La capital del «Jardín de la República» no goza ni de la naturaleza ni de la montaña.
 - 3.º) El auto y los tranvías han instituido la ciudad colonial: ruidos, accidentes, tránsito difícil, gases, estrechos de espacios, problemas de estacionamiento.
- b) La ciudad universitaria debe ofrecer:**
- 1.º) Orden: restitución del ciclo y del paisaje; horizontes amplios.
 - 2.º) Reconquista de la naturaleza: árboles, vegetación, cultivo; la montaña vive a participar de la vida diaria.
 - 3.º) Educación del tránsito. Los automotores marchan por su vía de circulación con la velocidad adecuada. El hombre camina libremente por el espacio.

Comparación del funcionamiento.

a) Funcionamiento actual de la Universidad en la ciudad de Tucumán:

- 1.º) Locales dispersos en la ciudad, insuficientes, inadecuados y viejos. Casi todas las dependencias de la Universidad están instaladas en antiguas viviendas familiares.
 - 2.º) Falta de ambiente propicio para la investigación y la formación universitaria.
 - 3.º) Descentralización antieconómica. Difícil intercambio y colaboración entre las distintas facultades e institutos.
 - 4.º) Dificultades de alojamiento para los estudiantes que acuden de todo el norte. Este problema assume cierta gravedad, pues aproximadamente el 20 % de todo el alumnado proviene de otras provincias y debe vivir provisoriamente en pensiones y hoteles. El problema también alcanza a gran parte de los profesores y personal de la Universidad.
 - 5.º) La Universidad no puede brindar un ambiente óptimo para un desenvolvimiento cultural y físico; ni facilidades de vida y albergue a los estudiantes de escasos recursos.
- b) Funcionamiento de la Universidad en una ciudad orgánicamente planeada:**
- 1.º) Concentración de la vida universitaria.
 - 2.º) Ambiente adecuado para el trabajo, la investigación y para la formación universitaria.
 - 3.º) Intercambio y colaboración entre las distintas facultades e institutos.
 - 4.º) La Universidad ofrece en condiciones de ofrecer a todos los alumnos facilidades de estudio, vida, alojamiento y mejoramiento cultural y físico.
 - 5.º) Ambiente adecuado para el estudio.
 - 6.º) Contacto directo con la naturaleza y con los problemas auténticos del campo.

La Ciudad Universitaria como ejemplo de solución urbana.

- La Ciudad Universitaria, al ser un núcleo modelo de habitáculo, permitirá:
- 1.º) La aplicación racional de la técnica moderna.
 - 2.º) La organización del medio físico y de las funciones humanas: habitar, trabajar, cultivar el cuerpo y el espíritu.
 - 3.º) Contribuir a la solución de los problemas urbanos de la ciudad de Tucumán.
 - 4.º) Aportar una experiencia para la planificación y remodelación de otros pueblos.

VIVIENDA

VIVIENDA

La vivienda está organizada en unidades vecinales. Cada unidad comprende un núcleo de viviendas habitadas y un block y los servicios comunes correspondientes: pequeña escuela, jardín de infancia, guardería, parque y lugares de recreo para niños. Los diferentes elementos de cada unidad se vinculan mutuamente entre sí.

RESIDENCE

The Residence is composed of neighbour hood units. Each unit consists of a nucleus of isolated buildings, or a block and the services common corresponding: small school, kindergarten, primary school and baby play grounds for children. The various sectors of each unit are connected by footpaths.

ÉCRIS

La zona está organizada sur la base d'unités d'habitation. Chaque unité comprend un groupe de maisons isolées, ou un block et les services communs correspondants: petit séminaire à provisions, école, école de primaire et lieux plantés pour les jeux d'enfants. Les différents éléments de chaque unité se sont reliés entre eux par des chemins de circulation à pied.

Perspectiva de la unidad vecinal de vivienda en block ubicada al Norte del Casco Principal a una altura de 1.400 y que alojará 5.000 personas.

View of the residential unit in block form, situated 1.400 metres to the north of the principal group of buildings, at the 1.400 metre level, and which will house 5,000 people.

Piano de un grupo vecinal de viviendas individuales en vías de ejecución.

Plan of a group of individual residences in the process of construction.

Plan d'un groupe d'habitations individuelles en construction.

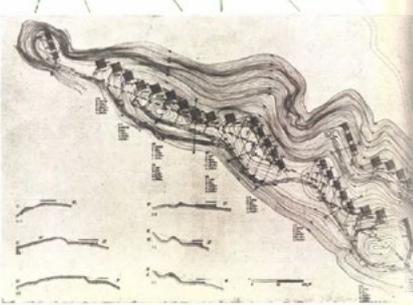
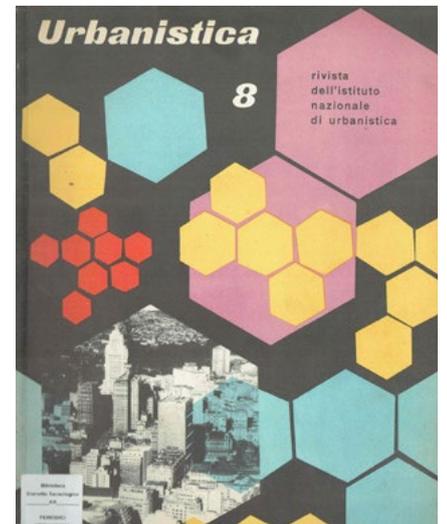


FIG. 60
In 1952 the Italian magazine "Urbanistica" (no.8) published the entire project of the new Ciudad Universitaria de Tucuman



Reyner Banham to dredge up the Ciudad Universitaria of Tucumán, some thirty years later, to participate in his mid-1970s Banham's megastructural campaign placing this peripheral university project among the 'Beginners and Begetters' of his seminal book:

“Latin America's first major bid at a megastructure, this gigantic hill-top complex in Argentina got as far as retaining walls and site works, but little further. If completed as designed, [Tucumán University project] would have covered the levelled mountain-top with a system of concrete umbrellas large enough to shelter most of the campus framed by buildings of enormous length – the student hostel was to be 2,000 feet long [...] Nevertheless, its scale and ruthlessness guarantee it a place somewhere in the megastructure canon”²⁷

However, what was happening in Tucumán was rather an experiment in which education was intended as a project, supported by the political power looking at the regional development to affirm the competitiveness of its territory by giving an urban connotation to this settlement model. The official document that reports on the project of the new campus circulates first as an illustrated text produced in 1950 by the in-house publisher Universidad Nacional de Tucumán, then re-edited in the same year for the Argentinean magazine “Nuestra Arquitectura” to ensure a largest diffusion of a revolutionary educational project undertaken in the peripheral region of Northern Argentina. An introductory note was added by the magazine's editors for the new version of the document:

“En esa documentación, la más abundante que hemos podido reunir en el espacio ceñido de un número de esta revista, los profesionales podrán apreciar con bastante aproximación la magnitud del programa trazado, para la más gran realización que en ese terreno se ha intentado en el país.

Integrado el plan con la provisión de agua, el trazado de caminos, la construcción de un funicular, la forestación y el trazado de la Ciudad Universitaria propiamente dicha, con sus múltiples estructuras para estudio, vivienda y auxiliares, fácil es comprender la complejidad de los asuntos que había que resolver. Factores económicos, técnicos, financieros, arquitectónicos y administrativos han debido ser tenidos en cuenta, para ir definiendo las grandes líneas del plan básico, antes

²⁷ Reyner Banham, *Megastructure: Urban Futures of the Recent Past*, New York: Harper & Row, 1976, pp. 36-37.

que se pudiera trazar una sola línea sobre la tela de los planos.

El terreno sobre el cual se ha de levantar esta obra, pertenece ya a la Universidad y tiene 18.000 hectáreas de extensión, más o menos la misma de la ciudad de Buenos Aires. Toda las obras que se muestran ya están proyectadas y algunas están en plena ejecución.

Para fines del corriente año comenzará a funcionar una pequeña parte de la Universidad en la Sierra de San Javier: el Departamento de Construcciones Universitarias que tiene a su cargo los proyectos y la dirección de las obras, y el Instituto de Arquitectura y Urbanismo”

Marking in the end on the extreme importance of circulation:

“Entendier do que esta obra despertará interés en el extranjero, dada la naturaleza de la misma y su trascendencia, se han confeccionado todos los textos en castellano, inglés y francés, en la seguridad de que así facilitamos a los arquitectos del exterior la mejor comprensión de una obra de gran interés de sus colegas argentinos”.²⁸

In addition to the introductory note, some subtle changes from the original edition appear. In particular, there is no trace in the magazine of Juan Domingo Perón words, new head of state, in whose tone resonated a certain claim to the institutional ownership of the project.²⁹ Founded by the American socialist engineer Walter Hylton Scott and published in Buenos Aires between August 1929 and May 1986, “Nuestra Arquitectura” (na) was considered the most influential platform for local architecture – until the mid-1960s when it began sharing the field with “Summa”³⁰ – aimed at a professional audience without the institutional support reserved to its contemporary “Revista de Arquitectura” edited by the SCA (Sociedad Central de Arquitectos). Despite the fact that “na” had always proclaimed itself a specialized publication, not interested in discussing political or religious issues, during the Peronist governments between 1946 and 1953 adopted a strategy of ‘cultural resistance’ by approaching the problems of urbanism as a particular form of response to the new political situation.³¹ One way to ignore most of the work produced by the state was to

28 See ‘Plan General de la Ciudad Universitaria de Tucumán’, in “Nuestra Arquitectura” no. 254, 1950.

29 The cover image was also changed between the first and second version. See Silvia Mariel Alvite, ‘La Ciudad Universitaria de Tucumán (1947-1952). Región, paisaje y organicismo’, in *REGISTROS*, Vol. 14 (2), 2018, pp. 113-129.

30 Founded in 1963 by architects Carlos and Lala Méndez Mosquera, it was published uninterruptedly until its bankruptcy in 1992, replaced by the current magazine “Summa +”.

31 In 1955, the overthrow of Peronism was greeted with the resounding editorial ‘Nunca mas’ by Hylton

publish monographic issues on the work of Argentine or foreign architects – as in the case of Amancio Williams (August, 1947), Marcel Breuer (September, 1947), Richard Neutra (July, 1953) – or projects of particular importance such as that of the Buenos Aires Auditorium (January, 1948) and the Ciudad Universitaria de Tucumán (September, 1950) giving a more neutral interpretation possible. Most likely, this favoured a fair international circulation: both the Italian “Urbanistica” (1951) and “The Architectural Review” in UK (1952) will publish this peripheral university project.³²

However, while the profusion of numerical data (surfaces, usage, people and their respective ratio) compressed in neutral bulleted lists or abstract matrices declare a highly *functional* approach, this is not enough to divert attention from the rhetoric and enchanting images that best suit with a project for a city of 20,000 inhabitants conceived as ‘una acrópolis a doce kilómetros de la ciudad’ by a collective of local and foreign architects inspired by the post-war CIAM discourse and gathered into the IAU (Instituto de Arquitectura y Urbanismo), an institute that operates from within the bureaucratic apparatus of the university. Not surprisingly, the guideline for the ‘Plan General de la Ciudad Universitaria’ is the:

“reconquista de la naturaleza donde el hombre caminará libremente por el campo, la restitución del cielo y del paisaje con el objeto de crear un ambiente adecuado para el estudio, la investigación y la formación universitaria, y como indicaba el urbanismo del CIAM, la organización del medio físico y de las funciones humanas: habitar, trabajar, cultivar el cuerpo y el espíritu”.³³

The IAU’s proposal was to settle the university in Cerro San Javier, 25 km West from San Miguel de Tucumán city center, at an average height of 1,220 meters

Scott, and the designation of the new director Raúl H. Burzacco. In the following years, the reflections of the Italian debate allowed “na” to define a theoretical positioning giving ample space to discussions on Organic Architecture and, subsequently, to the interest in the history of architecture which began to be explicitly thematized on the basis of Enrico Tedeschi’s articles consolidating a vision of modernity that would welcome ‘los valores tradicionales del habitar’. See Chapter 4, and also Jorge Francisco Liernur and Fernando Aliata, *Diccionario de la Arquitectura en la Argentina*. Buenos Aires: Clarín Arquitectura (updated 2019).

³² See “Urbanistica”, no. 8 (1951) and “The Architectural Review”, vol. 112, no. 671 (1952).

³³ From the report published by Universidad Nacional de Tucumán, *Memoria 1947, Tucumán*, p. 27, with texts by architects Hilario Zalba, Eduardo Sacriste, Horacio Caminos and Guillermo Rohmeder (Director del Instituto de Estudios Geográfico). See one of the most detailed studies on the case Franco Marigliano, ‘El Instituto de Arquitectura y Urbanismo de la Universidad Nacional de Tucumán. 1946-1955. Modelo arquitectónico del estado y Movimiento Moderno en Argentina’, PhD Diss. Universidad Politécnica de Madrid, 2003.

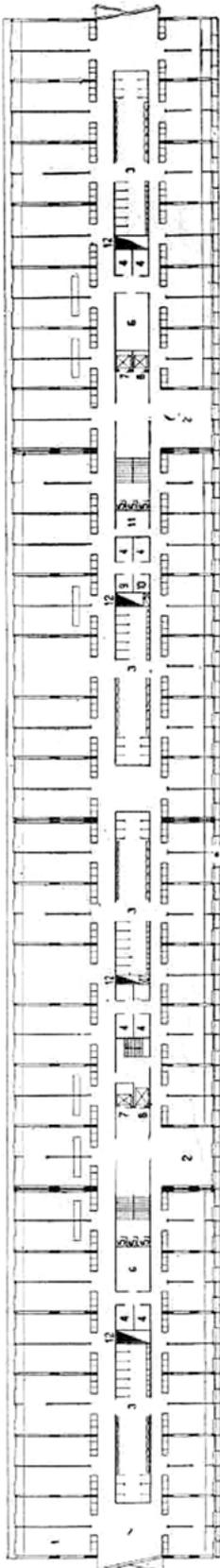


FIG. 62
 Typical plan of Tucuman's Vivienda Universitaria.
 From "Nuestra Arquitectura" (1950)

SINTESIS DE LOS LOCALES DE LA UNIVERSIDAD
 REFERIDOS A UN VOLUMEN MODULAR

	P1	P2	P3	P4	P5	P6	P8	P10	P11	P16	P20	P24	P28
AULAS													
SABINETES													
TALLERES													
LABORATORIOS													
BIBLIOTECAS													
SALES DE REUNIONES													
OFICINAS													
DEPOSITOS													
SALES DE PRUEBAS													

FIG. 61
 Matrix of space requirements.
 From "Nuestra Arquitectura" (1950)

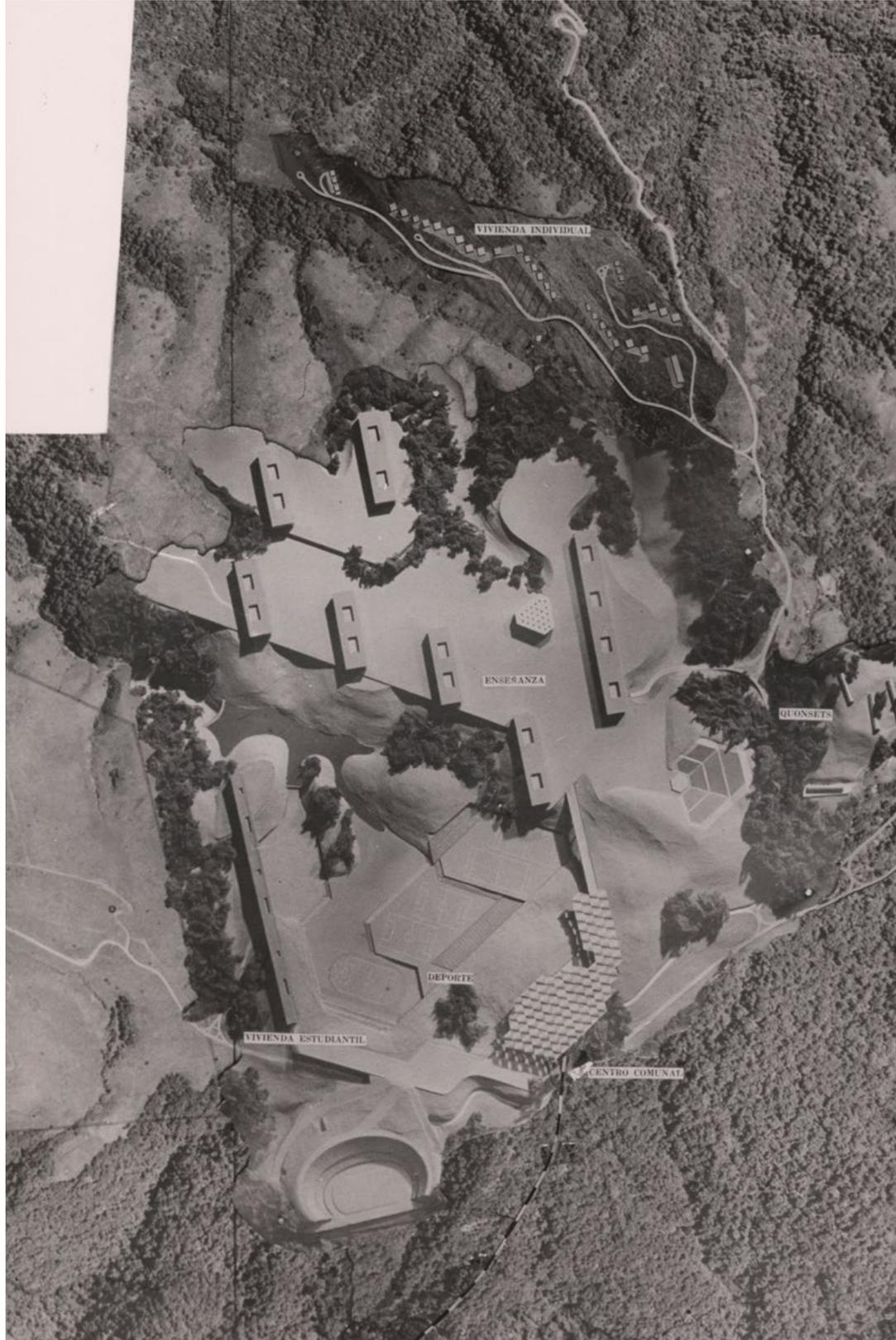




FIG. 63
Ciudad Universitaria de Tucuman (model).
MIT Distinctive Collections

above sea level (Tucumán is 480 meters). On top of the mountains, the site was approximately 18,000 hectares almost entirely occupied by forests – 75% of which became property of the UNT through expropriations financed by the National State in 1948 – which in addition to acting as a climate regulator and biological reserve of animal and plant species, represents a natural monument for the entire region. It was in this unique environmental setting that the ‘Sistema Educacional Residencial’ had to be installed under the assumptions of Dr. Horacio Descole, appointed by the national government as ‘interventor’ in April 1946, while the ideologue and motivator of the project was the CIAM delegate and then Director of the IAU Jorge Vivanco: about fifty specialized ‘Institutos’ were founded, whose mission will be to link teachings and research with the region’s specific needs providing real-world advices to production and governmental entities.

Essentially, by founding the Ciudad Universitaria on top of Cerro San Javier means to conceive a monumental complex whose geographical location and architectural scale could represent an inescapable institutional reference for the entire region. The gigantic project for the new Ciudad Univesitaria was divided into two ‘núcleos’, with a funicular railway climbing nearly 600 meters to ‘Casco Principal’ with the main university buildings, and ‘Casco Secundario’ just located at the foot of the hill where other educational facilities will be placed in the future. The site on top is a triangular dished plateau, low in the centre and high at the rim. Two dams make a lake in the lowest part so that a series of horizontal planes are created, making surfaces for circulation and recreation with all the university buildings grouped around the perimeter. Blocks for institutes and faculties are displaced on the site in a staggered pattern along the East-West axis, above a continuous platform which seems to anticipate that sense of *monumentality* appreciated by Giedion in Le Corbusier’s ‘modern space conception’ for post-war reconstruction:

“Desde el punto de vista arquitectónico los edificios se han dispuesto y planeado siguiendo un sencillo principio: que las grandes construcciones no sean meramente fachadas y volúmenes, sino que conformen espacio exteriores”³⁴

If Saint-Dié-des-Vosges reconstruction project embodies a new conception of modern space distinct from Le Corbusier’s earlier urban proposals, it was precisely this juxtaposition of free-standing buildings on paved pedestrian plazas to confer

34 “Nuestra Arquitectura” (1950).

a specific urban connotation upon the project of the new Ciudad Universitaria de Tucumán.³⁵

However, there are also other elements showing the search for a new monumentality at work here, giving a clear sense of the architectural ambition in this peripheral campus project. Looking South across the valley appears the ‘Vivienda Universitaria’, a collective housing superblock for teachers and students. The building known as the Hostel, with the precise purpose to form ‘una pantalla compacta para ocultar la visión de chalecitos con techo de teja que manchan la montaña en las lomadas de la villa’,³⁶ was 480 meters long, 21 meters wide and 30 meters high with a capacity of 4,000 people – 1,200 in its partially built stage. The Hostel is composed of seven horizontal slabs, vertically pierced by double and triple-height spaces containing lifts and stairs to filter inhabitants from the open ground floor to the third floor, called ‘plano de circulación’, where dining rooms, cafeterias, bookstores and living rooms with other communal services are located and work as an integral part of the university equipment. Two floors of bedrooms lie below third floor and others above, while the roof top is activated with recreation activities like in the case of its iconic reference of Marseille Unité d’Habitation – which was the commission Le Corbusier received immediately after Saint-Dié (1946).

Despite typological similarities, eloquent differences can be found in the reinforced concrete section designed by the Argentinean architect Eduardo Catalano (1917-2010): an asymmetrical branching tree-like structure that will be later simplified in its final version.³⁷ But it is in the conception of ‘Centro Comunal’ that the greatest energies will be invested to shape a monument to ‘a certain forgotten practices, such as giving *civic character* to nucleus of the city’.³⁸ The terminus of the funicular railway fixes the site of ‘Centro Comunal’, that marks a formal and typological break with respect to the rest of the campus project: an immense floating canopy hovering over the rugged topography is the architectural device designated to satisfy functional changes, variations and unpredictable uses of the entire complex just by covering a large flexible space

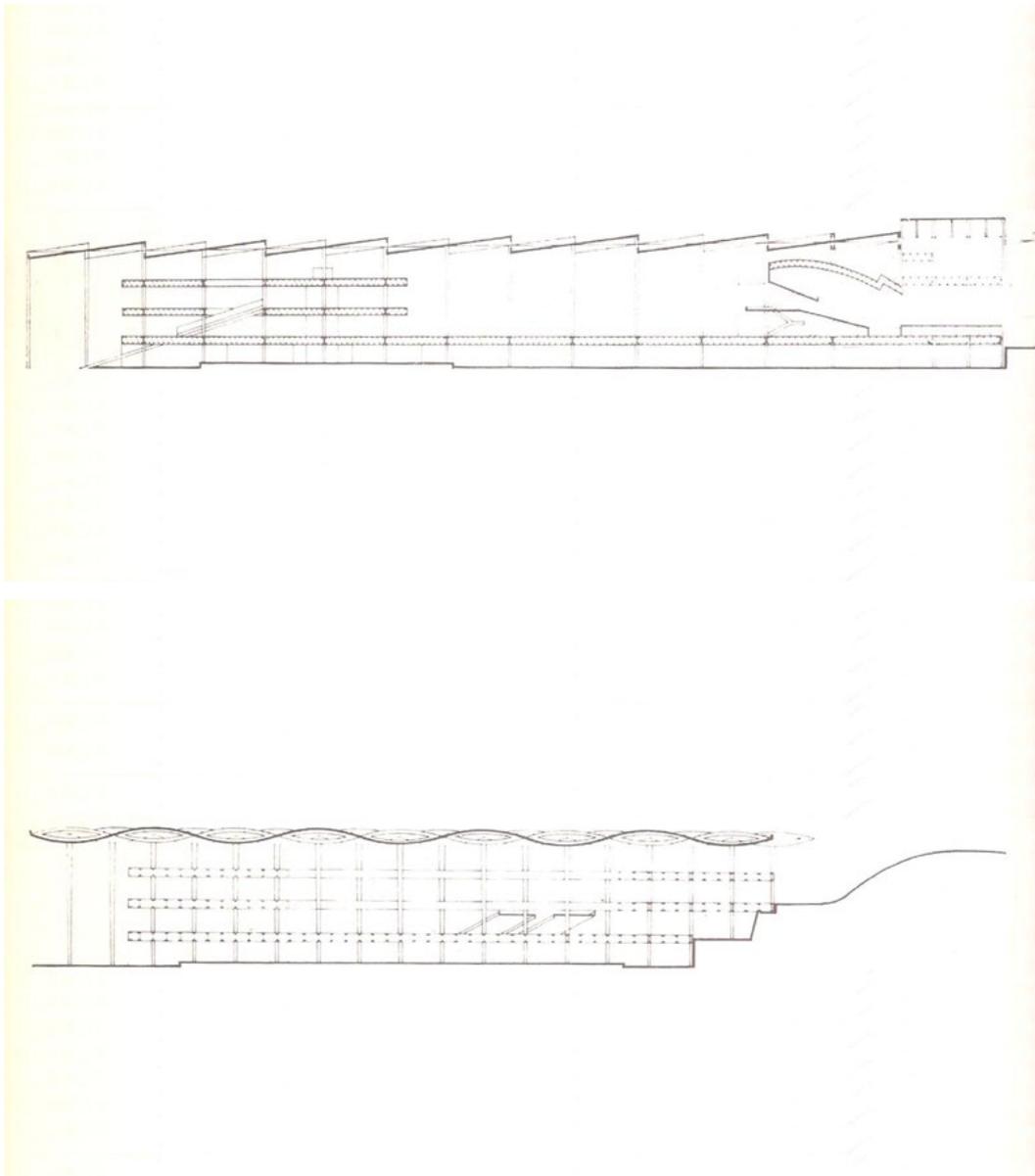
35 See Mary McLeod, ‘Saint-Die. A Modern Space Conception for Postwar Reconstruction’, in Jean-Louis Cohen (ed.), *Le Corbusier: An Atlas of Modern Landscapes*, New York: MoMA, 2013. This concept was also noted by

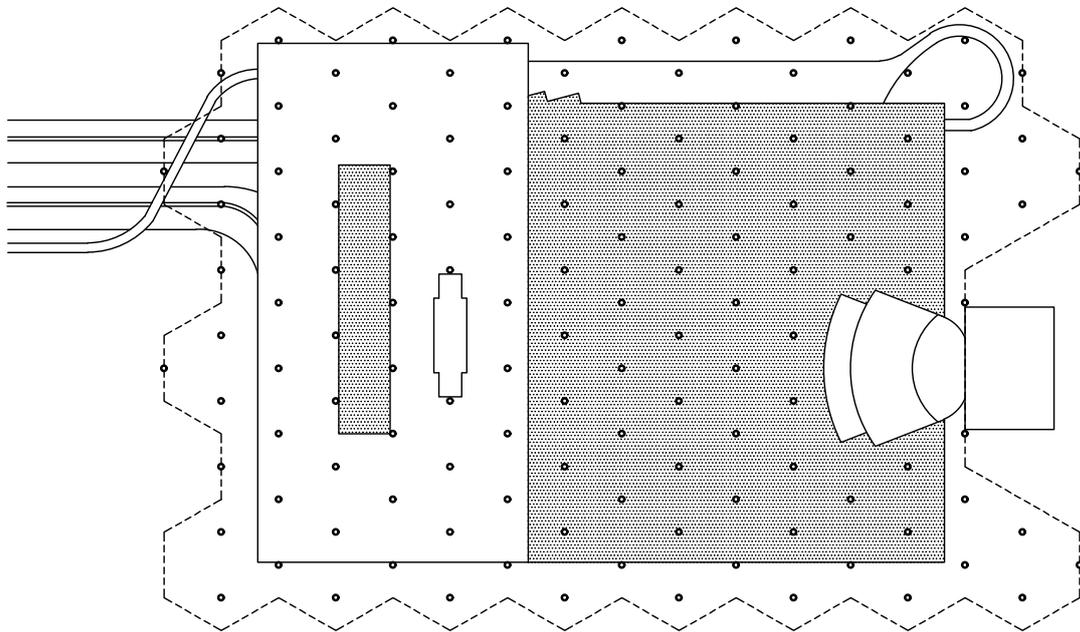
36 The Municipalidad de Tucumán entrusted to the urban planner Carlos Della Paolera the urbanization project of the hill to turn into a tourist village, a process that was already consolidated when the university city began its construction. See “Nuestra Arquitectura” (1950) and Marigliano (2003).

37 Although he never formally joined the IAU, architect Eduardo Catalano was invited in 1948 to give technical contributions to the project by one of the IAU’s founders, Horacio Caminos (1914-1990), who will become his lifelong professional partner in the following experiences in the United States, and above all, in the proposal for the new campus for the Universidad de Buenos Aires (see Chapter 5).

38 Jose Luis Sert, ‘From Architecture to City Planning’, in Stamo Papadaki (ed.), *Le Corbusier: Architect, Painter, Writer*, New York: MacMillan, 1948, p. 85.

FIG. 64
Centro Comunal sections.





0 50

FIG. 65
 Centro Comunal sections.
 (redrawn by the author)

with the possibility of indefinite growth adding regular modules. In fact, the structural idea suggested by the Italian engineer Pier Luigi Nervi, involved in the project with his colleague Guido Oberti on-site, consists of the repetition of alternate conical shell vaults in reinforced concrete – one convex and one concave – sustained by 20-meter-high columns positioned in the middle of the 20 meters-side equilateral triangle, that is the plan of each vault and the base module of the entire roof.

This gigantic concrete parasol has been widely celebrated as an highly original conception, with a 1:25 scale model of one single module subjected to structural studies and loading tests prepared by Pier Luigi Nervi at Politecnico di Milano Structure Laboratory.³⁹ As was the case for international magazines which devoted space to this apparently off-centre project, one can dwell in detail on how these shells are made, as well as on the peculiarity of the reverse-tapered legs that support them.⁴⁰ However, what should not go unnoticed is that the structures under the parasol are ‘fairly conventional’ and freely distributed against the 20-meters grid of equilateral triangles.

These aspects returned an idea of ‘civicness’ based on indeterminacy and indefinite growth, which seems to have an even more disruptive impact than what had been accepted within the post-war CIAM architectural discourse in search of ‘contemporary *city centers* imbued with modern space conceptions’: car park, cinema, theater, exhibition and conference rooms, museum, music halls, gymnasium, university administration and public offices, as well as the funicular station, take the form of a sequence of generic floors vertically pierced by columns uniformly distributed on the landscape scale. It is interesting to note that this generic version of a monumentalized image of civic life is hardly scrutinized in the commentaries of the time, rather interested in the metaphor of:

“a large balcony at 1219 meters above sea level from which you can enjoy a panorama [the plain of Tucumán] that embraces the city below and the high peaks of Aconcagua at the top.”

It is not by chance that this consideration comes from the piece published in the Italian magazine “Urbanistica”.⁴¹ At the time, the magazine founded in 1932 and

39 The process and results of structural tests are commented in detail on “Nuestra Arquitectura” (1950).

40 The open trusses face north (which is towards the sun at noon in Argentina) and are glazed to prevent rain blowing in, while down-pipes for run-off being provided in the supporting legs.

41 “L’idea grandiosa di questo progetto, che è già avviato alla realizzazione, assume particolare valore per la ripercussione che può avere nell’ambiente in cui sorge. Tucumán, fino ad oggi, non aveva dimostrato di saper apprezzare il grande vantaggio di avere, alle porte, una meravigliosa montagna, con un clima gradevole che registra una media annuale di 15° contro i 18° o 19° della attuale città con quasi sei mesi di

historically associated with Istituto Nazionale di Urbanistica (INU) was directed by Adriano Olivetti (1949-1952) and counted on the contribution of Giuseppe Samonà, Ludovico Quaroni and Bruno Zevi interested, in all likelihood, to package an interpretation of this project in the most 'organic' way possible.⁴² This kind of environmental sensitivity was relegated to a specific area away from the high-density central nucleus of Tucumán, where a residential complex of 33 individual teachers' houses was built on a steep slope almost disappearing among the natural landscape with roof gardens and north-facing large windows allowing a fluid integration between interior and exterior. Indeed, along this same line, the Italian architect Enrico Tedeschi (Rome, 1910 - Buenos Aires, 1978) invited by the IAU to re-found historical studies in architecture and also member of Oficina de Estudios y Proyectos de la Ciudad Universitaria, developed an alternative layout for the entire university settlement with small-size volumes more conditioned by the natural landscape. Tedeschi's design proposal was rejected from its initial stages,⁴³ though the regional scale remains the fundamental of IAU's educational project to actively participate in the revision of modern postulates by giving an original architectural connotation to its brand new slogans like that of a *new monumentality* and *civic centers* which were still on the table while the Ciudad Universitaria de Tucumán was under construction.

estate. La creazione del campus universitario in questo ambiente, che ovviamente ha incontrato resistenze nell'ambiente conservatore locale, presenterà perciò il duplice vantaggio di creare una organica città universitaria americana, vero centro culturale del nord-ovest argentino, aperta anche agli studiosi delle vicine repubbliche: nello stesso tempo costituirà il primo impulso per il graduale trasferimento della zona residenziale di Tucumán". In *Urbanistica* (1952). Policies of territorial decentralization in Italy based on industrial development were discussed in the same issue of "Urbanistica" in which the Ciudad Universitaria was published, paving the way for the application of urban planning theories that will take the stage, in the following decades, in the pages of other long-standing architectural magazines such as "Casabella" around the concept of 'centri direzionali' and 'città-territorio'.

42 Admiration for 'organic architecture' arrived in Italy through Bruno Zevi, who was the first to make explicit a critique against the hegemony of form over the qualities offered by 'space'. One of his harshest criticisms was against CIAMs after the 7th edition hosted in Bergamo (1949): "The other branch of modern architecture, that which is no longer rationalistic, the movement which is called organic, or of human architecture, or of the New Empiricism, doesn't have adequate representation in the CIAM and its cultural position has been defended by architects who entered the CIAM as proponents of the rationalist school ten years ago and have since undergone an evolution. An entire generation of young architects who have contributed to advancement of the modern movement, and all the adherents of the Wright school, have been more or less excluded. Why? The Congress of Bergamo must face this problem". See Bruno Zevi, 'Della cultura architettonica: messaggio al Congrès Internationaux d'Architecture Moderne, in "Metron", n. 31-32, 1949, pp. 46-49.

43 This caused Tedeschi's withdrawal from the Oficina Técnica de la Ciudad Universitaria as reported by students of that time Díaz Puertas, Robledo, Pagés, Bermejo Goday. See Alberto Nicolini and Carlos Paolasso, 'Racionalismo y arquitectura orgánica en Tucumán', in Marina Waisman (ed.), *Documentos para una historia de la arquitectura argentina*, Buenos Aires: Ediciones Summa, 1984. However, even if the Tedeschi's alternative proposal did not produce formal implications for the campus project, it certainly did so in the unprecedented relationship between man and territory explored in his lectures, later merged into the project of Universidad de Mendoza (see Chapter 4).



FIG. 66
The collective of architects-educators of IAU
(Instituto de Arquitectura y Urbanismo) pose in front of the skeleton
of the monumental Vivienda Universitaria de Tucumán (early-1950s).

1.3 *A collective of architects-educators.*
Instituto de Arquitectura y Urbanismo de Tucumán (1947-1952)

Hace algunos años, tuve la fortuna de dictar un curso en la Universidad de Tucumán, una ciudad septentrional de la Argentina, situada al pie de la Aconquija, donde un grupo de valerosos arquitectos, con singular audacia, habían tratado de establecer una escuela de arquitectura, que por las condiciones ambientales que se encontraba, constituyó para mí el laboratorio humano más desconcertante que haya visto jamás en mis numerosas peregrinaciones.⁴⁴

Ernesto Nathan Rogers, 1965

The 'Attic grandeur' of a project like that of the Ciudad Universitaria de Tucumán gave rise to the comparison between different design trends and cultural interests among the IAU's members in the first instance, apparently neutralized at a later time by the desire to influence the prevailing international debate and to occupy a place in the field of action of the post-war architectural discourse. In fact, it is certainly true that among the many hypotheses that have been explored under the umbrella of *CIAM discourse*, the most frequented is the one related to the way in which some of the leaders have progressively adapted their ideas, attitudes and forms of organization under the impact of unpredictable changes. It is equally true that the number of writings, quotations or allusions about the role of the Instituto de Arquitectura y Urbanismo of Tucumán, collected during the second half of the 20th century, tend to simplify this experience as a privileged territory in Argentina for the local exponents of the Modern Movement. Or alternatively, tend to shape the mythical prestige of the Institute on the model of a revolutionary image, readily incorporated into the network of *radical pedagogies* as an attempt to putting the Tucumán experiment on the international map.⁴⁵ Although these aspects are all part of the IAU's multifaceted

⁴⁴ Ernesto Nathan Rogers, *Experiencia de la Arquitectura*, Buenos Aires: Ediciones Nueva Visión, 1965, p. 93.

⁴⁵ "Radical Pedagogies" is an ongoing multi-year collaborative research project led by Beatriz Colomina with a team of PhD students of the School of Architecture at Princeton University, presenting a series of paradigmatic cases in architectural education. Horacio Torrent (Full Professor at Pontificia Universidad Católica de Chile) describes the case of 'Institute of Architecture and Urban Studies of Tucumán (1947-1952)' in 2015. The same author comments on the project of the Ciudad Universitaria de Tucumán in Horacio Torrent and Claudia Costa Cabral, 'Argentina III: Arquitecturas como infraestructuras urbanas',

complex history, which also includes anecdotes from disciples or collaborators of IAU's protagonists, a more targeted analysis appear necessary here to reposition this experience not only as the first episode in the design trajectory on higher education environments outlined in this study, but rather as a very laboratory of ideas around the intention of conceiving education as a project. This project of informal education, able to alter both the internal consistency of the academic structure and the extensive network of the context in which it operates, leads to delve deeper into the IAU's message from a contemporary perspective. In particular, very little space has been created for an alternative figure to that of CIAM leaders like Sert, Gropius or Giedion, that is someone operating on the side-lines of the official distribution of architectural debate, but on the contrary, extremely introduced into the bureaucratic apparatus of the university institution which serves both as an educator and as creator of its learning spaces.

The formation of the IAU, in fact, takes place within a particular institutional framework. Indeed, it is necessary to consider what was the situation of Argentine universities during the government of Juan Domingo Perón between 1946 and 1955, since it would be difficult to separate Tucumán educational project from the political, social and economic intentions that animated that time.⁴⁶ If there is an institution in Argentina committed to freedom and tolerance since the beginning of the twentieth century, it is the 'universidad pública'. However, university was also the territory where to cultivate progress, development strategies and the dream of a longed-for production autonomy, as well as cultural and social emancipation that could finally eliminate inequalities. So, given the complex scenario with populist governments oppressing intellectual networks and architectural modernism often converted into a folkloric and eclectic taste,⁴⁷ profound transformations of the entire educational system began in the mid-1940s in clear resonance with the modernization process promoted

"Revista AOA" no.36, 2017, pp. 16-35.

46 Peter Waldmann, *El Peronismo (1943-1955)*, Buenos Aires: Hyspamérica Ediciones Argentinas, 1986. The author defines a chronological sequence of four periods: the preparatory phase (1943-45); consolidation phase (1946-49); phase of political transition (1949-52); and the final years until the military coup (1952-55).

47 While this passage has been already explained in the critical position of the Argentinean magazine "Nuestra Arquitectura", other paradoxical contradictions are described by the philosopher Augusto Pérez Lindo: "Peronism has been criticized, among other things, for having de-hierarchized higher education. This suggests that the quality of teaching has improved and a greater diversity of trends and ideas was therefore tolerated. But Peronism has also been criticized for its authoritarianism and ideological intolerance [...] the political (and also professional) exclusions for the Peronists and the suppression of the mechanisms that guaranteed the rise of the popular classes left the University in the hands of the middle classes and the bourgeoisie. The 'reformist' or 'revolutionary' bourgeoisie has conquered the university environment. Although many representatives of the oligarchy have also reappeared in traditional chairs and classrooms". See Augusto Pérez Lindo, *Universidad, Política y Sociedad*, Buenos Aires: Editorial Universitaria de Buenos Aires, 1985.

by the central State, leading Universidad Nacional de Tucumán (UNT) to a level of academic excellence. The educational system supported by the first Peronism, was in effect a national development strategy formalized in its first Plano Quinquenal (1947-1951) based on the immediate connection with the socio-economic tissue and the regional productive environment:

“Por sobre todo, creo que es necesario llegar a una universidad argentina, nuestra [...] entiendo como ‘argentino’, aquella universidad que prepara hombres que sepan resolver los problemas argentinos en todos los campos y no aquella que forma hombres enciclopedistas que no sirven para mucho en el país. Más que enseñar muchas cosas, debemos enseñar cosas útiles”⁴⁸

This implied a profound reform of the legal system of universities, thus Ley n.13.0317 (1947) established the Organización Departamental de Insitutos: the Instituto became ‘la unidad universitaria para la investigación científica’ with education finding ‘su fuente natural en la investigación directa y profunda de la realidad’, while Departamento worked as ‘unidad de coordinación de las investigaciones científicas sobre una misma materia’.⁴⁹

If on the one hand the intervention of the State inevitably caused a suspension of the principles of ‘autonomía universitaria y cogobierno’ gained down the years of Reforma Universitaria and proclaimed by Manifiesto Liminar in 1918,⁵⁰ the third principle – ‘extensión’ – paradoxically assumed a primary position incorporated within the new educational rhetoric encapsulated in the role of the Institute, with its essential and elementary functions, now required by law, to connect research with the specific needs of the territory. What is noteworthy here, is the radical change in the bureaucratic apparatus and its organizational complex in order to make possible a process of institutionalization

48 Perón speech at Universidad Nacional de Córdoba in May 1947, transcribed by Carlos Mangone y Jorge A. Warley.

49 Ley Publicada en el Boletín Oficial del 4 de noviembre de 1947. See Marigliano (2003) p.61.

50 Universities Rectors are now appointed by Poder Ejecutivo Nacional. Students revolts took place in Córdoba between 1910s and 1930s, and then spread throughout Latin America. Against the authoritarian and aristocratic academic structure fused with conservative and religious values, students conquered the three principles underlying Reforma Universitaria: autonomía, cogobierno y extensión. This last word, is the one that perhaps best embodies the radical nature of that reform since ‘extensión universitaria’ was better explained in Manifiesto Liminar (ML) - published on Friday June 21, 1918 in a special issue of Gaceta Universitaria entitled: “La juventud argentina de Córdoba a los hombre libres de Sud América” - as ‘vinculación social universitaria’, that is the need to transfer the knowledge produced within the university to the immediate social context from which to receive, simultaneously, concrete inputs. See Alejandra Castro, ‘Lecturas Actuales Del Manifiesto Liminar De La Reforma Universitaria de 1918’, Dossier Especial: A Cien Años de la Reforma Universitaria de 1918.

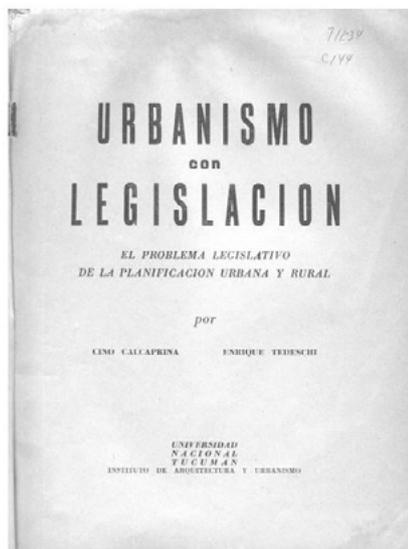
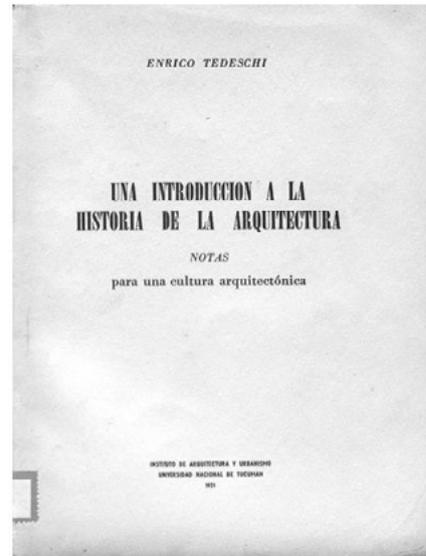
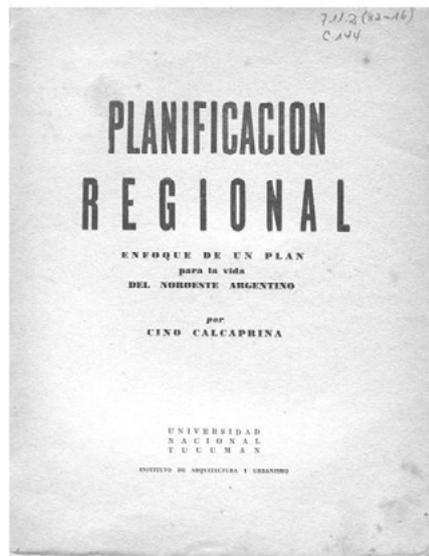


FIG. 67
Some studies published by the Universidad di Tucuman at the time of the IAU experience with the decisive contribution of Italian architects such as Cino Calcaprina and Enrico Tedeschi on the need to investigate the project to the regional scale. Image from Marigliano (2003).

of the revolutionary concept of 'extensión': to create 'recintos educativos' according to Institutes' technical-scientific fields but closely interrelated to meet common objectives through collaborative and interdisciplinary knowledge, to the point that the entire educational project was based on the formation of a subject 'adecuado para la convivencia y la cohesión de ideales comunes en la institución'.⁵¹

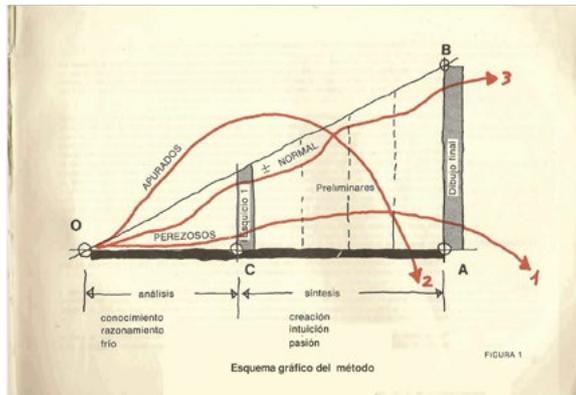
In this context, the role of the 'interventor' Dr. Horacio Descole will be decisive in the case of Tucumán. With a scientific background as a researcher at the Facultad de Bioquímica y Farmacia, Descole assumes his institutional role affirming the importance of 'medio', that is the territorial environment whose geographical scale should not be reduced to the borders of the Province. Especially, in the case of Universidad Nacional de Tucumán that, from its foundation in 1914 by Juan B. Terán, aspired to serve the entire region of Noroeste Argentino. Hence, after extending the university's area of influence to the other provinces,⁵² Descole's intervention was that of restructuring the institutional apparatus of Universidad Nacional de Tucumán adopting the Organización Departamental por Institutos, combined in parallel with one of the largest and ambitious recruiting campaigns of local and foreign academics, also taking advantage of the increasing circulation in the post-war years.⁵³ In particular, the Instituto de Arquitectura y Urbanismo (IAU) founded by architects Jorge Vivanco, Horacio Caminos and Eduardo Sacriste,⁵⁴ will be the one in charge of the task of 'spatialise'

51 This description often associated with the educational environment that was to be imagined in Tucumán, is here rather attributed to the subject fabricated during that experience.

52 Tucumán was the smallest province between Catamarca, Salta, Jujuy and Santiago del Estero, Formosa, Chaco and Misiones. The inclusion strategy taking charge of Escuela de Minas, Escuela Técnica Incorporada and Escuela Industrial in Vespucio, Escuela Salesiana in Salta, the archaeological museums of La Rioja, Catamarca and Santiago del Estero, was also supported by the first director of the IAU Jorge Vivanco to prevent the university's role was reduced to administrative perimeters.

53 Tucumán's ambitious educational project attracted professors and experts from all over the world and beyond the field of architecture or planning: Lino Enea Spilimbergo for Arts, and the engraver Víctor Rebuffo, from Argentina; the engineer Santiago Rubio from Spain; Dr. William Stirling, for English language and literature from UK; mathematician Anthony Zygmund from the University of Chicago; Dr. Vaino Auer, from the University of Finland Institute of Geography; Dr. Euen Ari, botanist at the Hebrew University of Jerusalem; Dr. Jean Cabennes, dean of the Faculty of Sciences from the University of Paris, and also from France the art historian René Hygue and the critic Marcel Volotaire; Dr. Ing. Schulz Grunow, a mathematician from the University of Aachen, Germany, with engineers Kurt Schulze and Albert Haase, the physicists Josef Würschmidt and G. Damköhler, and the anthropologist J. von Havenschild; the Italian philosopher Rodolfo Mondolfo and his compatriots, the criminal lawyer Dr. León Lattes, the critic Dr. Guido De Ruggiero, the criminalist José Bettioli; and the Russians Kutnetzoff and Gavrillov in zoology. See Liernur&Pschepiurca (2008) and Edgardo Ibáñez, *La Ciudad Universitaria de Tucumán*, Buenos Aires: IAA, 1989.

54 All three participated in the teams in charge of rebuilding San Juan after the earthquake in 1944. Eduardo Sacriste (Buenos Aires 1905 - Tucumán 1999) received his architectural degree in Buenos Aires, then since 1934 he worked in partnership with Jorge Vivanco (Tucumán 1912 - 1987) – co-founder of Grupo Austral and IAU's director between 1946-50 – and Horacio Caminos (1914-1990) who will be visiting professor at Architectural Association of London and the United States after Tucumán's experience



AUTOCRÍTICA

Suele suceder a n. las ideas y con nuestros proyectos (falta equilibrio conceptual, cómo nos cuesta proyectar) lo que a las madres se n sus hijos. Una madre, por el hecho de haber **gestado** un hijo en su seno, lo ama y ve en él a una criatura hermosa a pesar de que sea un pequeño monstruo.

Lo mismo pasa e n nuestros ideas y proyectos, por nuestra debilidad humana nos enamoramos de ellos, los aceptamos y no vemos sus fallos.

En este aspecto hay que desarrollar fuertemente el sentido de la autocrítica, es decir, aprender a ver nuestro trabajo con ojos ajenos. Debemos reemplazar lo de "la papa en el ojo ajeno..."

Cómo se consigue desarrollar el espíritu autocrítico?

Como todo, tiene su técnica. Primer consejo: estar siempre la vista en nuestra habitación, en nuestra mesa de trabajo o en la pared, un croquis de la idea en estudio para que cuando regresemos **después** de algunas horas de desplazamiento o al día siguiente, podamos ver de improviso si entramos al local y tener el impacto de una imagen fresca.

El segundo consejo: acortar de escala.

Si estamos estudiando un proyecto a escala grande, hacer una **versión** a una escala pequeña donde estarán en evidencia las conexiones entre circulaciones y superficies. **Grúas** que forman la estructura del proyecto, por ejemplo. Debemos hacer todo un juego **paralelo** de contrastes para ver nuestros proyectos con más hechos y formas distintas. Este sencillo sistema nos ayudará a criticarnos. Ver los planes al **revelar** desde lo alto, sobre forma. Un hombre con la subdureza de Leonardo Vinci nos dice: "Cada tanto retrato, descómalo un poco y cuando volvíes al trabajo vasote será más seguro, ya que el **primario** es instantáneamente adormido, el trabajo nos hace perder el poder de juzgar. **Apártate** cierta distancia porque **en** el trabajo se **verá** más reducido y se podrá observar más del mismo de un golpe de vista, y de ese modo una falta de **proporción** o armonía será **más** fácil de captar". Explicar y discutir nuestras ideas con otros ayuda a avanzar, precitar y enriquecerse.

9

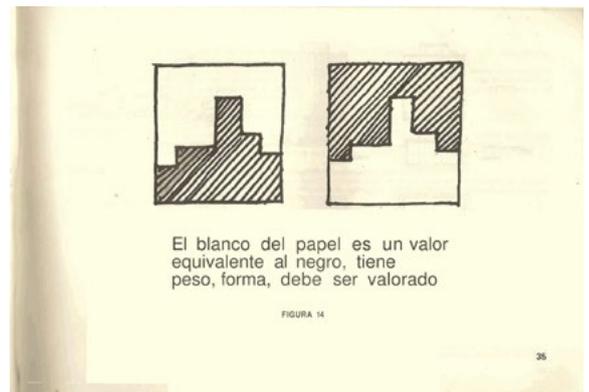
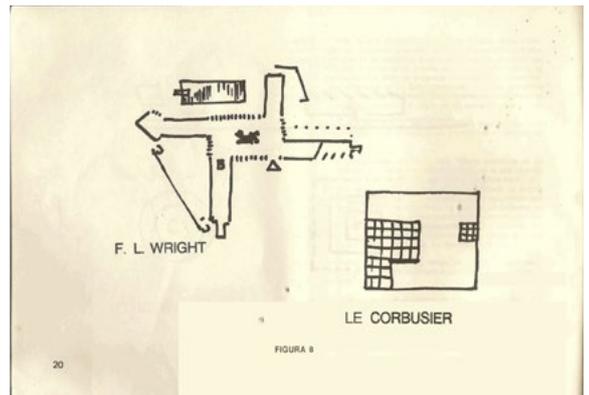
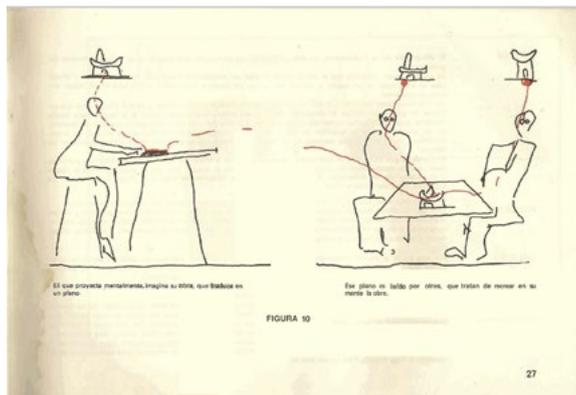


FIG. 68
Both Sacriste and Tedeschi will write about their pedagogical methods. The Argentine architect-educator Eduardo Sacriste will collect his ideas in "Charlas a principiantes" (Buenos Aires: Centro de estudiantes de arquitectura, 1963).

the entire educational project, that is to conceptualize the spatial infrastructure that could best exemplify and perform the bureaucratic apparatus within which they themselves would have operate as educators. IAU's educational objectives are summarized in a very powerful slogan: 'Investigar, Proyectar y Construir', in short combining pedagogy with research directly related to advices and actual commissions from public clients – contextually explored in students' design assignments.⁵⁵ To achieve it, it was necessary to expand the traditional academic role of the teacher, and this is how the figure of architect-educator outlined in this study emerged in a peripheral context.

Distant from leading circles, this alternative figure surprisingly found the opportunity to shape a real educational project – and its spaces – with the highest degree of experimentation in a perfect moment, that is when the possibilities to challenge the postulates of architectural modernism were greater and the table to do that had lengthened. In fact, the post-war 'reunion congress' that is CIAM 6 (Bridgwater, September 1947) commonly known for going beyond the Athens Charter's four functional categories affirming that 'the aim of CIAM is to work for the creation of a physical environment that will satisfy man's emotional and material needs',⁵⁶ is also the place where IAU's recruitment campaign goes across. On the one hand, the Argentine delegates Jorge Ferrari Hardoy and Jorge Vivanco invite Ernesto Nathan Rogers with a group of Italian architects such as Enrico Tedeschi, Luigi Piccinato, Cino Calcaprina and civil engineer Guido Oberti to participate in the major projects they were coordinating: Estudio del Plan de Buenos Aires (EPBA) and the Ciudad Universitaria de Tucumán (CUT). On the other hand, CIAM leaders as Giedion and Sert saw in this unmissable opportunity an entry point for the dissemination of the modern discourse in Latin America, a continent that had remained marginal, to say the least, with respect to the influence of CIAMs. The Italians contributes to the IAU's agenda revolved around a rational approach as well as organicist theories provided by those recently involved in the foundation of Associazione per l'Architettura Organica (APAO) and the architectural magazine "Metron" as in the case of Tedeschi and Piccinato, by taking into account regional connotations which have already entered the local discourse conducted by the Argentinean Grupo Austral.⁵⁷

(See Chapter 5).

⁵⁵ The projects addressed a wide range of scales, from urban developments - workers' housing for Marapa, Nuñorco, and the Villa Alberdi sugar mills - to buildings - Catamarca's civic centre, a school and hotel in Purmamarca - and regional plans - Plan Regulador de Jujuy-Palpalá. See Horacio Torrent (2015).

⁵⁶ Eric Mumford (2000), p. 13.

⁵⁷ The role assigned to Enrico Tedeschi was that of re-founder of historical studies in architecture (see Chapter 4), although together with Cino Calcaprina they will devote much effort to regional planning

From the local side, Grupo Austral was the striking exception within the confused construction of a modern architectural discourse in Argentina, and therefore, the most interesting place to look for members for the new Institute. Jorge Ferrari Hardoy and Juan Kurchan, among the founders with Antonio Bonet, worked in Le Corbusier's office in 1937-38, on the proposal of the Plan Regulador de Buenos Aires based on the guidelines enunciated by the Great Master ten years earlier. In a year, Grupo Austral signed their first manifesto titled *Voluntad y Acción* (1939) in sharp contrast with a notion of functionalism totally disconnected from social criteria and a coherent urban framework:

“La arquitectura actual se encuentra, aparte del relativo progreso técnico, en un momento crítico de su desarrollo y desprovista del espíritu de sus iniciadores [...] El arquitecto – aprovechando tópicos fáciles y epidérmicos de la arquitectura moderna – ha originado ‘la nueva academia’, refugio de mediocres, dando lugar al estilo moderno.”⁵⁸

This followed by a productive phase based on a territorial approach towards housing projects aimed to explore typological alternatives for rural dwellings in each region of the country with its specific climate, lifestyle, technological conditions. To this phase is also associated Casa Amarilla urban complex (1943) by architects Amancio Williams, Antonio Bonet, Ricardo Ribas, Hilario Zalba, Horacio Caminos and Eduardo Sacriste with the creation of OVRA (Organización de la Vivienda Integral en la República Argentina),⁵⁹ and even more interesting for the trajectory traced in this study, the competition for the Plan Regulador de Mendoza (1940) conceived by Antonio Bonet, Jorge Vivanco

studies until the latter will receive the commission for Plan Regulador de San Miguel de Tucumán. See Gaia Piccarolo, ‘Cino Calcaprina e il contributo italiano all’Istituto de Architettura y Urbanismo de Tucumán’, in Giovanna D’Amia (ed), *Italia-Argentina*.

Andata e Ritorno, migrazioni professionali, relazioni architettoniche, trasformazioni urbane, Rimini: Maggioli, 2015. Luigi Piccinato will collaborate with Ministerio de Obras Públicas to carry out a plan for Ciudad Ezeiza, in the context of Estudio del Plan de Buenos Aires (EPBA) on ‘Problemas inmediatos y obras públicas del Gran Buenos Aires’, the urbanization of La Florida, and a tourist center in San Luis. Jorge Francisco Liernur wrote about Italian architects in Argentina during the period in ‘Architetti italiani nel secondo dopo guerra nel dibattito architettonico della nuova Argentina 1947-1951’, *Metamorfosi. Quaderni di architettura*, Rome, Italy, 1995.

58 Edited in the offprint of the magazine “Nuestra Arquitectura” (June 1939): “Debemos aprovechar a los arquitectos de nuestra generación para revisar los ‘dogmas’ arquitectónicos que nos han sido legados [...] Este mismo conocimiento del individuo nos lleva a estudiar los problemas colectivos en función, no de una unidad repetida hasta el infinito, sino de una suma de elementos considerados hasta la comprensión”. See Ernesto Katzenstein, Gustavo Natanson y Hugo Schvartman, *Antonio Bonet: Arquitectura y Urbanismo en el Río de la Plata y España*, Buenos Aires: Espacio Editora, 1985.

59 The authors accepted Le Corbusier's suggestion to form a sort of Comité Cívico (OVRA) to press the authorities to implement their ideas.

and Eduardo Sacriste,⁶⁰ from which the Italian born-architect and IAU's member Enrico Tedeschi will develop his idea of 'Universidad (libre) de Mendoza' (see Chapter 4).

For all these reasons, it might be legitimate to think that CIAM 6 in Bridgwater was a pure trading venue: on the one hand, the Italians were invited to take on professional roles into public interventions of rare greatness, while the Argentines were interested in expanding their influence within the CIAM organization – thanks to an alliance that was already looking to the following edition taking place in Italy (Bergamo, 1949). However, what should not go unnoticed is the backdrop of this exchange: a peripheral region from which one can experience a side view on the new concepts disseminated by modernist propaganda with the aim of realizing a unprecedented educational project. This investing time and resources in drawing up 'plan de estudios', studio briefs with a regional impact, lecture notes for theoretical courses and seminars extended to the public and cultural cycles, rather than affirming a universal modern thought via seminal publications or treatise on architecture and planning.⁶¹ As if the defiladed profile of an architect-educator who instigate a revolution from within the bureaucratic apparatus of the university institution exemplifies the privileged condition for interpreting a revolution from within the CIAM discourse – well before the young insurgents openly attacked their parent organization's in Otterlo 1959 – in the form of a collective of architects-educators held together by the movement and circulation of ideas, projects, and people, but also by the permanent tension of their thoughts:

“Esa coexistencia del mundo de lo individual, de lo anárquico e informe con las ideas del funcionalismo, del avance social, de la utopía del progreso.”⁶²

60 “En plena guerra europea y con Le Corbusier refugiado en Marsella, se convocó un concurso para remodelar parte de la ciudad de Mendoza. Se nos ocurrió que si nos presentábamos incluyendo el nombre de Le Corbusier y ganábamos el concurso sería la forma de hacer venir a Le Corbusier a la Argentina y sacarlo del pozo en que se encontraba. A pesar de que nuestro proyecto no estaba mal, no ganamos y nos quedamos sin su venida”, in Antonio Bonet, 'Austral. Testimonio', Barcelona, September 1981.

61 Both Sacriste and Tedeschi will write about their pedagogical methods in their respective university publications: Eduardo Sacriste, *Charlas a principiantes*, Buenos Aires: Centro de estudiantes de arquitectura, 1963, and Enrico Tedeschi, *Plaza de Armas de Cuzco*, Universidad Nacional de Tucumán, 1961 would anticipate their theoretical framework (See Chapter 4). Horacio Camisos will write a text entitled *Educación o catástrofe: decisiones críticas en el proceso de aprender*, 1989 while he was in the U.S. almost at the end of his career (from a conversation between the author of this work and Horacio's son Carlos Caminos (see Chapter 5).

62 This is how Antonio Bonet argumentations from his 1950 text 'Nuevas precisiones sobre Arquitectura y Urbanismo' (Fondo Bonet Castellana del Archivo Histórico COAC) have been commented in Fernando Álvarez Prozorovich and Jordi Roig Navarro, *Bonet Castellana*, Barcelona: Ediciones UPC, 1999.



FIG. 69
Ernesto Nathan Rogers with Vittorio
Gregotti and Giotto Stoppino
at IX Triennale di Milano (1951).
Image from Maffioletti (2013)

1.4 *Ernesto Nathan Rogers educator.
Tucumán, CIAM Summer School, Milan*

I might say that even beyond pedagogy, in the much vaster area of productive activity, the Tucumán school on the one hand and end the London Architectural Association on the other might symbolically represent the limits (the external limits, of course) beyond which the culture of applied arts tends to overflow (and by applied arts I mean everything from a teaspoon to a city).⁶³

Ernesto Nathan Rogers, 1957

The Italians' enquiry into modernist discourse was actively animated from the pages of "Casabella-Continuità" as indisputable epicenter of Roger's project of 'continuità'. Often described as a typical Crocean operation, this project aimed to understand both values and conditions of past times in relation to contemporary culture to detect those meaningful aspects within a blended tradition of modern architecture.⁶⁴ Ernesto Nathan Rogers is a complex and controversial figure, often kept on the sidelines of contemporary architectural discourse except the recognition of his extremely sophisticated argumentations, to the point that his influence is essentially ascribed to famous editorials from Italian magazines he directed, to which Rogers entrusted 'in toto' the aforementioned historical project along with his professional work with BBPR group.⁶⁵

In fact, no univocal architectural discourse was proclaimed in Italy, not even on the prevailing modernist ideology. On the other hand, a very heated discourse was conducted in the pages of national magazines or exhibitions, often in contrast and strongly compromised with politics since the time of Giuseppe Pagano or Pietro Maria Bardi.⁶⁶ Much of the seduction generated by Rogers'

63 Ernesto Nathan Rogers, 'Tradition and modern design', Colorado: Aspen Conference, 1957.

64 "However remote in time events thus recounted may seem to be, history in reality refers to present needs and present situations wherein those events vibrate". See Benedetto Croce, *History as the Story of Liberty*, London: G. Allen and Unwin, 1941, p.19.

65 Rogers' intellectual endeavour of *humanize* modern discourse is made explicit from the addition of subheadings in both editorial projects he directed, that is "Domus. La casa dell'uomo" (1946-1947) and "Casabella-Continuità" (1953-1965).

66 Giuseppe Pagano was editor of "Casabella" (1931-1943), antagonist of magazine "Quadrante" founded by Massimo Bontempelli and Pietro Maria Bardi in 1933, with this last orchestrating the Rome exhibition 'Mostra di Architettura Razionale' (1931) against Marcello Piacentini historicist hegemony.

figure lies in the intricate plots preceding WWII, his connection with Bardi who introduced him in the international network of CIAM, the famous *syllogism* on which is based architects rehabilitation after the fall of fascist regime, and the Italian revision of modern architecture in the light of ‘preesistenze ambientali’, the concept coined by Rogers and strongly opposed by British and Dutch counterparts from within the post-war CIAM.⁶⁷ As for these seasons, Ignasi de Solà-Morales identifies in Rogers, Samonà and Quaroni ‘the three vertices of an intellectual circle’ proposing a renewed rationalism based on the ‘taste for history and the material analysis of architecture’ given by the ‘assembly and articulation of a few permanent and immutable elements’, on which the young Aldo Rossi and Giorgio Grassi would build their theoretical frameworks.⁶⁸

However, Rogers has been recently rediscovered as a paradigmatic figure also beyond national borders.⁶⁹ Behind all these very much talked-about moments around which Rogers’ architectural discourse has been shaped, what still seems understated is Rogers’ pedagogical project apparently developed in a condition of complete detachment from the aforementioned intricate and seductive plots within national borders, with Tucumán’s experience at the end of 1940s as a privileged territory of experimentation. His famous first editorial from “Casabella-Continuità” reads:

“We believe in the fecund cycle ‘man-architecture-man’ and want to represent its dramatic deployment: the crises; the few, indispensable certainties and the numerous doubts, even more necessary; since we believe that being alive means, overall, accepting the fatigue of the daily renewal, with the refutation of the acquired positions, through

67 Notoriously, it happened on the occasion of two well-known episodes, that is Rogers’ heartfelt defense of BBPR’s Torre Velasca (Otterlo, 1959), and the so-called ‘Neoliberal debate’ with “Casabella-Continuità” (no. 215, 1957) presenting works by the young Turinese architects Gabetti and Isola, strongly attacked by Reyner Banham using the invaluable loudspeaker of “The Architectural Review”. This tendency went beyond national borders also on the occasion of ‘A Florentine Fiasco’, with James Gowan abandoning his role as juror in the international competition for the new University of Florence against the controversial approach of Italian ‘city-territory’, strenuously defended by Vittorio Gregotti in the pages of “Architectural Review” (no. 905, 1972). See Francesco Zuddas, *The University as a Settlement Principle: Territorialising Knowledge in Late 1960s Italy*, London: Routledge, 2019.

68 Ignasi de Solà-Morales, ‘Tendenza: neorazionalismo e figurazione’, in *Decifrare l’architettura. “Inscricpciones” del XX secolo*, Torino: Umberto Allemandi & C., 2001. See also Capozzi, R., Orfeo, C., Visconti, F. (2012). *Maestri e Scuole di Architettura in Italia*. Napoli: CLEAN.

69 See Roberta Marcaccio, ‘A Hero of Doubts’, in *AA Files* no.75 (2017), and in the same context the Royal Academy Symposium ‘Ernesto Rogers. Forgotten Masters’, Monday 4 November 2019. See also Serena Maffioletti, ‘Ernesto N. Rogers and the CIAM: Teaching for Democracy’, *DOCOMOMO Journal*, no. 49 2013/2, pp. 28-33; Luca Molinari, *Continuità: a response to identity crises. Ernesto Nathan Rogers and Italian architectural culture after 1945*, PhD Doctoral Diss. Delft University of Technology, 2008; Marina Lathouri, *Reconstructing the topographics of the modern city: the late CIAM debates*, PhD Doctoral Diss. University of Pennsylvania, 2006.

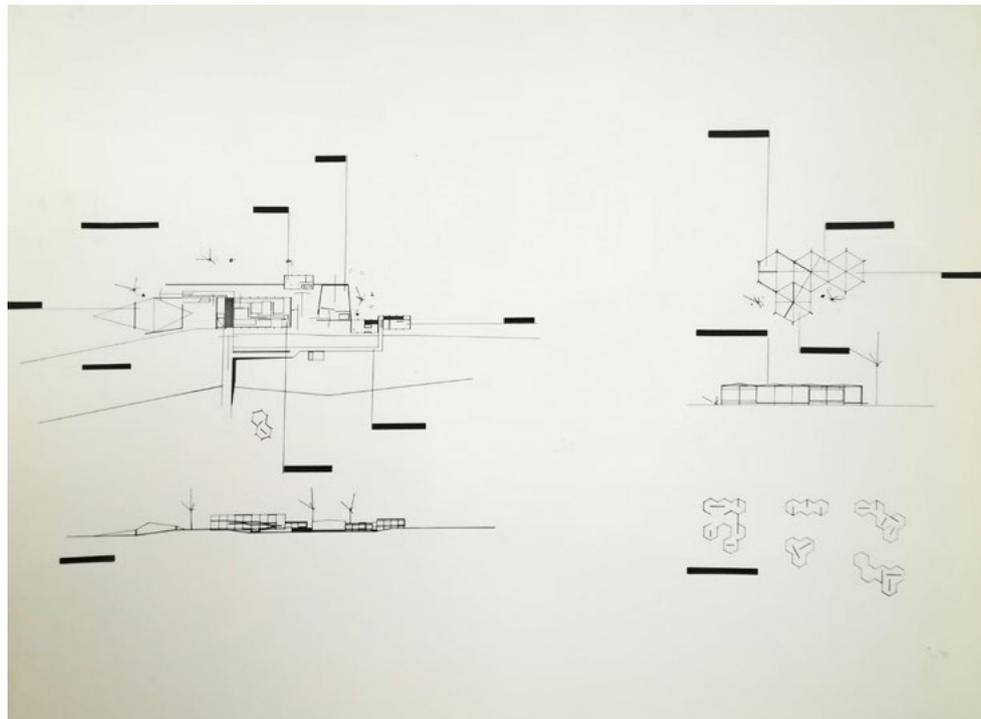
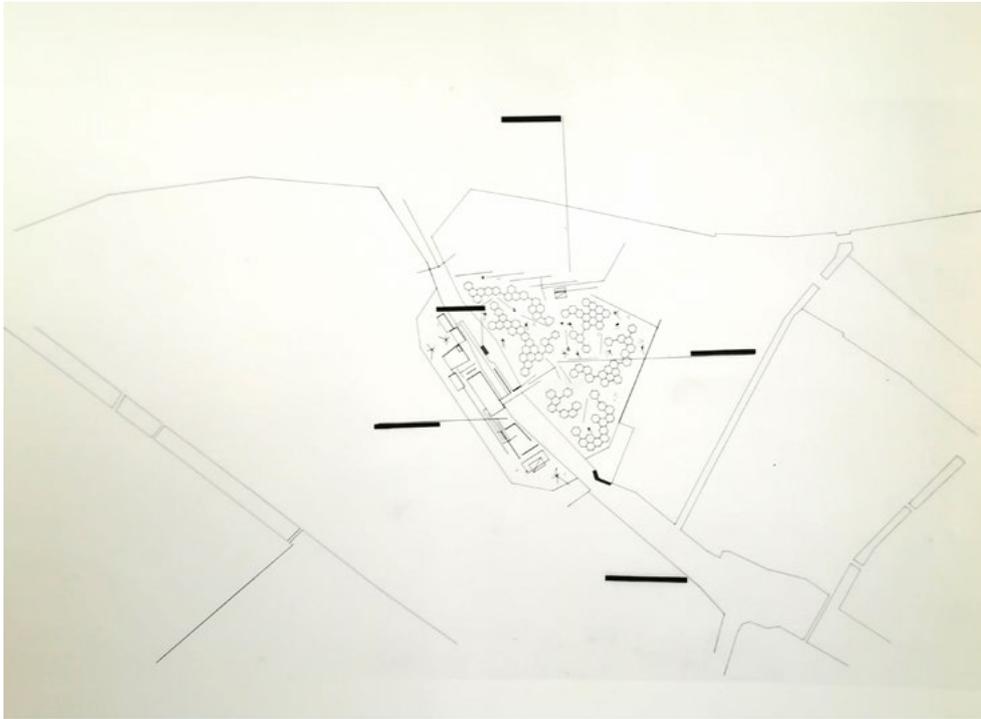


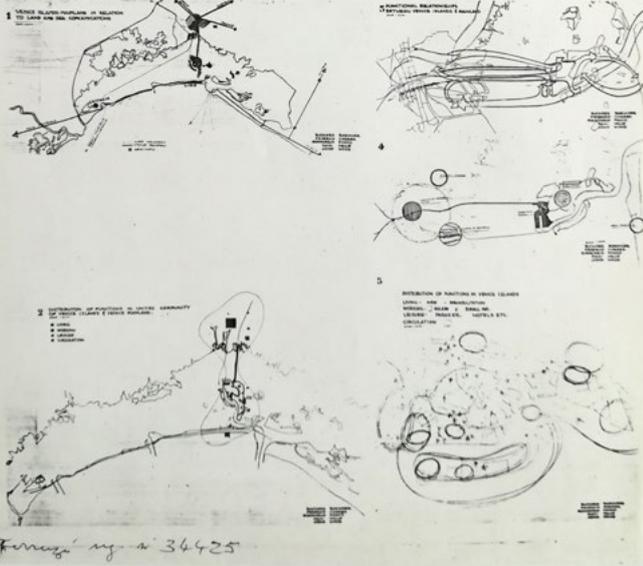
FIG. 70
 Students work from Ciam Summer School Venice.
 The 1953 edition focused on the Biennale di Venezia as a design
 question proposing both interventions within the existent pavilions
 as well as urban sacle explorations including the Giardini section.
 Annotations claim that 'the biennale should be a center for contact'
 used for 'education purposes' in a 'free garden for everyone'.
 Archivio Progetti IUAV

Richard E. BARINGER U.S.A.
 Federico GORREA Spagna
 Giancarlo POZZO Italia
 Nani VALLE Italia
 John E. WOOD U.S.A.E

Lido - Venezia - Mestre sono considerati "urbanisticamente" come una sola città.

In pratica per risolvere il problema, l'attuale porto commerciale dovrebbe essere trasferito a Marghera mentre nella zona del Tronchetto verrebbe attuata una vera e propria "rivoluzione": accentramento di una unica grande "stazione passeggeri unificata" comprendente il porto civile, la stazione ferroviaria, un parcheggio per auto, un grande garage e un piazzale sopraelevato per i pullmans.

Negli spazi attualmente occupati dal Piazzale Roma, dalla Ferrovia e uffici annessi troveranno posto: parchi pubblici, alberghi e case I.N.A.-



Michael BURTON Inghilterra
 Patrick CROCKE Inghilterra
 Vittorio GREGOTTI Italia
 William OLLIS Inghilterra
 John TURNER Inghilterra

Il TURISMO distrugge la comunità di Venezia - non si vede nel Turismo un mezzo positivo di vita - siccome non si può impedire, si tratterà di regolerlo. La dipendenza economica del Comune di Venezia dal Turismo dà conseguenze cattive - nulla deve essere speso per aumentare questa dipendenza. Si crede che allorché si sarà stabilizzata in Venezia una economia migliorata e non si insisterà sul suo "eccezionale" non sarà più attirata una certa qualità di Turismo e si elimineranno così gli aspetti negativi di questo. Le zone agricole che forniscono i viveri a Venezia sono considerate comunità indipendenti ma

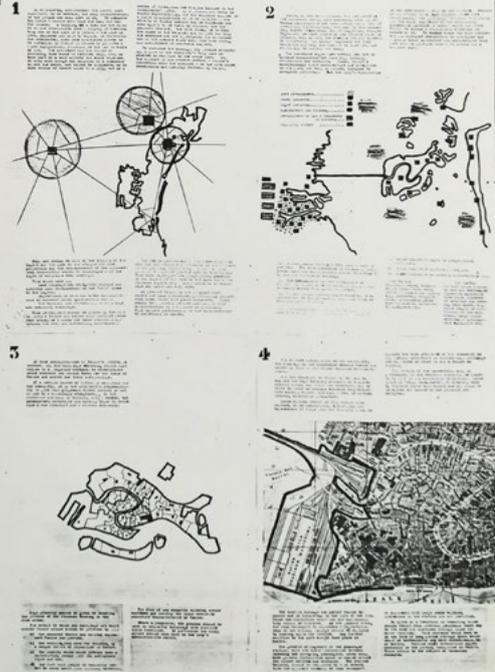


FIG. 72
 Students works from Ciam Summer School Venice (1952-54).
 Archivio Progetti IUAV

THE ARCHITECTURAL ASSOCIATION.
 (INCORPORATED)
 CHAIRMAN'S REPORT TO COUNCIL.

A MEETING of the SCHOOL COMMITTEE of the ARCHITECTURAL ASSOCIATION (INCORPORATED) was held at 36, Bedford Square, W.C.1., on Monday, 3rd October, 1949, at 1.45 p.m.

There were present:-

Mr. S.E.T. Cusdin (in the Chair)
 Mrs. Anthony Cox
 Mr. A.R.F. Anderson
 " C.S. Marshall
 Hon. Godfrey Samuel
 Mr. Hilton Wright
 " P.F. Shephard
 " R. Parnoux Jordan
 " M.S. Colborne Brown
 " H.J.W. Alexander.

- The Minutes of the meeting held on the 27th June 1949, were confirmed and signed by the Chairman.
- An apology for absence was received from Mr. A.M. Chitty.
- The Committee then discussed the Principal's report, which had been previously circulated (copy attached to the Minute Book). The Principal enlarged on some matters in his report - viz. the ratio of one staff to 22 students did not refer only to full-time staff, but included the equivalent in part-time staff, but not lecturers.
- The Committee noted that Prof. Krjcar was seriously ill and not expected to recover, and reference was made as to the terms of his appointment. The Secretary pointed out that the Association had no ruling on this point, but that each case was considered individually. Krjcar was under contract and his salary continued to be paid. It was agreed to leave this matter until a definite report came from the doctor in attendance, and if this were received in time, the matter should be laid before the Finance Committee.
- The Principal said there was no special significance in the fact that two Italian teachers were to be engaged for the present term, but the chance had presented itself of obtaining two very good men. He asked the Council to agree to the engagement of Mr. Ernesto Rogers as a guest teacher for two months from October 15th for a fee of £200. The Committee generally agreed that the appointment of the Italians was an advantage, and RESOLVED to recommend that Mr. E. Rogers be engaged on the terms mentioned. The Principal said that if Mr. Rogers proved a success, his partners would be interested in making similar visits, and it was agreed that further enquiries be made.
- Mr. Colborne Brown had nothing to add to the Principal's report, but mentioned that the School had re-opened, and everything was running very satisfactorily.
- The Principal said that the British Institute at Florence had been most helpful to some A.A. students visiting that city, and the Secretary mentioned that he had received the Annual Report on the past year's activities of this Institute, which could be read by members of the Committee.

FIG. 71
 The London Architectural Association invited Ernesto Nathan Rogers as a guest teacher (1949).
 From AA Archive

anxiety up to anguish, by the perpetuating of agony, towards the extension of the field of human ‘sympathy’”⁷⁰

Paradoxically, this attitude towards the ‘refutation of the acquired positions’ partially justified by his biography and cultural references,⁷¹ reaches its climax in the middle of the catechizing mission planned by the post-war CIAM, aimed to reach the most remote regions to reinvigorate the modern architectural discourse in the aftermath of the WWII. It will be the then CIAM secretary Giedion to entrust Rogers with the construction of a connection with Latin America, suggesting to accept the invitation made in Bridgewater by delegates Jorge Ferrari Hardoy and Jorge Vivanco to join the projects they have undertaken in Argentina.⁷²

Apparently, Rogers leaves for Tucumán on April 24, 1948, to serve the CIAM propaganda, even if the unmissable opportunity was to join the IAU’s collective of architects-educators he considered a ‘magnificent field where the work with a generous breadth of ideas and in agreement with modern methodology’. On May 24, 1948, Tucumán’s Council approved Rogers’ teaching program based on: (1) ‘clases dibujada’ (design studios) for third year students on the topic ‘Man and the City’ which included urban analysis, psychological relationships and comparison of existing residential architectures; (2) ‘clases hablada’ (architectural theory) addressed to the whole student body. This last was supposed to link all the other courses, but was more demanding than Rogers imagined. Then, fascinated by the idea of experimenting his maieutic method turned into a constant instillation of doubt on the virgin land of Tucumán,⁷³ asked Ferrari Hardoy to recalibrate his professional advice for Estudio del Plan

70 Ernesto Nathan Rogers, in “Casabella-Continuità” no. 199, December 1953/January 1954, p.2.

71 Influenced by Italian philosopher Antonio Banfi during his school studies in Milan, Rogers has been described by his own disciples as ‘the man who taught two generations of Italian architects how to read and write’, exposing them to a wider context of international debate and by stimulating a dialogue with other cultures and disciplines like history, philosophy, poetry, geography, literature and politics. See Marcaccio (2017).

72 Letters between Giedion and Rogers remark the importance to favour region’s participation into CIAM’s initiatives, while a letter from Vivanco to BPR was sent after Bridgewater (1947): “Como Rogers habrá podido ver en nuestros proyectos en Bridgewater, nuestra orientación dentro del movimiento moderno es semejante a la vuestra. De establecerse la nueva organización, existirían dos o tres ateliers de los cuales podrían hacerse cargo ustedes”. Other Italian architects are mentioned by Vivanco to his IAU’s colleague Holario Zalba: “Luigi Piccinato es inteligente, agudo, pero sus obras no son tan modernas como las del grupo de Milán [...] y Enrico Tedeschi, a quien le interesa Historia y Teoría [...] Tiene facilidades para escribir y como Piccinato agudo para pensar”. See Marigliano (2003).

73 Alfred Roth and Max Bill gave Rogers his first teaching assignment at the Faculty of Architecture de Lausanne, that is a theory course where the notion of ‘variable’ marked every lecture: La variable mécanique, La variable du materiel; La variable de la mesure humaine among others. See Maffioletti (2013). This is a perfect example of what will be called ‘dubbio metodologico’ to describe internal dynamics of a tortuous process of repeated interrogation and collaborative reworking.

de Buenos Aires in favour of IAU's educational project,⁷⁴ later described at Aspen Conference (1957):

“Their lack of tradition made it extremely difficult to discuss values with them [...] They were like persons who had skipped infancy and had suddenly grown up. But they were grown-ups without maturity [...] They were unaware of most of the events in the history of architecture; they knew almost nothing about Michelangelo or the Gothic cathedrals or those of any other epoch. And yet, on the subject of modern architecture – particularly Le Corbusier – they had gathered enough information to win, had there been one, a difficult television quiz game”⁷⁵

even if their ‘quality lies in a kind of freshness and greater freedom from the preconceptions that the centuries have bestowed on culture and tradition’. Especially, if compared with the very opposite student prototype he would have thought at the Architectural Association of London a few years later, with ‘a persistent critical sense of acute dissatisfaction with every idea acquired, but all without being able to coagulate thought into form, which is the *sine qua non* for the designer who is fulfilling the role proper to him’.⁷⁶ At this juncture, it must be remembered that Rogers was elected vice-president of the CIAM Educational Commission in 1947 – same year in which Tucumán adventure began:

“Method is more important than information, it must rely on intuition, analysis, critical thinking, and synthesis. Life in its constant evolution is the source of all inspiration”⁷⁷

read the CIAM's report suggesting an in-depth revision of pedagogy based

74 Alongside his collaboration for Estudio del Plan de Buenos Aires (EPBA) alternately with Piccinato and Peressutti, Rogers will participate in the design proposal for Bajo Belgrano area in Buenos Aires, a project for 50,000 inhabitants near the border of Río de la Plata, to be presented under the concept of ‘unidad vicinal’ at CIAM 7. The contrast between the Ciudad Universitaria de Tucumán and the EPBA also reflected the two positions of the respective promoters, Vivanco and Ferrari Hardoy. Indeed, Vivanco's defense of agriculture's industrialization opposed Ferrari Hardoy's centralist vision, looking at Argentina from within the country as a series of productive force lines that did not necessarily pass through the center. See Liernur and Pschepiurca (2008).

75 Ernesto Nathan Rogers, ‘Tradition and modern design’. Colorado: Aspen Conference, 1957.

76 Ibid.

77 From ‘Rapport de la Troisième Commission: Reforme de l'enseignement de l'architecture et de l'urbanisme (CIAM 7), while in Commission's report on Architectural Education at CIAM 8 was decided that ‘members of CIAM must take the initiative [...] to provide opportunities for direct interchanges such as CIAM summer schools’.

COMMUNITY CENTRE:

Situation:

Height: 1,210 metres above sea-level.
Situating on the edge of the mountain-tange, it commands a view as from a balcony of the Plain of Tucumán and the city of the Sports Grounds, the University buildings, and the summits of Aconquija.
Distance to the University Residential Centre. (1,192 metres above sea-level), 700 metres.

Distance to the University buildings (1,220 metres above sea-level), 500 metres.

Aims:

To unite under one roof all those services required by the communal activities of the University City: recreation, corporate life, administration, health services, supplies, transport.

Aims (Detail):

The following services and organisations are provided for:

Recreation: Theatre, Cinema, Museum; Exhibitions and Lectures, Music, other Entertainments.

Meetings: a covered plaza.

Administration: a President's office, health services, fire services, Registrar's office, judges, Police, municipal services, public offices.

For Visitors: Hotel.

Business activities: banks, insurance, newspapers, travel agencies, commercial agencies.

Health Services: First Aid, Hospital Out-patient's Department, Dispensaries, Laboratories.

Supplies: Markets, Stores, Restaurant, Cafés, Shops, Warehouses.

Communications and Transport: Upper station for the funicular railway, Bus station, goods station, car-parks, service station, Post office, telephones.

GENERAL DESCRIPTION:

A covered area capable of growth in any direction, and assuring protection against the rain and summer sun: the distribution of the various units is elastic.

There will be two levels, one for store-houses, petrol pumps, lorries, etc., one for general public activities.

CENTRE COMMUNAL

EMPLACEMENT

Altitude 1210 m. au-dessus du niveau de la mer.

Placé comme une sorte de balcon au bord de la montagne avec des vues sur la plaine de Tucumán et sa capitale: sur la zone de sport et édifices de l'Université et sur les cimes de l'Aconquija.

Distance au Logis Universitaire (côte 1.192), 700 m.

Distance à l'Université (côte 1.220), 500 m.

DESTINATION

Grouper sous un grand toit commun

tous les services nécessaires pour le développement des activités collectives de la ville: divertissement, réunion, administration, salubrité, approvisionnement et circulation.

PROGRAMME

Comprend les services et installations suivants:

Divertissement: Théâtre, Cinéma, Musée, Expositions et Conférences, Salons de musique, Salon d'amusements.

Réunion: hall fermé.

Administration: Bureau d'Intendance, Pompiers, Salubrité, Mairie, Tribunaux, Police, Voirie, Bureaux d'Administration.

Logement: Hôtel.

Commerce: Agences Banques, Compagnie d'Assurances, Journaux, Voyages

Santité: Cabinets de consultation externes, Infirmerie, Laboratoires, Pharmacies.

Approvisionnement: Marchés, Merceries, Restaurants, Pâtisseries, des Magasins divers, Succursales, Entrepôts.

Communications: Gare supérieure du funiculaire, Gare d'omnibus et charge, Stationnement de voitures, Garages, Poste, Télégraphe, Téléphone.

L'ensemble est une surface couverte susceptible d'élargissement dans un sens quelconque; la protection contre le pluie et le soleil d'été est assurée.

Il y a un niveau pour le public, magasins, etc., et un autre pour les autos, charges et entrepôts.



BIBLIOTECA

llegando a 2 kgs y al final a 3 kgs (180 kgs en total).

Los ciclos de carga fueron repetidos muchas veces hasta haber tenido seguridad del comportamiento prácticamente elástico de la estructura.

La medición de las deformaciones locales fué hecha empleando extensómetros de la casa suiza Huggenberg, mundialmente conocidos y además extensómetros electroacústicos Galileo, de más fuerte amplificación para la medición de los esfuerzos en los tensores de acero que constituyen los vínculos de apoyo vertical del vértice de cada bóveda, para buscar el valor de la reacción hiperestática.

3.—Los resultados que se han obtenido de las mediciones están resumidos en los planos. Los números allí indicados dan el valor de la deformación unitaria media entre los puntos de medida. Como se constata, se han ejecutado dos ciclos completos de mediciones: uno con carga puntual de

2 kgs y el otro con 3 kgs (por lo dicho antes a 2/3 y al total de la carga prevista en el proyecto). Observando en el conjunto los resultados de los dos ciclos puede darse cuenta, en primer lugar, del hecho —que siempre se manifiesta en el estudio experimental de todas las estructuras especialmente hiperestáticas— que los mismos van arreglándose en el sentido que con el aumentar de la carga las asimetrías de los valores y las perturbaciones cerca de los vínculos van disminuyendo. Además, los puntos que menos trabajan a pequeñas cargas propenden, con cargas mayores, a trabajar proporcionalmente, más que los otros.

Tomando en cuenta los valores buscados en el ciclo básico (a carga completa, igual 3 kgs por punto) para los puntos de mayor interés de las bóvedas —es decir los ubicados en las generatrices de clave y de arranque— hemos promediado los resultados, debido a la excelente similitud

Además para los puntos de la clave donde se disponen cuatro valores de deformación en dirección de 45° uno del otro, hemos impuesto la compensación de la medida debido a la relación básica que la suma de todas las deformaciones cruzadas a 90° debe ser invariable.

4.—Es interesante y de suma utilidad práctica comparar los valores de las tensiones deducidas por el modelo con las que se pueden buscar con el cálculo. Dos métodos distintos de cálculo se presentan para la bóveda cónica en estudio, ambos aproximados; el primero consiste en admitir ésta como si fuese una viga de sección variable, apoyada o empotrada al tímpano y simplemente apoyada en el vértice.

El segundo consiste en considerar la bóveda como una membrana (bóveda cáscara) en la cual se presupone tan pequeño el espesor por admitir la ausencia de esfuerzos flectores y tensores.

En el caso presente los tanteos ejecuta-

FIG. 73
Images depicting Piazza San Marco city life.
From "Nuestra Arquitectura" (1950)

on international exchange and close collaboration between disciplines, since industrial society was demanding a better understanding of social conditions and the ability to take on a full gamut of projects ranging from the design of an object to a regional plan.⁷⁸ All this, giving the impression that something from Tucuman's experience was circulating backwards. Not by chance, the Commission formalized a pedagogical experiment: the CIAM Summer School. The first edition organized by the British MARS group, took place at the Architectural Association in August-September 1949 with Rogers returning from Americas invited as juror and consequently appointed as visiting teacher by the then AA director Robert Jordan.⁷⁹

The topics focused on actual problems (neighborhood units, office buildings, national theatre and traffic) informally discussed among students, professors, and practitioners from various disciplines, in the spirit of the subsequent editions from 1952 to 1957, when CIAM Summer School will lend in Venice under the direction of Ernesto Rogers, Franco Albini, Ignazio Gardella and Giuseppe Samonà – with Vittorio Gregotti, Joseph Rykwert, Denise Scott Brown and John F.C. Turner among participants – producing such an impact that Istituto Universitario di Architettura di Venezia (IUAV) reorganized its own curriculum turning the 'school of Venice' into one of the most vibrant architectural environment.⁸⁰ Apart from the experiment on informal education,⁸¹

78 Gropius stated that "The nature of teamwork will lead the students to good, 'anonymous' architecture rather than to flashy, 'stunt' design". It must be remembered that 1947 is also the date of Henry-Russell Hitchcock controversial article 'The Architecture of bureaucracy and the Architecture of genius', in "The Architectural Review" no. 101 (January 1947). Education was also a breaking point between Gropius and Rogers, with the first arguing that history should be studied in later years to avoid imitation and intimidation, while the latter found it substantial to modern progressive ideas.

79 Rogers travelled to Santiago de Chile and Lima between February and March 1949. It was on the occasion of the conference entitled 'Il dramma dell'architetto' at Universidad Mayor de San Marcos in Lima that Rogers would tackle for the first time the question of 'preesistenze ambientali'. See Luca Molinari, 'Milano-Tucumán-Buenos Aires-New York-Milano, 1947-1949. Circolarità dei saperi e delle relazioni: il carteggio E.N. Rogers – BBPR', in P. Bonifazio, S. Pace, M. Rosso e P. Scrivano, *Tra guerra e pace, società, cultura e architettura nel secondo dopoguerra*, Franco Angeli, Milano 1998, pp. 155-164. As for the agreement with Architectural Association of London, this also involved other BPR partners, invited to the AA as visiting teachers while AA students would spend a term in their office in Milan.

80 John F.C. Turner was a student at the AA at the time, and it was in occasion of Venice CIAM Summer School that he received the invitation to move to Peru and work in a context that would have propitiated his theories on informal settlements. From the interview by Roberto Chavez, Julie Vioria and Melanie Zipperer, Washington D.C., 2000.

81 Leonardo Zuccaro Marchi investigates intersections between CIAM pedagogical reform and CIAM Summer School, where "in parallel with the informal condensation of peerships among young students attending the CIAM Summer School, many efforts were spent by Norberg-Schulz on the formal constitution of young groups within CIAM" passing through the redaction of a manifesto based on 'Ten Points' (1951) with Candilis, Gregotti and Tavora among the signatories. See Leonardo Zuccaro Marchi, *The Heart of the City. Legacy and Complexity of a Modern Design Idea*, London: Routledge, 2018. CIAM Summer School legacy and pedagogy lived on at the IUAV and even returned twenty years later when, in 1976, De Carlo founded the International Laboratory of Architecture and Urban Design (ILA&UD). See Chapter 3.

what resonates from Tucumán's experience is a territorial approach applied to Venice city, focused on the relationships between the island, the mainland, and the region. Differently declined in the various editions, these relationships range from tourism, industrial development, preservation and transports all of them explored through the new lens of the *human scale* 'lost in most modern cities',⁸² as in Le Corbusier's explicit mention on Piazza San Marco already become one of the iconic images in previous CIAM on the 'Heart of the City' and, not by accident, even between the pages of "Nuestra Arquitectura" whit the Venetian square equally used to advertise the sense of togetherness and civicness performed in Tucumán's 'Communal Center'.⁸³ Rogers had promoted Heart's conceptualization in the context of CIAM 8 (Hoddesdon, 1951) around a precise notion of community life:

"The Heart can be neither the centre of business, as in the capitalistic organisations, nor the factory, the symbol of a proletarian society. The Heart of the City must be the centre of more extensive human relationships: conversation, discussion, the shopping parade, 'piropeo', 'flâner', and that priceless 'dolce far niente' in its finest significance - the natural expression of contemplation, leisure for the quiet enjoyment of body and spirit"

Accordingly since, Rogers continues:

"The framework of our lives today cannot be either static or absolute. Even though conceived *sub specie eternitatis* (or better, say as if it were eternal) it still must be capable of flexible adaptation to the rapid mutations of life".⁸⁴

What we know about the much-talked about post-war CIAM conversion, is that Italian group was fully aware of the imminent crisis even if they were not among Team X 'hot heads' – with the exception of Giancarlo De Carlo. What we can grasp here, is instead a possible trigger in Rogers's pedagogical experiences

82 From the lecture Le Corbusier gave in Venice as the main exponent of CIAM in 1952.

83 See "Nuestra Arquitectura" (1950). Vivanco experienced Italian historic centers during his stay in Venice, most likely in the middle of the chat with Rogers on the road trip to Tucumán in a Fiat 1100 while the two were discussing Palazzo Farnese, admiring the large deserted salt pans between Cordoba and Tucumán with Rogers confessing to being impressed by the geography of the country that expand from the river to the pampas. See Liernur and Pschepiurca (2008).

84 Ernesto Nathan Rogers, 'The Heart: Human Problem of Cities', in J. Tyrwhitt, J. L. Sert, E. N. Rogers (eds), *The Heart of the city: towards the humanisation of urban life*, London: Lund Humphries, 1952, pp. 69-73.

to call into question the idea of modernity while a peripheral university project was taking shape in those years in Latin America from 1947, far from the social and cultural cosmopolitanism of capital cities. It should not go unnoticed that a monographic “Domus” issue calling for a radical renewal of schools’ architecture as a departure point for the construction of an ‘explicitly modern and liberal Italy’ has been edited in the same year, with Rogers’ editorial ‘Architettura educatrice’ – followed by another special issue from “Casabella-Continuità” in 1960 (see Chapter 3).⁸⁵

However, what most seems in the wake of a pedagogical project is the book *L’Utopia della Realtà* (1965), with Rogers reiterating his reluctance to deliver certainties and to open horizons over the limits that not even the Great Masters of modernism can surpass.⁸⁶ Apart from Rogers’s refusal to fix his words in a treatise or compose a systematic theory, this work is striking because it is based on didactical experiences from design studios coordinated by him at Politecnico di Milano on the concept of ‘school’ as education environment, whose ‘spatial materialization’ is left to Rogers’ assistants studio briefs, comparing them just before, paradoxically, they will contend for the massive territorial project of Italian University in the following decade when flexibility, adaptability and informality would become banners of student turmoil externalized, with no way back, outside the institution.⁸⁷

85 See “Domus” no. 220 (1947), and “Casabella-Continuità” no. 245 (1960).

86 Ernesto Nathan Rogers (ed.), *L’utopia della realtà. Un esperimento didattico sulla tipologia della Scuola Primaria*, Bari: Leonardo da Vinci Editrice, 1965.

87 Francesco Zuddas (2019).

FIG. 74

the construction of the Ciudad Universitaria de Tucuman was interrupted in the mid-late 1950s and the gigantic Vivienda Universitaria now stands towards the natural landscape of the Andes as an abandoned monument from which, however, it is still possible to perceive the design principles at the base of the original project.
Image from Garcivarez-Alfaro (2015)



1.5 *Everything looks better with a view*

La Universidad necesita contacto con la existencia pública,
con la realidad histórica, con el presente, que es siempre
un *integrum* y sólo se puede tomar en totalidad.

La Universidad tiene que estar también abierta a la plena
actualidad; más aún, tiene que estar en medio de ella,
sumergida en ella.⁸⁸

José Ortega y Gasset, 1982

Ten years before the project for a new Ciudad Universitaria began to take shape in the peripheral context of Tucumán, Lewis Mumford proclaimed ‘The Death of the Monument’ building his arguments against a ‘death-oriented’ civilization glorified by the ‘static immortality’ of monuments. That would be very undesirable from the author’s point of view, since ‘stones which are deserted by life are even more helpless than life unprotected by stones’. Hence, ‘the classic civilizations of the world oriented toward death and toward fixity’ should instead be abandoned by virtue of a new paradigm:

“Civilization today, for different reasons, must follow the example of the nomad”.⁸⁹

This provocation to which Mumford arrives in 1937, will take on multiple connotations and nuances with respect to the *pastoral* metaphor attributed by him,⁹⁰ just as European *civilization* was crumbling under the hegemony of totalitarian power and *nomadism* would become an obligatory condition for those persecuted by those regimes. Hence, *monumentality* will rather become a critical matter in modern architecture,⁹¹ with Mumford’s attack synthesized in the very notion of the modern monument as a contradiction in terms – ‘if it is a

88 José Ortega y Gasset, ‘Misión de la Universidad’, *Revista de Occidente*, Alianza Editorial, Madrid, 1982, p. 77.

89 Lewis Mumford, ‘The Death of the Monument’, in Martin, Nicholson and Gabo, *Circle: International Survey of Constructive Art*, London: Faber and Faber, 1937, pp. 263-270.

90 “So long as men are oriented toward death, the monument has a meaning: no sacrifice is too great to produce it. Just as a poor religious family today will spend half a year’s income to celebrate fitly the death of one of its members, money that it would find it impossible to spare to make possible the birth or education of a child, so the civilizations of the past sacrificed their life and their income and their vital energy to the monument. The pastoral nomad alone spared himself that sacrifice, until he copied the ways of men in cities: he travelled light”. In Lewis Mumford (1937).

91 Collins, Christiane C. and George R., ‘Monumentality: A Critical Matter in Modern Architecture’, in *Harvard Architectural Review* Vol.4 (Spring, 1984), pp. 14-35.

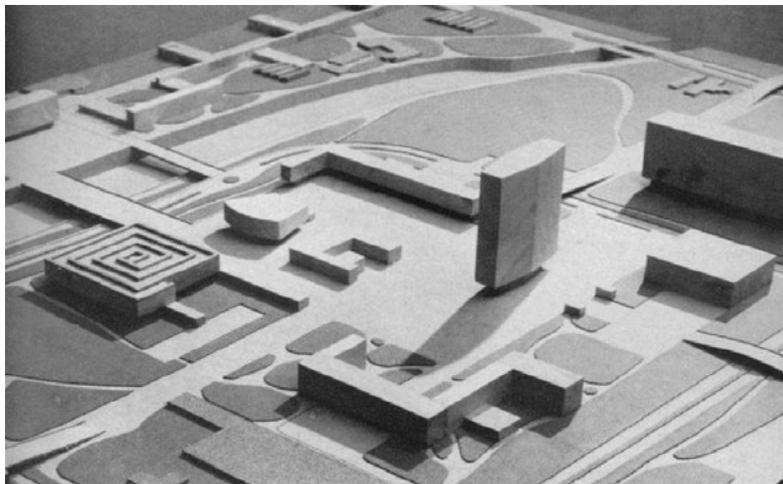
monument, it cannot be modern, and if it is modern it cannot be a monument' – while the disruption of his first provocation will become visible not before the mid-1950s, that is when the project for the new Ciudad Universitaria de Tucumán was essentially paralyzed without the financial support from the government and in the absence of institutional promoters.

The economic fluctuations during the Perón's second mandate had generated serious inconveniences in the expenses of the university institution, now forced to maintain its grandiloquent educational project with its own efforts. In 1955 was inaugurated the 'Rivolucion Libertadora' which proposed to re-establish the full exercise of university autonomy by dismantling the national university system, thus the departure of rector Horacio Descole and the IAU's progressive dissolution were among the main reasons that prevented the construction from continuing.⁹² Today, the Ciudad Universitaria looks like a ruined monument with much of its supposed educational spaces immersed in the lush vegetation favoured by the region's climate. For some, the perfect synthesis of the ruin of an out-of-reach educational project and a metaphor for a timeless architectural discourse that we love to observe as it is now, fascinated by that catchy aesthetic of 'non finito'.

However, apart from pseudo-realistic positions that roam in the superfluous inconveniences of Tucumán initiative and aesthetic trends in contemporary architecture, what remains underexplored about this episode is the superior purpose of conceiving education as a project. Apparently, a project subordinated to political authority, on two fronts: that represented by the national state, and that represented by the post-war CIAM organization with ambition to convey the modern architectural discourse at a global scale, as for the *need for a new monumentality* materialized in the concept of *civic centers*. Admittedly, it is in the construction of a monument that this episode revolved since the very initial stage, assuming the monumental scale as the most appropriate for their pedagogical scope. Moreover, in the middle of the conflict between the two paradigms of dispersion and concentration, IAU's members take a clear stance assuming the necessity to re-group the reciprocal entities of city and landscape into distinct but interdependent ecologies materialized in a monument with

92 By 1955, the seven state universities are affected by the changes induced by Rivolucion Libertadora with the aim of 'de-peronize' higher education. This proclaimed the end of the state monopoly on higher education encouraging private initiatives to provide academic degrees or diplomas. For some, it was a question of placing the country in the context of the most advanced societies: until 1957 there was only one full-time professor at Universidad de Buenos Aires, and disciplines such as sociology or psychology were not considered. Others observers recognize that the reformist university (1955-1966) would have been nothing more than a manifestation of a 'pedagogical colonization' imposed on the people and repeatedly opposed on several fronts. See Augusto Pérez Lindo (1985).

FIG. 76
Le Corbusier Saint-Dié's project
and Civic Center (1945)



outsized proportions and a pronounced public appearance. Against this backdrop, architects comply, because those who oppose the rule of authority find themselves unable to build and confined to the symbolic realm of imagination or surrogate models. However, it is precisely around the criticism of the monument that the episode of Tucumán and IAU's work should be repositioned, following the trajectory outlined in this study. Not so much as an experience subjected to political power and CIAM's cultural influence that allegedly supported and inspired it, but as a laboratory of ideas for an unobserved educational project that begins with Ciudad Universitaria de Tucumán challenging the campus ideal from a protected place of monotony to relational liveliness. This, thanks to an *ordinary* process instigated from within the bureaucratic apparatus of the institution, where the concept of informality applied to education not only survives the ruined monument of Tucumán university city, but dissipates, evolves, adapts and remodels in response to multiple and divergent architectural forms in later episodes, thus resisting its complete dissolution.

As for the political support, it must be admitted that Tucumán experience would not have been possible without a financial aid commensurate with the grandiloquence of the national project: the budget multiplied almost five times compared to the first intervention in 1946, resulting in the substantial increase of teachers' salaries, scholarships for students from the region, and resources to pursue the dream of building a monumental Ciudad Universitaria in Cerro San Javier.⁹³ It is clear that such visions could be realized, even today, given the political will – when it does not simply rely on the precept of market opportunity – and it would not be strange to describe this process in universities such as Rio de Janeiro, Caracas or any other Latin American capital. In fact, Tucumán's experience is marked by the systematic will of states that have transformed education and scientific production at the service of their growth and power in the aftermath of WWII, since studies from the most industrialized countries estimated that over 45% of GDP was determined by the contribution of intellectual production.⁹⁴ These results have excited technocrats and analysts also in the more peripheral countries, even if success could not come only from a mere quantitative growth in scientific and educational potential: education does not generate development

93 The increase in the amounts of the UNT budgets is remarkable: with an average of 2 and 3 million pesos per year between 1940 and 1945, became 6,5 million in 1946 reaching 34 million in 1948. See Franco Marigliano (2003), according to whom, apart from the State financial support, considerable interest derives from the discovery of a gold deposit known as Farallón Negro which later became property of UNT during the rectory of Dr. Descole.

94 Edward Denison, *Why Growth Rates Differ? Postwar experience in nine western countries*, Washington: The Brookings Institution, 1967. See also Schultz T., 'Education and Economic Growth', in *National Society for the Study of Education*, Chicago, 1961.



FIG. 77
Structure of the Tucuman's Centro
Comunal conceived as a large-scale
roof on top of the Andes.
MIT Distintive Collection Archive

by itself, as secret lays in the articulation of science and education with the context of reference. This is what IAU's members understood, and then, as often happens in the field of architectural pedagogy, even this peripheral case has been commented as a descendent of the pre-war Bauhaus model for different aspects, ranging from social commitment, student-mentor relationship or the productive function of 'tallers' (ateliers), which remained crucial in the learning process.

However, unlike material production which distinguished the work at the Bauhaus with objects detachable from the subject who produced them, what you learn in Tucumán is that you cannot detach the commodity from life itself in knowledge production intended as an agent of collective development of the region promoted. Rather than absorbing specific forms of knowledge, university students learn how to live, how to network, how to compete. The vehicles for this informal exchanges, however, are the students themselves as subjects with their desires, feelings, affections and perspectives as proved by the passionate words of Cesar Pelli, one of the school's first graduate students:

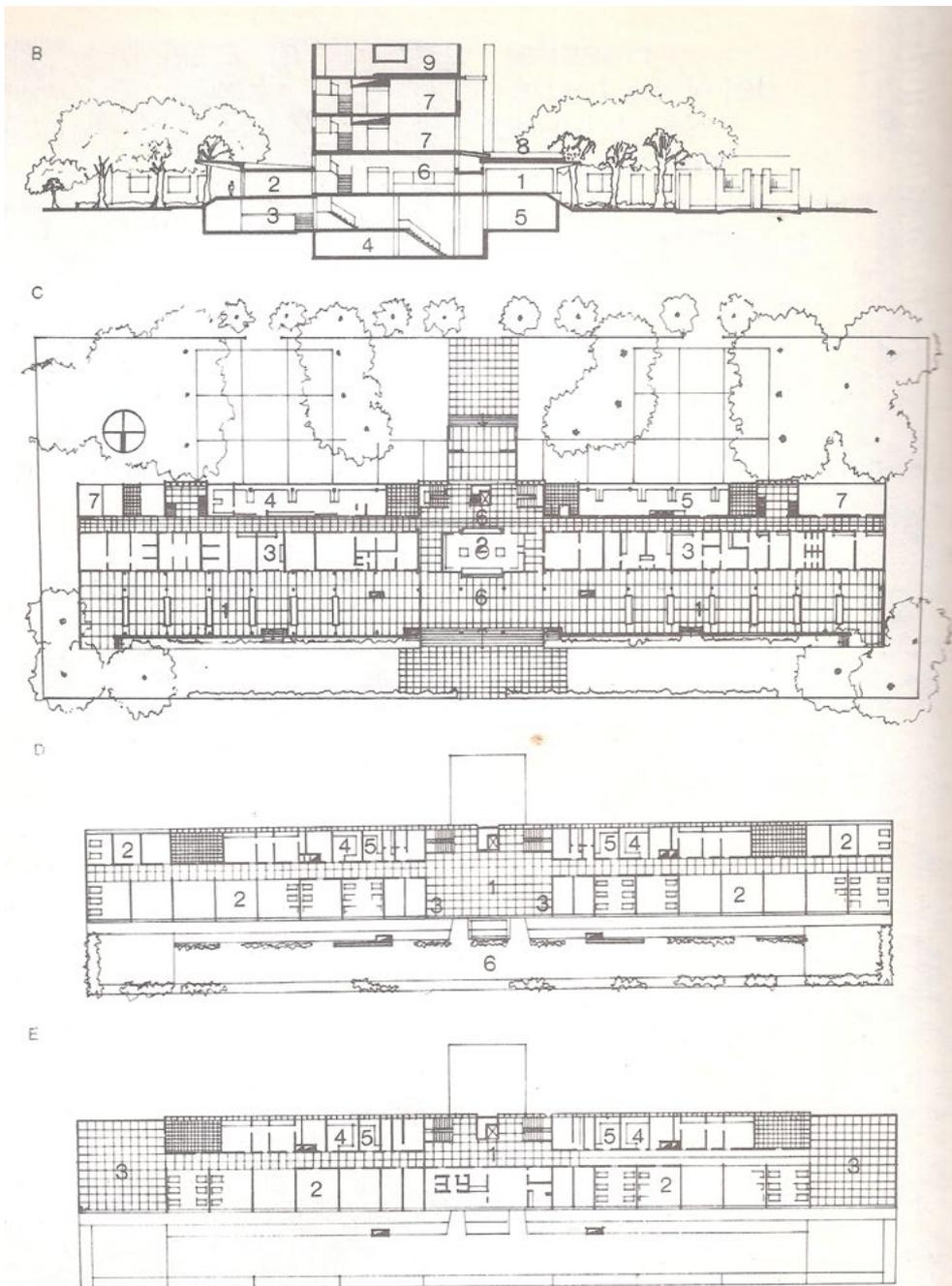
“la diferencia en los talleres estaba en el tipo de ejercicios proyectuales ahora destinados a satisfacer problemas reales de la vida cotidiana del habitante comun: viviendas, centros de salud, escuelas, la ciudad entre otros. No mas urnas funerarias o temples a dioses mitologicos. Incorporaron al Instituto el componente humanista que le hacia falta al modelo Bauhaus y a las propuesta de los CIAM, para tener un arquitecto con una superadora base conceptual de su diseño”⁹⁵

also reflected in the early projects of IAU's members, as in the case of Hospital del Niño Jesús, San Miguel de Tucumán, designed by the young Horacio Caminos and Eduardo Sacriste in 1947, conceived on the basis of its flexible program and environmental conditions, to which respond by challenging the potential of its 'urban floor' rather than standing as a finished and autonomous object.⁹⁶ Hannah Arendt notes that with the rise of modernity and its emphasis on productivity as the fundamental task of society, the boundaries between labour

95 Pelli began his studies at Escuela de Arquitectura de Tucumán before IAU's foundation in 1944, then in 1952 he got a postgraduate scholarship at the Illinois Institute of Technology, United States. See 'César Pelli', report by Rodolfo Braceti in *Nueva* no. 425, Buenos Aires, September 1999, p. 36.

96 Horacio Caminos and Eduardo Sacriste described their project starting from the “gran galería: sala de espera abierta al norte, que ubicamos frente a la plaza (provee de un amplio y fresco espacio de sombra y un area de gran movimiento y permanencia de gente) y demuestra prácticamente como un elemento tradicional de la arquitectura del Noroeste argentino puede integrarse a una propuesta que sigue los principios básicos fijados por el Movimiento Moderno. La flexibilidad y la posibilidad de crecimiento fueron otras consideraciones tenidas en cuenta en el momento del proyecto lo que permitió, años después, agregar una cantidad de funciones no contenidas en el programa original”. In “Summa” no. 220, 1985, pp. 57-59.

FIG. 78
The Hospital del Niño Jesús (1947)
was one of the first opportunities
of public interest where some of the
Argentine architects involved in
Tucuman experience established
IAU's principles, with Horacio
Caminos and Eduardo Sacriste
exploring a permeable typical
plan in continuity with the urban
environment.
Image from "Summa" (July 1985)



and work dissolved. Unlike artisanal production, where the *homo faber* could see his or her finished work, the subject educated in Tucumán is part of a vaster productive organization in which work has been reduced to a generic process of labour, where products are the outcome of a larger social process and as such they do not come out of individual craft. For Arendt, such condition was caused by the rise of the social: the organizational framework in which the lives of people was systematically linked with the imperative of production and the consequent accumulation of surplus value.⁹⁷ What is noteworthy in performing a monumental educational project like that of Tucumán, is that rather than focusing on the solid training of a specialist with an illusive nationalist profile, IAU's members used their privileged position within the organizational framework of the university bureaucratic apparatus to interrogate the region's potential with the highest degree of experimentation, collaboration and today's much-acclaimed cross-fertilization that attracted a huge number of young foreign educators to converge in the geographical periphery of Tucumán – in the spirit of the CIAM summer schools that will travel between London and Venice from 1949.

At this juncture, the question for the foundation of a monument responsive to post-war CIAM 'authorities', but with no possibility of controlling any 'finished product', remains open. One of the most striking paradoxes in Tucumán lies in the fact that IAU's educational mission to become a generator of concrete interventions, eventually resulted in its unfinished physical framework, that is the monumental Ciudad Universitaria on top of the hill which will be enabled, in its short life, only by the temporary structures of *Quonset* freely distributed near the university campus' construction site.⁹⁸ According to Frampton's application of Arendt's thoughts to the status of modern architecture, the distinction between work and labour is already contained in the ambivalence of term architecture, which designates at the same time 'the art or science of constructing edifices for human use' and 'the action or process of building'. If the first definition addressed architecture as a *work* which finds its scope in the creation of a lasting human world, the second definition identifies architecture as 'the never ending process of biological *labour*': when architecture is thus an edifice

97 See Hannah Arendt, *The Human Condition*, Chicago: Chicago University Press, 1958. These are considerations derived from the open seminars attended at the Architectural Association of London organized by Pier Vittorio Aureli and Maria Giudici under the title "On the Origins of Capitalist Urban Space" (Winter Semester 2019).

98 The university acquired a stock of prefabricated metal sheds known as Quonset, military structures coming from the WWII: the most common model was 15 metres long, with a radius of 3 meters (90 square meters), and mountable on a concrete platform, pillars or simply positioned on the ground. Thus adapted by IAU members to interchangeably accommodate educational and recreational activities – classrooms, dining rooms, bedrooms, offices and workshops – they conceive the most versatile educational and residential nucleus that could exist.

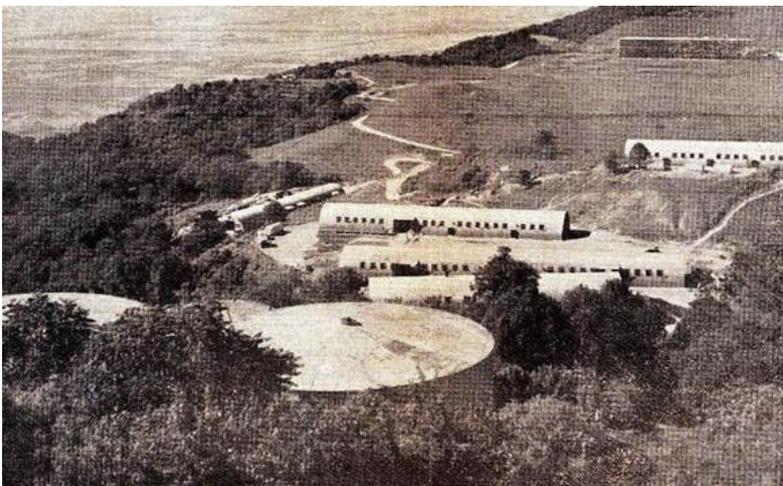
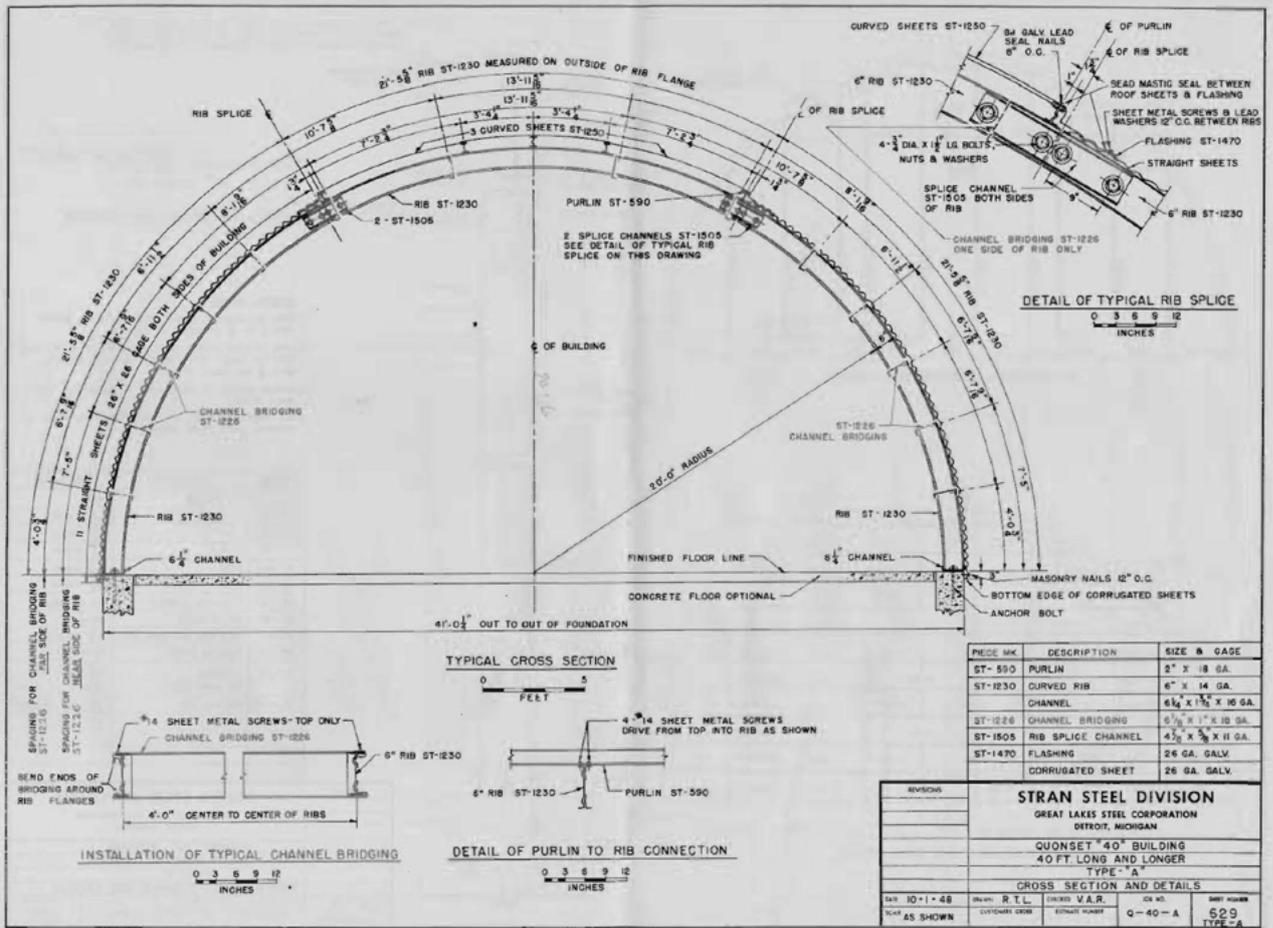


FIG. 79
 Patent of Quonset prefabricated construction (above) and its usage in Tucuman in the initial stages of Ciudad Universitaria construction. Image from "Nuestra Arquitectura" (1950)

it is so not simply because it is an object, but because its appearance within the physical world is charged with the intention to build something whose meaning goes beyond mere instrumentality.⁹⁹

As said, post-war CIAM's intention was increasingly concerned about 'emotional' and relational vitality that sprang directly and spontaneously from life, best epitomized by Saint-Dié's civic center (1945) – also the most cited source of inspiration for the Ciudad Universitaria de Tucumán. However, if asymmetry, sliding axes, layering of planes, and dynamic tension between verticals and horizontals look like undisputable features of the innovative compositional mode that unites the two urban plans, one of the most intriguing commentaries on Le Corbusier reconstruction project comes to mind here, with Mary McLeod comparing Saint-Dié's buildings 'now stood isolated in space' and 'their placement carefully calibrated to accentuate perspective views' with 'objects in the *free plans* of [Le Corbusier] white villas'.¹⁰⁰ Although this subtle object-oriented notation does not disprove legitimate similarities at the scale of the general plan, it reveals Tucumán's project bold and daring capacity to establish an aesthetic of the collective in which a 'modern urban space' was expressed through a diverse architectural materiality, deeply embedded in the belief that university could become the centre of the region's 'intangible' production of knowledge.

As noticed by McLeod, a caption adjacent to the sketch of Saint-Dié's civic center says:

“In my opinion urbanism can only exist in three dimensions [...]
The volumes compose themselves in the sky”¹⁰¹

with Le Corbusier acutely aware that he had created something that went beyond his original desire for a plan that would expose the city's natural terrain: the strategic positioning of critical large-scale architectural interventions suggests

99 See Kenneth Frampton, 'The Status of Man and the Status of his Object: A Reading of Hannah Arendt' in Melvyn A. Hill (ed), *Hannah Arendt: The Recovery of the Public World*, New York: St. Martin Press, 1979, reprinted in Michael Hays, *Architectural Theory since 1968*, Cambridge: Mit Press, 1998, 362-367. For both Arendt and Frampton the problem with labour it is the fact that it concerns the 'necessity of subsisting' of the human species and for this reason, the *animal laborans* can't produce a world, but only life, that is to say existence for the sake of his or her own reproduction. These are considerations derived from the open seminars attended at the Architectural Association of London organized by Pier Vittorio Aureli and Maria Giudici under the title "On the Origins of Capitalist Urban Space" (Winter Semester 2019). On the concept of 'knowledge production see Pier Vittorio Aureli, 'Labor and Architecture: Revisiting Cedric Price's Potteries Thinkbelt', in LOG, no. 23, 2011, pp.97-118.

100 Mary McLeod, 'Saint-Die. A Modern Space Conception for Postwar Reconstruction', in Jean-Louis Cohen (ed.), *Le Corbusier: An Atlas of Modern Landscapes*, New York: MoMA, 2013.

101 Also reported in Le Corbusier, 'A plan for Saint-Dié', in "Architectural Record" no.4, October 1946, p. 82.

that everything looks better with a view – of other buildings-*objects*. Same happens with the geographical scale of Ciudad Universitaria, with the difference that what could be found by scrutinizing its buildings – beyond the general plan – is a simple but recurring choice of making empty space available to perform togetherness and communitarian life, stimulated in the specific case of Tucumán by the IAU's educational project rather than merely adhering to the post-war CIAM's mandate.

This happens in 'Centro Comunal', the most representative building where informal education goes on stage under the modular and extensible canopy, deliberately repositioning the concept of monument well beyond the over-consumed images of Italian historic centers also associated with the project of Ciudad Universitaria. Conversely, something more about this repositioning can be understood from the conception of São Paulo Olivetti factory (1957) where the production area – for typewriters and calculators – is organized according to a triangular modulation of the site allowing subsequent expandability in the three directions of the base module: a vault of reinforced bricks, repeated in a staggered pattern to provide air and sunlight from above. In the article describing the first of the two industrial complexes designed by Italian architect Marco Zanuso in South America, published in "Casabella-Continuità" directed by Ernesto Nathan Rogers (1953-1965) with Pier Luigi Nervi as a member of the scientific committee,¹⁰² mention is made of an initial scheme covering the entire terraced lot along the highway to Rio de Janeiro with a uniform triangular figure, which would have guaranteed the best use of space and a greater impact with the boundless landscape.

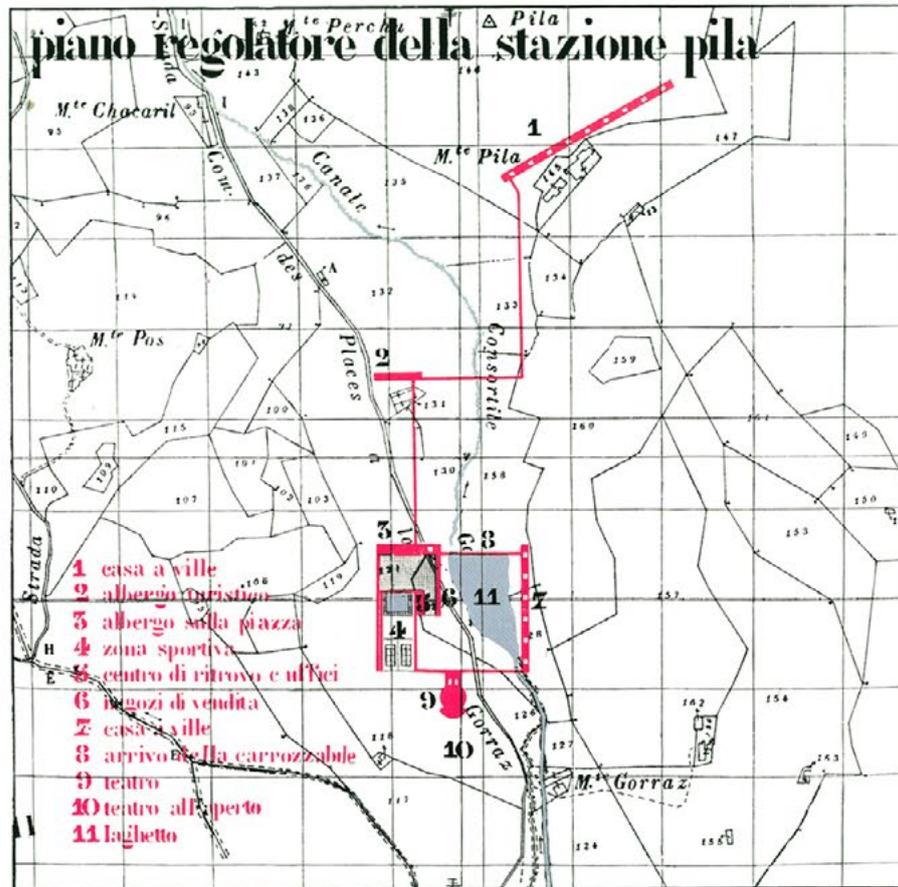
However, this choice would have been advantageous for a single production cycle, while modern production in light mechanics was already demanding multiple and changeable production cycles. Therefore, the architect's challenge was to conceive a *productive monument* by achieving 'the maximum degree of freedom, not generic and undifferentiated (pre-rationalism), but suitable for organic movements and expansions (second rationalism)'.¹⁰³ Consequently, the triangular module – about half of that of Tucumán with 12-meters side and 72 square meters – rather represents a 'reduced environmental unit, circumscribed, psychologically and materially graspable and controllable', although endlessly extensible. In fact, despite the vaulted structure could be used to occupy the entire lot, it seemed better 'not to indulge in the concept, albeit modern, of limitless adaptability' by placing the assembly line in a separate

102 See Roberto Guiducci, 'Appunti sulla fabbrica di São Paulo in Brasile', in "Casabella-Continuità" no. 216 (September 1957), pp. 66-71.

103 Ibid. Translation by the author.

FIG. 80
 Piano Regolatore della
 Valle d'Aosta (1936-
 37) BBPR designed
 urban interventions at
 Pila village exploring
 architectural dimension
 applied to the magnificent
 natural landscape of
 Italian Alps.

PILA, STAZIONE DI MASSE - PIANO REGOLATORE E TEMPI D'ATTUAZIONE



CCXXIX

PILA, STAZIONE DI MASSE - PIANO REGOLATORE E TEMPI D'ATTUAZIONE



CCXLI

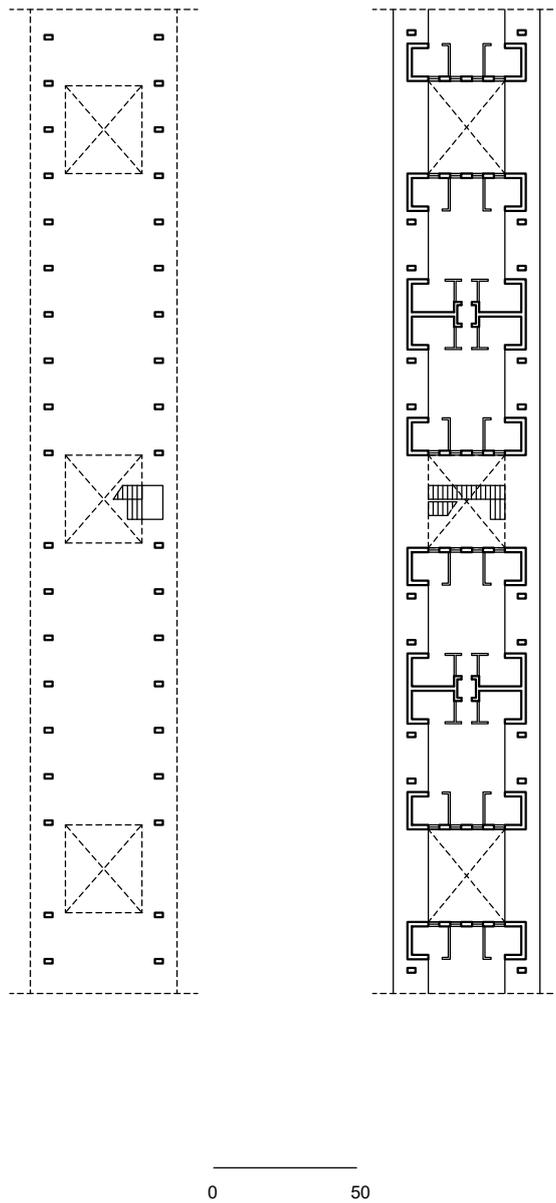


FIG. 81

BBPR worked with a variation on the theme of linear buildings combining residential and collective spaces for the temporary tourist community, with a free ground floor and a typical floor organized on the sequence of minimal lodgings alternated with central patios and balcony terraces running on the side bands.
(redrawn by the author)

building consisting of two linear parallel volumes which define a clear limit both in the production and spatial layout. Moreover, in this attempt to place Zanuso's project within the flow of ideas circulating from Tucumán's experience – via Rogers' "Casabella" – what should not go unnoticed is the space devoted in the same article to the architect's working method: knowledgeably introduced within the collaborative system of a 'coordination' structure that clearly excludes 'individualistic and artisanal' tendencies, but not for this, lacking of imagination seen as indispensable to 'get noticed and be present' against the imposing natural landscape, in the prerogatives of a modern monument.¹⁰⁴

A later article on Buenos Aires Olivetti factory will appear in 1959,¹⁰⁵ commented by the same Roberto Guidicci around the interesting notion of a *a posteriori* project, a concept that really resonates with Rogers' pedagogical approach: architectural maieutic (*a posteriori* project) can paradoxically open up many more paths than *a priori* project, as proved by Zanuso's functionally analogous theme resulted in such a glaring differences between the Argentine and Brazilian case, because:

"The freedom of the factory's needs goes hand in hand with the freedom of its architectural needs"¹⁰⁶

which was also what seems to be true for education in Tucumán. In essence, Zanuso invests architectural ambition in the spaces of production to build the same 'aesthetic of the collective' that was explored, years earlier in a similar context, by the unprecedented educational project of the Ciudad Universitaria de Tucumán, in particular its Communal Center where intangible production of knowledge equally performed under one roof – with an interesting disruption to be considered in the lineage of the *knowledge-factory* metaphor successfully propagandized in contemporary discourse on informal education.

Less easy to notice than in this case of Centro Comunal, the same choice of obtaining empty space within the architectural materiality of university buildings can be found in Tucumán 'Vivienda Universitaria': not only its internal

104 The rhetoric of the monument in comparison with the landscape becomes explicit at some point: "Pensiamo che l'arroccata fabbrica di São Paulo con il suo corpo centrale a volte incastrate e sorrette a difesa le une alle altre, circondata da edifici rettilinei (quasi mura) e da avancorpi esagonali (quasi bastioni), e pur libera, dominante, aperta ai bisogni civili, abbia molte ragioni per resistere". In addition, the author justifies the article's opening image portraying a sublime cloudy sky as one of Zanuso's major concerns in anchoring his project to the Brazilian landscape.

105 "Casabella-Continuità" no. 229 (July 1959).

106 Ibid. p. 25. In Buenos Aires Olivetti factory, the design process required compactness and expandability at the same time, but resulted in sequence of slipped rectangles grouping workshops and assembly line. In addition, Zanuso was asked to integrate urban connotations, interchangeability of spaces and air conditioning system.

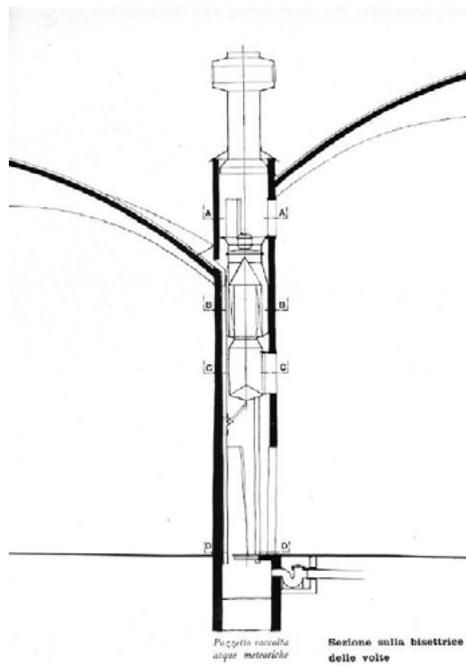


FIG. 82
 Olivetti factory designed
 by Marco Zanuso in
 São Paulo (above) and
 its technological detail.
 Image from "Casabella-
 Continuità" (September
 1957).

articulation is expressively section-oriented compared to presumed analogies with Le Corbusier's Marseille Unité,¹⁰⁷ but also the typical linear arrangement of the plan presents a reversed diagram with a furnished central corridor repeatedly pierced by double and triple-height spaces containing lifts and open stairs, thus displaying impermanence and transitoriness of inhabiting immeuble-cité's system of walls and partitions.

This inversion in the diagram of the plan provides an unexpected precedent. In fact, even if the professional contribution of IAU's Italian members in designing Ciudad Universitaria is considered limited and discontinuous with respect to their educational contribution, some contamination can be found with the innovative pre-war territorial strategy of Piano Regolatore della Valle d'Aosta promoted by the industrialist Adriano Olivetti in 1936-37 involving Italian architects Banfi, Belgioioso, Bottoni, Figini, Peressutti, Pollini and Rogers. On the one hand, it is clear how the two projects similarly interact with the regional scale deeply analysed in their natural and social aspects, then approached with a rational ordering principle.¹⁰⁸ However, it is in Rogers' proposal for Pila village (and ski station) that architectural connections can be appreciated: a variation on the theme of linear buildings combining residential and collective spaces for the provisional tourist community, with a free ground floor and a typical floor organized on the sequence of minimal lodgings alternated with patios occupying the middle section and balcony terraces running on the side bands.

One perceives that, even if the resumption of CIAM meetings in the aftermath of the WWII had been instrumental, to say the least, in the advancement of Tucumán educational project as one of the most paradigmatic institutions of modernity in Latin America, a deeper thought can be made on post-war CIAM

107 Early criticisms on Le Corbusier's post-war works come from the pages of "Architectural Review", with Lionel Brett declaring "Le Corbusier's greatness remains absolutely unimpaired by the kind of holes I have picked in his latest book [Le Corbusier: Œuvre complète 1938-1946]". In truth, the criticism is focused on projects, with "no justification for the excessive fatness of the whole block [Unité d'habitation], which gives a horrid cell-like section to each dwelling and many dark and ill-ventilated corners. This is, of course, another example of Le Corbusier's weakness in the section, which Mr. Colin Rowe was, as far as I know, the first to demonstrate as a weakness inherent in frame construction. One need only flip the pages of any of the Œuvre complète to notice at once the contrast between the fluid grace and lucidity of the plans and the rigid slabs that slice across the sections. Just as we escape from the weight-bearing wall we look like being crushed in true Hegelian style by the floor slab". See Lionel Brett, 'THE SPACE MACHINE: an evaluation of the recent work of Le Corbusier', in "Architectural Review" no. 102 (November 1947), pp. 147-150.

108 This kind of analysis for the Ciudad Universitaria was also reported in the abridged version published in "Nuestra Arquitectura" (1950). In referring to this scale, connections are recognized in Liernur & Pschepiurca (2008), recalling the exhibition at Galería Van Riel in August 1948 dedicated to 'arte abstracto concreto no figurativo' where Tomás Maldonado, Alfredo Hlito, Enio Iommi and Claudio Girola exhibit their works, while Eduardo Catalano and BPRs were the only architects to participate. See the entire project in Adriano Olivetti (ed.), *Studi e Proposte preliminari per il Piano Regolatore Della Valle D'Aosta*, Torino: Nuove Edizioni Ivrea, 1943.

most recent concepts challenged from within their organization and what the role of education was in this process. What we see at work in Tucumán is an advanced educational project with respect to the rhetoric of 'saber/saber hacer' embodied in political or cultural mandates of the time. From the critical design analysis of its buildings, the Ciudad Universitaria de Tucumán results in the construction of a monument questioning the city and the forces that make it. Not surprisingly, observing the campus model that circulated back then, one sees a physical connection between the two university buildings commented above: a narrow suspended path joins Vivienda Universitaria intermediate collective floor with Centro Comunal, instigating an even more effective dissolution of university institution in its context without, however, relinquishing architectural implications of form.



FIG. 83
Ciudad Universitaria de Tucuman, elevated connection between Centro Comunal and the intermediate floor of Vivienda Universitaria. Image from "Urbanística" (1952).

Chapter 2

The liberated ground.

Transparencies for university's technical image in Concepción and Santiago de Chile



FIG. 84
Universidad Técnica del Estado de Santiago de Chile by BVCH architects (1957-67)
Archivo Patrimonial del U. de Santiago de Chile

ABSTRACT (ITA)

La glorificazione di un'immagine tecnica dell'università esaltata dalla trasparenza di materiali innovativi, attraverso cui esibire i suoi spazi pur continuando a perseguire l'istinto primario della loro protezione, è interpretata criticamente nei due episodi progettuali discussi nel Capitolo 2: il progetto del campus per la Universidad Técnica del Estado di Santiago de Chile intrapreso in concomitanza con quello di espansione della Universidad de Concepción. In particolare, il 1957 è la data in cui le rispettive commesse vengono affidate a giovani protagonisti della scena architettonica cilena che impersonano, in maniera molto più eloquente rispetto a tutti gli altri episodi, l'apparente contrapposizione tra l'architettura del genio e l'architettura della burocrazia esposta da Henry-Russell Hitchcock nel suo articolo del 1947.¹ Da un lato Emilio Duhart (tra gli allievi di Gropius nel suo Master di Harvard), e il grande ufficio di architettura BVCH dall'altro (costituito nel 1944 da Carlos Bresciani, Héctor Valdés, Fernando Castillo and Carlos García Huidobro), diventano gli esponenti periferici di questa contrapposizione. Questo nonostante lo stesso Hitchcock avesse posizionato il Cile ai margini del suo celebre sondaggio per il MoMA sull'architettura Latino Americana (1955) presentando due soli progetti di ville singole, seppur piacevolmente colpito dalla promettente vivacità dell'ambiente accademico della Universidad Católica.²

In questo contesto, sia Duhart che BVCH modellano la figura dell'architetto-educatore principalmente sull'esercizio della professione che diventa, non a caso, anche il tema principale intorno al quale entrambi elaborano la propria risposta progettuale per due istituzioni universitarie che mirano a fabbricare un soggetto tecnico e professionalmente specializzato per lo sviluppo strategico della nazione. I due progetti sono accomunati da una strategia ben definita che privilegia la liberazione del suolo del campus per un uso non programmato, indeterminato e informale in assoluta continuità con la città, declinando in due modi differenti un concetto di trasparenza ben più ambizioso e complesso di quello letterale e materico associato all'immagine tecnica dell'università. Questo nello stesso momento in cui, Colin Rowe e Robert Slutzky, muovevano la loro critica interna alla modernità inaugurando il concetto di trasparenza fenomenica, rispetto al quale si è costruita l'analisi progettuale dei due casi cileni presentati in questo episodio.³

Infatti, pur riconoscendo la peculiarità e l'avanzamento delle soluzioni tecnologiche in acciaio e vetro applicate ai singoli edifici, concepiti prevalentemente come variazioni sul tema del blocco lineare sospeso, la radicalità delle due proposte emerge più che altro dalla struttura formale ottenuta dall'uso di questo dispositivo architettonico: come elemento discreto ripetuto in sequenze lineari a Concepción o come inspessimento volumetrico della fitta griglia di percorsi pedonali a Santiago, il dispositivo architettonico del blocco lineare sospeso è responsabile della liberazione del suolo da programmi specifici e senza interruzione di continuità con la città, con l'università che conquista un terreno privilegiato per sviluppare capacità relazionali ed esercitare una maggiore attitudine all'imprevisto. Questo ultimo aspetto si evince in particolare dallo scambio di lettere tra le autorità universitarie cilene e l'esperto di educazione consulente dell'UNESCO Rudolph Atcon, promotore di una certa flessibilità istituzionale da lui stesso formalizzata in un diagramma sintetico di cerchi

secanti – che richiama le prime elaborazioni progettuali di Emilio Duhart per il campus di Concepción. La totale continuità con la città che, in entrambi i casi, era assunta come condizione di partenza: Duhart lavorava infatti sull'espansione del progetto di Karl Brunner del 1931 che aveva già previsto una connessione diretta tra il campus e la città di Concepción, mentre BVCH stavano già realizzando la Unidad Vecinal Portales a Santiago quando ricevono la commessa del nuovo campus per la Universidad Técnica del Estado nel lotto adiacente.⁴

Tuttavia, al pari delle influenze esterne, bisogna considerare la vivacità di quell'ambiente accademico notato da Hitchcock in cui sia Duhart che i membri di BVCH si erano formati. Ovvero, la Universidad Católica de Chile che fin dalla prima metà degli anni '40 aveva avviato un processo di trasformazione della sua organizzazione interna e dei suoi metodi pedagogici sperimentando pratiche collaborative e svincolate da gerarchie accademiche con l'obiettivo di un'azione concreta sulla realtà locale. Pertanto, nel clima favorevole che forma Duhart e BVCH prima come studenti e subito dopo incorporati nell'apparato burocratico dell'università dove incarnano la variante di architetto-educatore più compromessa con la professione, si assiste a una totale contaminazione tra pratiche pedagogiche e pratiche professionali equamente stimolate da capacità dialogiche, relazionali e di adattamento agli imprevisti offerti dal mondo reale.

Un altro aspetto da tener presente è che lo stesso clima di quegli anni favoriva il passaggio in Cile di intellettuali sudamericani respinti da altri paesi. Come nel caso di Paulo Freire che trascorre cinque anni in Cile prima di formalizzare nel 1970 il suo pensiero pedagogico basato sulla pratica dialogica come strategia di liberazione dell'individuo, proco prima che anche Ivan Illich esplicitasse la sua idea di 'deschooled society [that] implies a new approach to incidental or informal education'. Il dibattito pedagogico che in quel momento trovava terreno fertile in alcune regioni dell'America Latina, dimostra da un lato che il termine informalità applicato all'educazione e alle pratiche di apprendimento entrava nel vocabolario di pedagogisti e pensatori radicali in maniera più disinvolta, anche se non ricorrente, di quanto accadesse invece per gli architetti-educatori impegnati nei progetti universitari. Dall'altro lato, questo dibattito aveva agevolato influenze reciproche con alcuni protagonisti di questo episodio che abbandonano gradualmente il loro anonimato che li qualificava nella sfera professionale per ottenere ruoli sempre più stabili dentro l'apparato burocratico dello stato, come nel caso di Fernando Castillo Velasco (membro "C" di BVCH) che otteneva la carica di rettore della Universidad Católica nel 1967 o Carlos Bresciani (membro "B" di BVCH) che dirigeva la scuola di Valparaíso dal 1952.⁵

L'episodio successivo, non a caso, riguarda proprio il nuovo campus per la Universidad Católica di Santiago che nei primissimi anni '60 inizia a ripensare la sua struttura organizzativa sulla base di un rafforzamento della componente relazionale del suo nuovo progetto educativo. Il principio di liberazione del suolo e continuità con la città che contraddistingue i due progetti analizzati in questo capitolo verrà condotto a un grado di complessità ben più alto, in cui l'intricata stratificazione di un organismo tridimensionale che fa coincidere la scala architettonica con quella della città dialoga a distanza con gli esperimenti mega-strutturali ben prima della loro connotazione 'mainstream'.⁶

NOTE

1. Non molto tempo prima di essere incaricato del sondaggio del MoMA sull'architettura dell'America Latina, lo storico americano pubblica il suo articolo 'The Architecture of Bureaucracy & the Architecture of Genius' in "Architectural Review" (no.101, 1947), rilevando nella produzione architettonica moderna la coesistenza di un profilo riconducibile alla creatività individuale dei Maestri e un profilo più anonimo rappresentato dalle grandi società di progettazione che si reggono su un'organizzazione del lavoro basata su efficienza e ottimizzazione.
2. Questa fugace osservazione presente nel catalogo del MoMA curato da Hitchcock (1954), fa eco alle previsioni di Rollie McKenna, la fotografa che accompagna lo storico americano nel suo frenetico itinerario: "In 5-10 years, though I think they will have some nice things".
3. Una prima versione del celebre saggio sulla 'trasparenza' elaborato da Colin Rowe e Robert Slutzky esisteva già nel 1955. Sottoposto alla redazione di "Architectural Review" che rifiutò di pubblicarlo senza revisioni sostanziali, circola in forma di dispensa tra gli studenti finché "Perspecta", la rivista dell'Università di Yale, pubblica la prima versione di 'Transparency. Literal and Phenomenal' nel 1963.
4. La Unidad Vecinal Portales è il primo grande complesso di residenza collettiva a Santiago, progettato dallo studio BVCH nel 1954. È in questa occasione che gli architetti cileni iniziano a esplorare una configurazione aperta basata sulla ripetizione e variazione di blocchi lineari interconnessi da una rete di percorsi pedonali elevati e sospesi sul suolo. Sarà anche l'unico progetto sudamericano a trovare spazio nell'indagine sul New Brutalism condotta da Reyner Banham nel 1966.
5. Ivan Illich pubblicherà *Deschooling Society* nel 1971. Nel frattempo Paulo Freire trascorre il suo esilio in Cile tra il 1964 e il 1969, coinvolto nel progetto statale di Riforma Agraria dove promuove lo sviluppo di programmi educativi per gli abitanti delle aree rurali. Il testo che lo renderà celebre, *Pedagogy of the Oppressed* (prima edizione in inglese del 1970), viene elaborato in questo periodo e arricchito dai ripetuti scambi di opinioni con il filosofo brasiliano Ernani Maria Fiori, anch'egli esiliato in Cile e scelto come vice da Fernando Castillo Velasco quando nel 1967 otterrà l'incarico di rettore della Universidad Católica (da conversazione tra l'autore e Jorge Fiori, figlio di Ernani Maria Fiori e professore alla Architectural Association di Londra).
6. Sarà Alison Smithson nel suo articolo per "Architectural Design" (n.9, 1974) a inaugurare il termine 'mat-building' per descrivere un paradigma progettuale già esplorato in diverse esperienze progettuali dei primi anni '60.

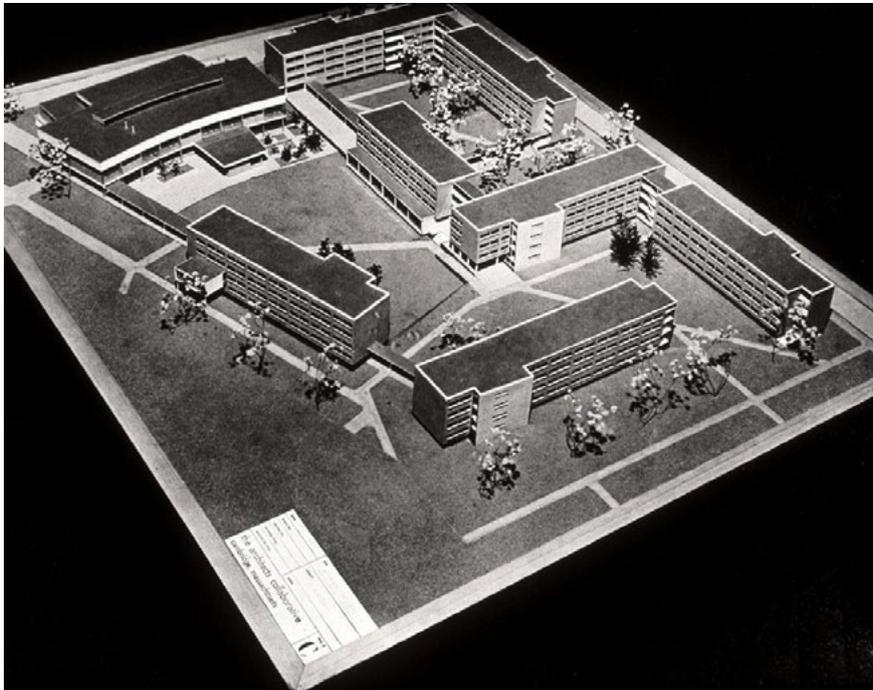


FIG. 85
The Harvard Graduate Center was a campus extension
commissioned to The Architects Collaborative (headed by Walter Gropius) in 1948

2.1 *On forms of togetherness.*
The unsolved problem of university technical image

We need a new tradition which shall at long last deliver
our universities from the vagaries of architectural succession.¹

Joseph Hudnut

What is certain from CIAM's prevailing concerns in the aftermath of the WWII was a reorientation of the modern architectural discourse towards a new sense of communal life enhanced by a fifth function – the *civic* – crucial to unify the others. What was totally uncertain, however, was the discourse on the form the new civic function would take. In other words, togetherness was about to be institutionalized and a form for this had to be found. University cities represented a laboratory of experimentation in this sense since the early 1940s, and it will be a 1947 article for “Architectural Record” entitled ‘On Forms in Universities’ signed by Joseph Hudnut – the one who had engaged in dialogue with CIAM leaders and among the first to ‘institutionally’ defend Modernism in the United States² – to identify in the project of university campuses the reconciliation between the power of form and that of life:

“The task to be performed in university buildings and the methods by which they are built constantly change. Their nature tomorrow cannot be predicted. No program is possible which extends beyond a dozen years. There are now enrolled in American universities about two and a half million students. The University of California has 27,000 students; Boston University, 20,000. Jefferson thought that a university might have enrolled 300 [...]

No one can say what will be the task of tomorrow's university or what will be the new relationships to the society which nourishes it and use it; and no one can guess what new miracles of steel and glass,

1 Joseph Hudnut, ‘On Forms in Universities’, in “Architectural Record”, Vol. 102, no.6 (December 1947), pp. 88-105.

2 As mentioned in Chapter 1, Hudnut was dean at Harvard Graduate School of Design from 1936 to 1953, and among the first to collaborate with CIAM leaders such as José Luís Sert and Walter Gropius. See Jill Pearlman, ‘Joseph Hudnut's Other Modernism at the Harvard Bauhaus’, in “Journal of the Society of Architectural Historians”, Vol. 56, no. 4 (December, 1997), pp. 452-477.

of magnesium and plastics, will compel new and unheard-of aspects in its structures”.³

A growing organism whose form cannot be separated from an unpredictable future, the university saw its opportunity for emancipation from a protected place for monotony to a space for relational liveliness. At the end of the article, it is also mentioned ‘the civic center at Venice as a good example of the way in which a quality of life may give unity to buildings diverse in character’ familiarly handling the same image of Piazza San Marco that was increasingly accompanying the post-war CIAM discourse, and also the one that had inspired the monumental project of the new Ciudad Univarsitaria de Tucuman begun in the same year as Hudnut’s article – which focused his analysis on North American examples.

After all, the MoMA survey on Latin America is still a long way off. Instead, 1947 is the same year as another influential article written by the one who will be the responsible of that survey: Henry-Russell Hitchcock’s ‘The Architecture of Bureaucracy & the Architecture of Genius’ has been published in January issue of “Architectural Review”.⁴ The North American historian described a *de facto* situation in which a new form of professional practice, the architecture of bureaucracy, had to be added to that of the creative genius traditional profile. The term ‘bureaucratic’ did not necessarily imply a negative meaning for Hitchcock, but rather exemplifies a different approach in architectural production that required a peculiar *attitude*, totally different from that of the genius traditionally associated with special expressive power and the atelier-image cultivated by European masters of modernism, including Frank Lloyd Wright who provided the best North American variation of the prototypical ‘genius’ with his Taliesin’s studios in Arizona and Wisconsin. Hitchcock’s argument was built on the fact that architecture could no longer be assessed on whether it was in tune with technical advances or not, as it was during the first decades of the twentieth century, since modernization had produced the only ‘contemporary way of building’ which also includes architectural production such as that conceived by Albert Kahn’s office, primarily known for Detroit factories and offices of the Ford Motor Company:

“The type of bureaucratic architecture par excellence [that] depends not on the architectural genius of one man, but in the organizational genius which can establish a fool-proof system of rapid and complete

3 Hudnut (1947), pp.90-92.

4 Henry-Russell Hitchcock, ‘The Architecture of Bureaucracy & the Architecture of Genius’, in “Architectural Review” no. 101 (1947), pp. 3-6.

plan production.”⁵

Such a system predictably assumes in Hitchcock’s argument the rhetoric of a ‘perfect mutual co-ordination as machine parts come from the various sections of a factory to be joined first into sub-assemblies and then into the finished product on the final assembly line’. However, in 1947 Fordist industrial production was already an anachronistic model for large-scale postwar organizations, as noticed by Michael Kubo referring to Peter Drucker book published one year before Hitchcock’s text, which identified the ‘corporation’ as the only American social institution that would emerge as the dominant post-war organizational form.⁶ The organizational structure of what would become the largest corporation in the world in the 1950s, General Motors, replaced the Fordist assembly-line production with managerial principles adopting flexibility as an imperative:

“A mix of specialists at different levels within the hierarchy allowed information to travel both upwards and downwards through the production chain, increasing efficiency from the factory floor to the management office. Decentralization, teamwork, and flexibility were the characteristics that would mark the progressive application of corporate models across both business and institutional domains in the post-war context”.⁷

Even earlier, collective work and flexible collaborations had become watchwords for a generation of architects educated in the belief that ‘anonymity, teamwork, and the broadest scale of action’ were crucial for an adequate architectural response to urgent building problems of the post-war time. Concepts that became popular in a climate of criticism that also affected Joseph Hudnut leadership at Harvard Graduate School of Design, as demonstrates the short paper ‘An Opinion on Architecture’ signed by Bruno Zevi and other students in 1941:

“We see only one solution for the future of architecture as an expressive and social activity: COLLECTIVE WORK among architects, engineers, contractors, and the working class.”⁸

⁵ Ibid., p. 4.

⁶ Peter Drucker, *Concept of the Corporation*, New York: The John Day Company, 1946. Quoted in Michael Kubo, ‘The Concept of the Architectural Corporation’, in Eva Franch i Gilabert, Amanda Reeser Lawrence, Ana Miljacki, and Ashley Schafer (eds.), *OfficeUS Agenda*, Zürich: Lars Müller Publishers, 2014, pp. 37-48.

⁷ Kubo (2014), p.38.

⁸ The paper ‘An Opinion on Architecture’ (Boston: The Century Press, 1941) addressed to the then dean Joseph Hudnut was signed by John B. Bayley, Robert Hays Rosenberg, Bruno Zevi, John Taylor Moore,

In these pages, Walter Gropius' call for anonymity and teamwork is appreciated by a young Zevi as opposed to 'Wright's dark genius clouded by his own personality'. Even if we all know that Zevi became the first promoter of Wright's architecture on his return to Italy while Gropius' principles were assumed as an example for the social and political reconstruction of post-war Italy by Giulio Carlo Argan, that paper contained a very clear statement:

“We are treating the problem of the position of the architect in modern society from two points of view: the educational and the professional”.⁹

And in fact, it was precisely on the complicity between education and profession that a discourse on bureaucratic architecture could be articulated.

The Architecture Collaborative (TAC) represents one of the most fitting examples, with Harvard Square as the core of a vibrant professional network and personal connections to which Gropius took part in 1945. In TAC approach resonates the task of the next generation of modern architects, that is to overcome 'the individual genius [as] the only embodiment of true and pure art'.¹⁰ The thinking behind was that teams should consist of 'generalists able to criticize each other as equals, rather than parcelling tasks among specialized practitioners according to the managerial principles of efficiency and division of labour. This structure was formalized through a weekly meeting in which all the partners gave shared criticism of each others' projects. Working at other team-based firms meant suits and ties, a time clock, and a rigid chain of command; TAC meant corduroy and jeans, wild (occasionally scandalous) office parties, and a messy environment of shared investigation closer to an atelier than a corporate office'.¹¹ Embedded in this informal environment was Gropius himself, who significantly understood that this change in pedagogy would allow new attitudes towards individual self-awareness for architects in practice, no longer taught to think in terms of a singular author. In the 1966 monograph,¹² essay's titles such as 'TAC's Teamwork', 'Collaboration' and 'The Idea of Anonymity' reaffirmed the faith in their collectivist model evidently shaped around Gropius' pedagogical methods

Jr., Warren H. Radford, Frank C. Treseder, Arthur Koon Hing Cheang, Wm. Joseph, Dahong Wang, T.J. Willo.

9 See 'An Opinion on Architecture', 1941.

10 Walter Gropius, 'The Architect Within Our Industrial Society', in *Scope of Total Architecture*, p. 86.

11 The collaborative ideal at TAC meant something very different from the hierarchy represented by the work of SOM. See Kubo (2014), p. 42.

12 See Walter Gropius et al., *The Architects Collaborative 1945-1965*, Teufen: Arthur Niggli, 1966.

practiced at Harvard collaborative workshops.¹³

As Sylvia Lavin wrote recently, it might seem inevitable that offering architects the choice of becoming bureaucrats or geniuses would lead to a profession in which every architect aspires to be recognized as a genius. And indeed, within the two decades since Hitchcock had made his argument for the balance between the two categories, this balance would have shifted towards the exclusive competence of geniuses in the design of libraries, museums, municipal buildings, residential complexes, hospitals and universities.¹⁴ However, as the first episode of the trajectory traced in this thesis began to show in the experience of Ciudad Universitaria de Tucuman, in those same two decades ‘since Hitchcock had made his argument for the balance between the two categories’ – that is the time-frame of this research – there was a peripheral context in which the figure of the architect-educator participated in the renewal of the post-war architectural discourse by working in a condition of partial anonymity, operating within the structure of a different bureaucratic apparatus, that of university institution, which intended to revolutionize its educational project from within: the pedagogical mandate based on the relational, collaborative and multidisciplinary component showed a bureaucratic institution such as the university that appropriated a broad concept of informality to renew their programs, their relationship with the immediate of larger context, and their spaces that would perform these changes. All this, added a level of complexity to the two categories defined by Hitchcock as stable and opposite.

Chile was also part of this peripheral context, which in the recurring year 1947 ratifies the adhesion to CIAM principles by publishing a manifesto signed by fifty Chilean architects in March issue of the magazine “Arquitectura y Construcción” under the title ‘Filial Chilena de los CIAM’.¹⁵ A manoeuvre that had still given little tangible effects on the date of MoMA survey, as evidenced by the words of the photographer Rollie McKenna who accompanied Hitchcock on his whirlwind Latinamerican tour in 1954:

“The Chileans were quite put out at our one day visit. I tried to

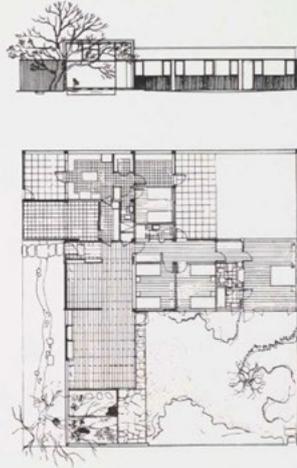
13 Given Gropius’s identification with the Bauhaus pedagogy, critics chose to see TAC’s organizational model as the application of these same principles in the context of Americanized professional practice. In 1952, on the verge of his retirement from Harvard to focus on the practice, Gropius reiterated the urgent need for “a closely co-operating team together with the engineer, the scientist and the builder,” in which “design, construction and economy may again become an entity - a fusion of art, science and business.” See Kubo (2014).

14 See Sylvia Lavin, *Architecture Itself and Other Postmodernization Effects*, Leipzig: CCA Spector Books, 2020.

15 In “Arquitectura y Construcción”, August 1947. This operation was propitiated by the visit of Paul Lester Wiener in Chile, co-founder with Sert of Town Planning Associates since 1942 (see Chapter 1).

47 Emilio DUHART H.
HOUSE FOR SRA. MARTA H. DE DUHART
AVENIDA VATICANO 78, SANTIAGO, CHILE, 1946

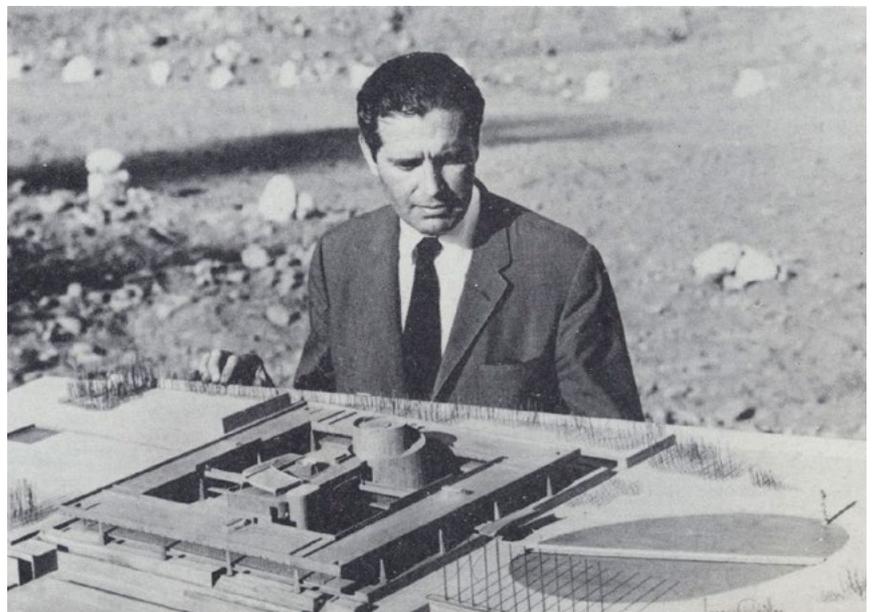
Although its thin membering and crisp definition reflects the architect's experience with Gropius and with Pei in the States, the planning is definitely Latin American. The nearly blank front wall rises at the sidewalk's edge and the L-shaped plan provides for main living areas across the front with service and bedrooms to the rear, all opening on a high-fenced garden. The way the space of the living room seems to be defined not by its glazed end but by the wall beyond, thus incorporating the pool and its surrounding foliage visually in the living area, is especially successful. The precision of the designing and the excellent execution would be notable anywhere, while the pebble-covered outer wall introduces a textural interest delicately scaled to the slightness and smoothness of all the other elements.



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FIG. 86
From MoMA catalogue edited by Henry-Russell Hitchcock
showing a single house designed by Chilean architect Emilio Duhart

FIG. 87
Emilio Duhart observing the model of his design proposal for CEPAL building.
Image from Esparza (2015)



assuage this in various ways, but from a point of view of existing completed buildings your allotted time was quite accurate. In 5-10 years, though I think they will have some nice things.”¹⁶

In New York, in fact, Chile will be reductively represented by only two house projects: the one built by Emilio Duhart for his mother, and Casa Costabal by the office Acevedo, Mendez y Costabal.

Despite this, McKenna’s optimistic perspective is better explained by another observation Hitchcock made on the – very few – ‘excellent schools like that headed by Larraín at the Catholic University of Santiago’. Although, at the same juncture, the North American historian does not fail to recall that ‘a very considerable proportion of the best Latin American architects, particularly those under forty, owe at least the final stages of their professional education to the architectural schools of the United States like those that have been headed by world famous architects like Gropius and Mies’.¹⁷ And in fact, it is precisely in this axis between Santiago de Chile and Harvard that the protagonists who conceived the two Chilean university campuses analysed in this episode are located. Both structured on the basis of a complex complicity between forms of professional work and pedagogical methods that shape a specific variant of the architect-educator personified in one case by Emilio Duhart Harosteguy (Temuco 1917-Ustaritz 2006), who experiences Gropius-Harvard collaborative workshops in 1942-43; in the other case by the collective BVCH (Carlos Bresciani, Héctor Valdés, Fernando Castillo and Carlos García Huidobro) forming in 1944 what will be for a long time the largest Chilean architecture office in terms of staff and volume of work.

Both Emilio Duhart and BVCH partners share the same experience that is fleetingly mentioned by Hitchcock and McKenna, that is, benefiting as students from the favorable climate of openness and change that characterized Chilean universities since the mid-1930s, in the wake of the revolution that already in 1918 led to the affirmation of the principles of ‘autonomía, cogobierno y extensión’ in Argentina (see Chapter 1), culminating here in the neighbouring country with the reform of Universidad de Chile in 1945 and the Universidad Católica in 1949. It is in this last university, under the guidance of young professors such as Sergio Larraín García-Moreno, Alfredo Johnson and Jorge Aguirre – nephew of

16 The reports speak of a really short visit from Wednesday 3 to Friday 5 November. Letter from Rollie McKenna to Porter McCray, quoted in Cristóbal Molina ‘Henry-Russell Hitchcock y Rollie McKenna en Chile. Precisiones al capítulo Chileno de la exposición y libro *Latin American Architecture Since 1945*, del MoMA de Nueva York’, p. 12.

17 Among the others ‘excellent schools’ mentioned by Hitchcock are Montevideo formerly headed by Julio Vilamajó, and Villagran García at the National University of Mexico. In Hitchcock (1955), p.20.

President Pedro Aguirre Cerda¹⁸ – that the protagonists of this episode shaped their figure of architect-educator strictly implicated with profession. As Ricardo Braun recalls (1962), it can be affirmed that that generation of Chilean architects was the result of an educational project pursued within the university institution by both young teachers and students, with the greatest concerns for a critical interpretation of reality coming from the latter.¹⁹ Sometimes, Castillo Velasco of BVCH admits, an even unscrupulous interpretation that finds fertile ground in the academic environment that, peculiarly, lived on dialectics and transition as the old traditional rigidly structured educational model coexisted with the progressive line of action, marked by the increasing degree of freedom with which students could choose their own path and concretely operate on the reality that surrounded them.²⁰ Thus, the new generation that graduated in the mid-40s – including Alberto Cruz who will be at the head of the radical experiment of Ciudad Abierta de Valparaíso – looked at the application of modern ideas to the local reality of a Latin American country in the midst of urban concentration and transformation of its institutions and productive forces.

Chile already had the institutional framework to take on such challenge, with qualified professionals to shape them and a construction industry capable of delivering, but urbanization in Chile accelerated in the 1930s with the effects of the global depression and the saltpetre crisis. The decline in exports forced the state to promote a system of public services and social protection. Between 1930 and 1952, Santiago doubled its population from 696,200 to 1,436,500 so that during the 1950s the mission of the state was turned into providing salaried work and universal access to education, with a spatial project in support of this

18 Pedro Aguirre Cerda was president of Chile between 1938-1941. His main goal was to increase education rate creating new schools and employing a great number of new professors. Another fundamental intervention was the creation of Corporación de Fomento de la Producción (CORFO), a technical-oriented bureaucratic body that supported the modern process of industrialization in Chile.

19 See Ricardo Braun Menéndez, *Bresciani, Valdés, Castillo, Huidobro*, Buenos Aires: Instituto de Arte Americano e Investigaciones Estéticas, 1962, p. 50.

20 Héctor Valdés of the Chilean office BVCH recalls: “Todas las inquietudes se han generado y desarrollado en las escuelas de arquitectura y muchas veces en el alumnado antes que en los profesores”, in “Revista C.A.” no. 68, 1992 and also quoted in Hugo Weibel Fernández Ph.D. diss. ‘Vivienda Moderna en Chile 1945 -1965. Bresciani-Valdes-Castillo-Huidobro’ Universidad Politècnica de Catalunya, 2008. Although the integration of the arts tended to place Chilean architects within the post-war debate, with BVCH introducing bas-reliefs by the sculptor and painter Ricardo Irarrázaval in their housing complex Unidad Vecinal Portales, Universidad Técnica del Estado and Torres de Tamar in Santiago), their active, creative, ingenious and at times unscrupulous participation in modern discourse derived from the opportunities offered both by profession and teachings. In Fernando Castillo’s words: “Ahora pienso que pudimos estar equivocados en nuestra exagerada intransigencia [...] En nuestra vida profesional dejamos de realizar muchas obras porque no queríamos renunciar a lo que nos parecía que era lo que se debía hacer”, from an interview by Humberto Eliash and Teresa Lima-Campos in *Fernando Castillo: de lo moderno a lo real*, Bogotá: Escala, 1990, p. 207.

FIG. 88
BVCH architects
(Héctor Valdés, Fernando Castillo, Carlos Bresciani, Carlos García Huidobro
Image from Braun (1962)



promise of a new kind of social life: modern architecture and urban planning.²¹ Not occasionally, the fate of Emilio Duhart and that of BVCH is also united by the public commissions they both received in 1957: the former will work on the expansion plan for the campus of Universidad de Concepción, 500 km South of the capital, while Universidad Técnica del Estado will entrust the project of the new Santiago campus to BVCH producing a vast public echo associated with its ‘technological image’:

“All the classical schemes that have determined university architecture have been broken [...] recalling the civic sense of its function. Steel, glass and concrete connected with a clear spatial purpose of continuity creates a diverse human environment. The great mastery is manifested in the neat solution of every junction between materials”.²²

However, the ‘great mastery’ does not end in the material solution. These two projects will be the pretext to advance an ambitious educational project, with Emilio Duhart and the BVCH partners interpreting the figure of the architect-educator explored here in this episode in the unexpected variant shaped around a profound complicity with the profession: Emilio Duhart returned to Chile in 1948 after the Harvard experience and began teaching together with his mentor Sergio Larraín at Universidad Católica; Carlos Bresciani is assistant professor at Universidad Católica between 1933 and 1949 tutoring his future office partners; Héctor Valdés has been working as design studios assistant professor since 1936; Fernando Castillo has been doing the same since 1959, until reaching the position of rector of Universidad Católica between 1968 and 1973 coup; Carlos Huidobro, instead, moved especially in the international network with connections in Italy – Gio Ponti’s “Domus” (no. 233) published ‘Villa a un piano a La Reina’ in 1949 – and UK thanks to the friendship with Monica Pidgeon, Chilean editor who favored the publication of BVCH projects in the

21 For a deep examination on this period see Eliash, Humberto and Manuel Moreno, *Arquitectura y modernismo en Chile, 1925–1965: Una realidad múltiple*. Santiago de Chile: Universidad Católica de Chile, 1989. See also Umberto Bonomo, ‘Las dimensiones de la vivienda moderna: La Unidad Vecinal Portales y la producción de viviendas económicas en Chile, 1948–1970’, Ph.D. diss. Pontificia Universidad Católica de Chile, 2009. See also Rosanna Forray and Francisca Márquez, ‘The Memory of Inhabiting Modern Architecture. Villa Portales, 1955–2010’, in “Latin American Perspectives”, Vol.4 no.3, 2016, pp. 64-82.

22 Translation by the author from the article on the project of Universidad Técnica del Estado in the Chilean magazine “Auca” no. 8, 1967, p. 56: “Se han roto todos los esquemas clásicos que determinaban la arquitectura universitaria [...] recuerdan el sentido también cívico de la función universitaria. Acero, cristal y hormigón conectados con claro propósito espacial de continuidad crean un ámbito humano variado. El gran dominio del oficio se manifiesta en la limpia solución de cada encuentro de materiales”.

magazine “Architectural Design” first and the connection with Rayner Banham in a second moment.²³

Surprisingly, what emerges from the complicity between the educational vocation and the pragmatic inputs of the profession – which also imbued the pedagogical mandate of the two universities that commissioned the two campuses analysed in this episode – is an unexpected result that replaced professionalization with the dialogic, collaborative and informal practices exercised in the blurred lines of bureaucracy:

“La combinación entre oficina profesional y docencia hizo también que el grupo se proyectara más allá de su propio trabajo, a través de generaciones de estudiantes, quienes como alumnos, ayudantes o colaboradores del taller, fueron formados en el espíritu de esta verdadera *escuela*”.²⁴



FIG. 89
Unidad Vecinal Portales designed by BVCH (1954).
Fondo Documental René Combeau

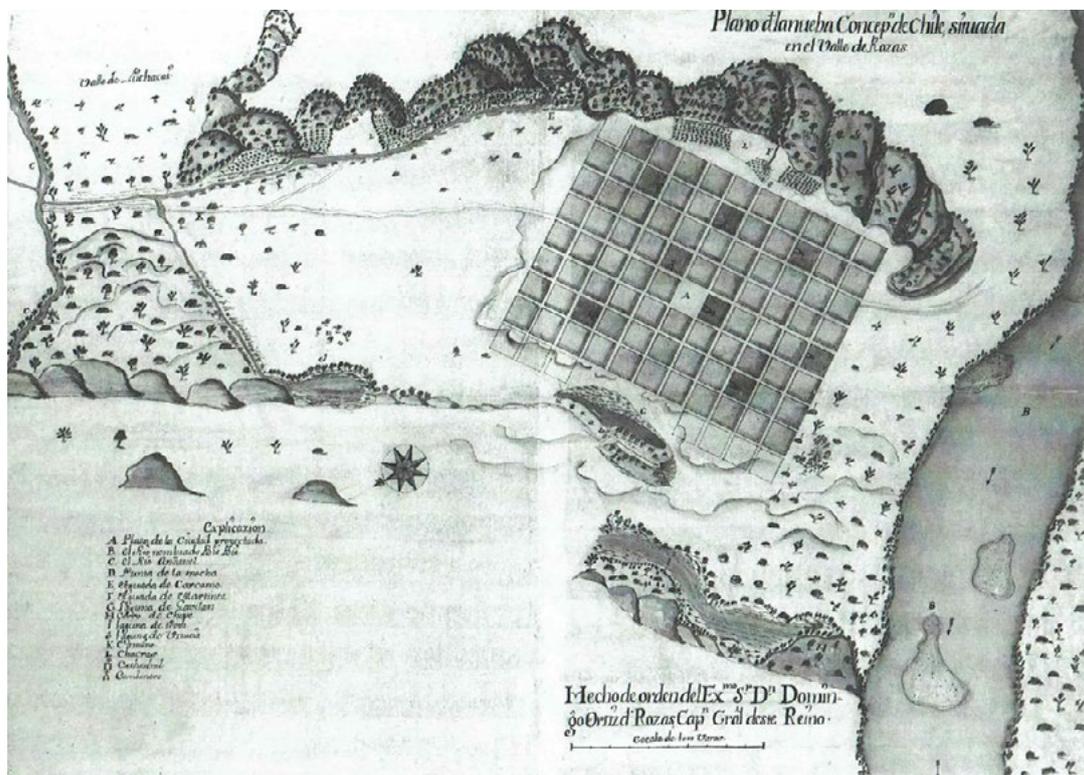


FIG. 90
 Historical map of Concepcion, 1752.
 Coleccion Iconografica. Dep. de Historia del la Universidad de Concepcion

2.2 *Universidad de Concepción.*
Emilio Duhart and the discreet charm of the genius

La arquitectura sin urbanismo se queda corta en su aporte,
la obra puntual de arquitectura, como objeto aislado,
para mí no tiene sentido.²⁵

Emilio Duhart

Emilio Duhart (1917-2006) is one of the protagonists of the critical interpretation of modern architectural discourse in the Chilean context, among the students who benefit, like the members of BVCH group, from the aforementioned climate of experimentation that distinguishes education and teachings at the Universidad Católica since the early 1940s. Karl Brunner von Lehenstein, invited professor from the Technische Universität Wien, would have introduced the first Seminario de Urbanismo in Santiago with Duhart among the most concerned students.²⁶ To the point that, after graduating in 1942, he decides to invest in a post-graduate master's degree at Harvard Graduate School of Design under the guidance of Walter Gropius – who had assumed the role of head of architecture department in 1937 – with the aim to cultivate his interests in the urban responsibility of architecture.

In addition, what Duhart learns during Harvard experience is how this primary responsibility is inextricably associated with technological progress applied to architecture through a high degree of experimentation on construction methods. Gropius's pedagogical belief is well summarized in Argan's words:

“From the moment he is appointed professor at Harvard, the main focus of his teaching becomes urban planning, in its broadest sense: architecture is nothing more than the phenomenology of planning. No longer recognizing a figurative nature of architecture, the

25 From Cristián Berríos, 'Universidad de Concepción', in *Documentos de Arquitectura Moderna en America Latina 1950-1955*, p. 268, edited by Grupo de Investigación FORM (2013).

26 Between 1929 and 1948, Karl Brunner collaborates with the Chilean and Colombian governments to draw up the Plan Regulador for the two South American capitals Santiago and Bogotá.

architect's preparation is based on a formal teaching of a general nature and on the practical exercise of work".²⁷

Although the attempt to expand the post-war CIAM network to incorporate North American exponents into modern discourse was anything but simple task, as already examined in Chapter 1, a privileged territory for the leaders became academic institutions which attracted a great number of students from all over the world, and this also happened in Gropius' classes. Ieoh Ming Pei, for example, was among Duhart's classmates with whom a brief collaboration was established on the occasion of the 'Post-War Housing' competition organized by the magazine "Arts & Architecture" (August, 1943) with prominent personalities like Richard Neutra and Charles Eames in the role of jurors. The Duhart-Pei proposal won second place – immediately after Eero Saarinen's – developing many of the concepts on the topic of prefabrication learned from Gropius's teaching.²⁸ Together with the topic of prefabrication, however, the didactic exercises through which experimentations on the architectural device for the formulation of urban projects must not go unnoticed, such as that of the new campus for the Universidad de Concepción which will be entrusted to Emilio Duhart in 1957, while he was conducting the Seminars for the 'Gran Santiago' sponsored by the Ministerio de Obras Publicas del Gobierno de Chile which will serve as the theoretical basis for the Plan Intercomunal de Santiago (1960).²⁹

The commission coming from the Universidad de Concepción is rather configured as an adaptation and expansion scheme dealing with two previous phases: the first original settlement that placed the university complex at the western limit of the city of Concepción (1926- 1930), followed by a campus plan that regulated its distribution by the same Karl Brunner (1931-1956), Duhart's mentor when he was a student. For this reason, Concepción is

27 In Giulio Carlo Argan. *Walter Gropius y la Bauhaus*. Buenos Aires: Nueva Vision, 1957, p.131.

28 Bruno Zevi, Eduardo Catalano, Robert McMillan e Philip Johnson are among the other participants in the same Master program.

29 The proposals that Duhart exhibited on this occasion were students' works from Taller Profesional (5th year) he directed with a brief focused on assigning urban structures to the 'congestion de funciones' then considered essential for a real improvement. Duhart returned to Chile in 1945 at the invitation of his mentor Sergio Larrain García Moreno, after a short period of work with the North American architect Ernest J. Kump on the project of school complexes in California. In 1951 he was appointed professor at Pontificia Universidad Católica, where he founded the Instituto de Planificación, Urbanismo y Vivienda (IPUV) which will result in a one-year collaboration with the Institute d'Urbanisme de la Sorbonne in Paris when, on that same occasion, he collaborated with Le Corbusier until 1953, in charge of developing alternative solutions for Villa Shodhan and the other projects for Chandigarh. For a deeper examination on Emilio Duhart career see Cristián Berríos. *Emilio Duhart: Ciudad Universitaria de Concepción. Elaboración de un espacio urbano moderno*. Santiago: LOM Ediciones, 2017 and Verónica Esparza Saavedra, 'Emilio Duhart Harosteguy. Un Arquitecto Integral 1935-1992, Ph.D. diss. Universidad Politécnica de Catalunya, 2015.

FIG. 91
Duhart-Pei proposal for
"Post-war House" design competition in 1943.
Image from "Auca" (no.35, 1978)

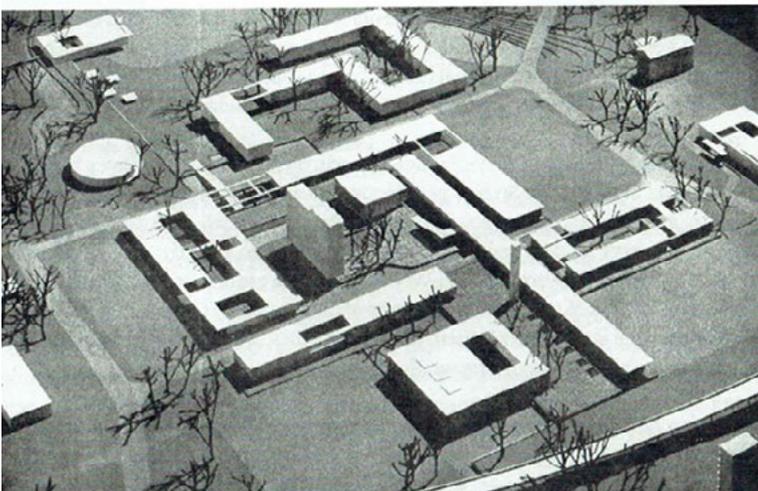
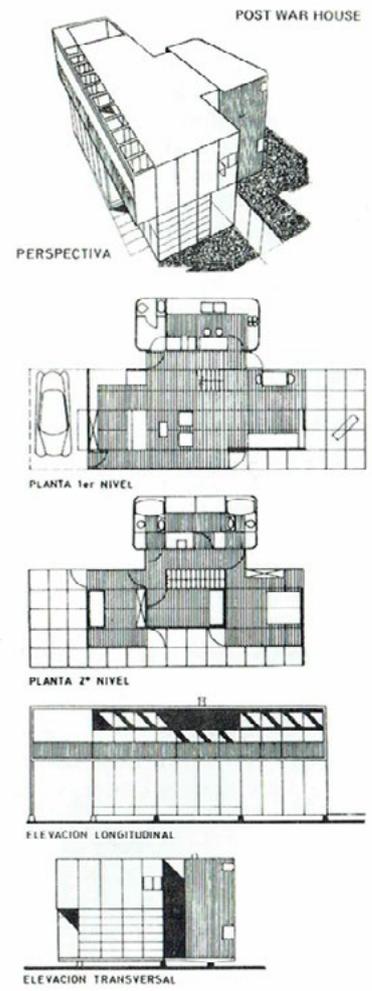


FIG. 92
Students works presentation at Harvard
Master's course taught by Gropius (1943).
Image from "Ieoh Ming Pei" (Suner, 1998)



FIG. 93
 Campus plan of Universidad de Concepcion designed by Karl Brunner (1931-1956).
 Archivo de Originales. FADEU. Pontificia Universidad Católica de Chile

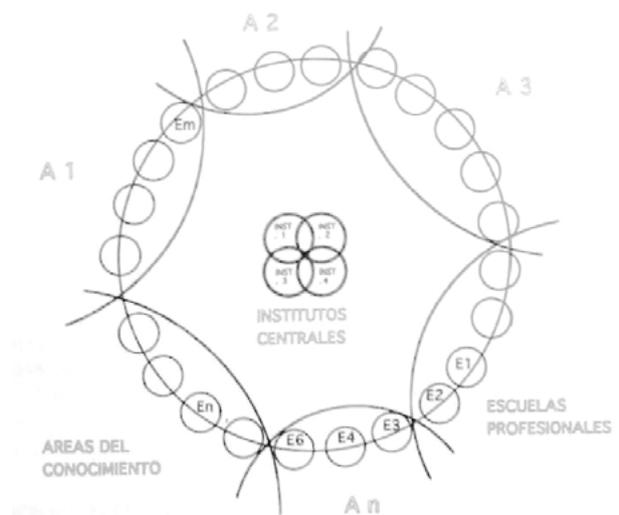


FIG. 94
 Diagram of Rudolph Atcon's educational system.
 Image from Garcia Molina (1995)

generally considered to be the first example with specific features of a 'university campus' not only for Chile, but of the whole South American continent.³⁰ In particular, Brunner had introduced a hierarchical order in the free distribution of existing university buildings by establishing a connection between the campus settlement and the orthogonal city grid: a longitudinal axis accentuated by the presence of two symmetrical diagonals leading to a large central void defines a new public infrastructure for the city of Concepción, whose influence extends far beyond the physical confines of the campus explicitly declaring a spirit of integration achieved through urban design interventions.

When Duhart is called to intervene in 1957, the spirit of integration was taking pedagogical connotations, with Universidad de Concepción assuming a precursor position in the phase of academic restructuring towards the 'Sistema de Educación Integrada' that was being discussed in Chile at that time. In particular, the rector of the UdeC David Stitckin had requested advice in the same year from the North American engineer Rudolph Atcon, UNESCO expert in the field of higher education.³¹ Atcon's proposal had the traits of a revolutionary educational project, replacing the vertical organization of self-sufficient and sector-specific units with a horizontally integrated system structured on areas of knowledge rather than professional fields. The main objective of this new organizational complex was to make it possible to provide general basic teachings to develop applied research with a more diversified approach also towards unexplored directions, to correct the excessive professionalization rooted in Chilean education system.

What is interesting to note here is that Atcon's *horizontal* educational project was oriented towards greater economic and administrative efficiency, which affected the bureaucratic apparatus of the university institution and the knowledge deficit to make the university responsible for its unavoidable research mission. But in order to obtain this, the need for 'generar nuevas actitudes' devoted to openness, collaboration, and 'integration' emerged.³² The 'Sistema de Educación Integrada' certainly required a physical structure corresponding to it, graphically represented in Atcon's a diagram of secant circles: at the center was the university academic direction; the thickest secant

30 Among the many sources that support this primacy with the first buildings of the Universidad de Concepción built in 1921, we still refer to the magazine "AUCA" no. 8, 1967, p.58.

31 Rudolph P. Atcon graduated from Amherst College (Massachusetts) in 1949, and later became UNESCO advisor between 1952 and 1970. After a long experience of relationships and collaborations with region's institutions, he will publish 'La Universidad Latinoamericana' in ECO, Revista de la cultura de occidente, mayo-julio, tomo VII, Bogotá, 1961, pp. 1-169.

32 See Jaime García Molina. *El campus de la Universidad de Concepción. Su Desarrollo Urbanístico y Arquitectónico*, Ediciones Universidad de Concepción, 1995, p.74.

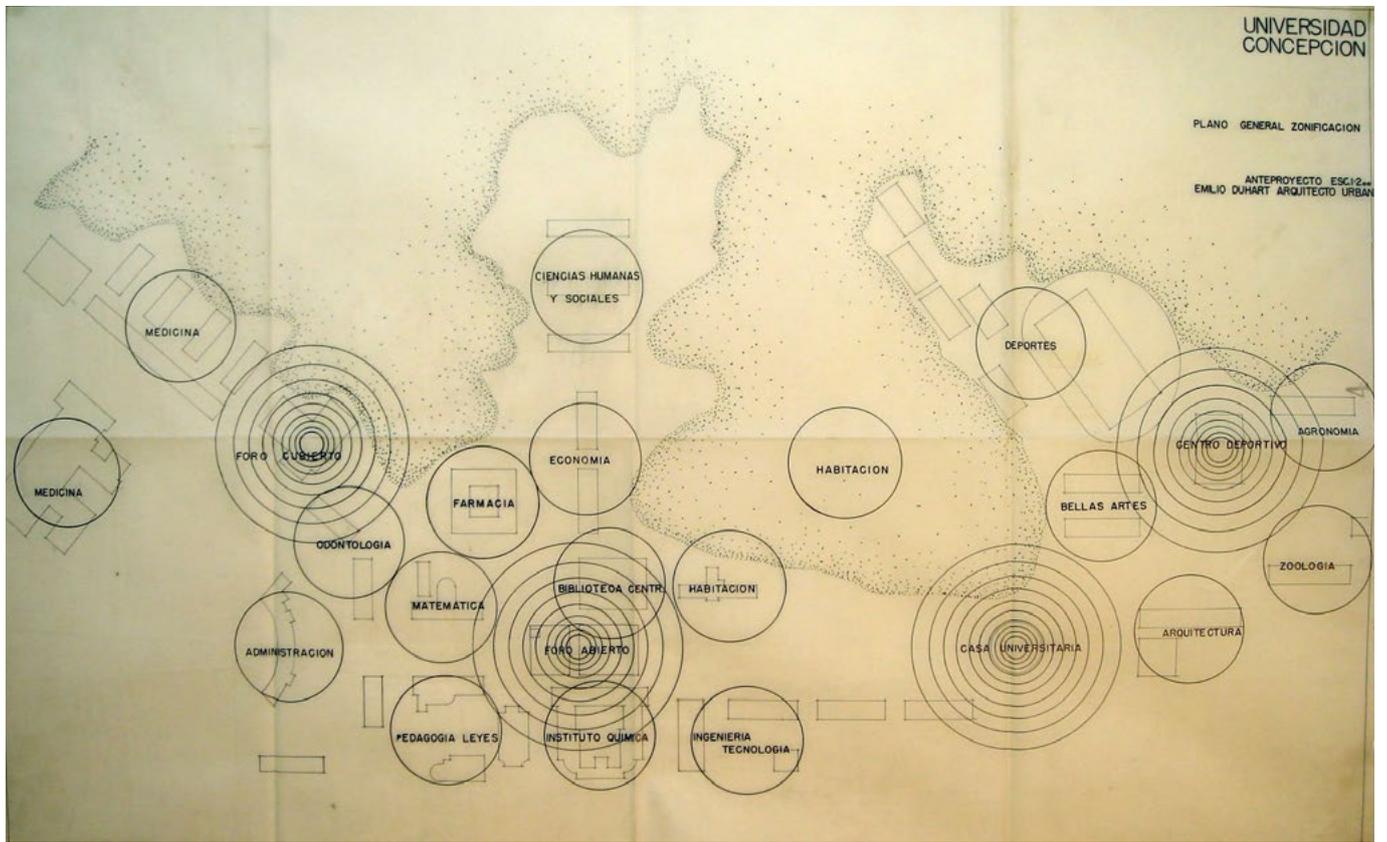


FIG. 95
 Duhart's "Plano de Zonificación" (above, 1957) and early proposal of "Plano General de Anteproyecto" (1958).
 Fondo Emilio Duhart H.
 Archivo de Originales. FADEU.
 Pontificia Universidad Católica de Chile

circles were the research institutes; the small dashed circles along the ring were professional institutes; and the major thin-line circles were the areas of knowledge.

Not surprisingly, Duhart's first study for UdeC university campus materialized in 'Plan de Zonificación' has a typically diagrammatic appearance. Greatest curiosities come in fact from the graphical language, with the use of single or concentric circles to spatialize different areas: the former indicate the location of each single academic unit, while the sequence of concentric circles indicates those places where interactions between students from different areas and university public functions intensify. This graphic which clearly echoes the educational project developed by Rudolph Atcon, is combined with physical elements from the existing natural context and free sequences of narrow rectangles that only suggests a strengthening of the ordering principle established by Karl Brunner's previous campus plan.³³

In particular, Duhart indicates the 'Foro Abierto' as the gravitation center positioned at the intersection of the two main axes that structure the entire university complex, and consequently, the area designated to assume the connotation of a civic center that unite university population and citizenship outside the academic world. As already mentioned in the previous analysis of 'Centro Comunal' from Tucuman experience, the main source of inspiration for the civic function of a 'modern urban space' came from the image of Italian historical squares such as Piazza San Marco in Venice and Piazza della Annunziata in Florence already incorporated in the CIAM post-war rhetoric on the 'Heart of the City' (see Chapter 1). However, compared to the Argentine episode still conditioned by the dream of building a monument to confront the geographical scale of Cerro San Javier overlooking the city-region of Tucuman, Duhart's study of Italian squares appears more accurate on measures and geometric proportions of the built space, and even more so, of the unbuilt space between buildings.

For Duhart, it is precisely in the empty habitable space that lies secret for the design control of a new urban dimension, based on human scale and with an authentic public connotation. In the following phase, Duhart advances the diagrammatic solution by proposing a settlement model completed in all its parts in which a basic concept is established, that is architecture at the exclusive service of the system that produces urban space:

“para seguir despues con una arquitectura impersonal, generando un

33 Duhart had attended on several occasions to Atcon's explanations. See Molina (1995), p. 77.

sistema mas que un obra firmada por tal o cual arquitecto”.³⁴

A uniform grid superimposed on the entire floor plan is the ordering system, whose module of 7,65 x 7,65 meters (a typical classroom) regulates all design decisions. In truth, it is a composed grid oriented to the cardinal axes and another rotated by 40° with respect to pre-existing interventions, but even more important is the spatial connotation in the three dimensions it assumed if we consider that buildings height corresponds to half of the module (3,85 meters).³⁵ Therefore, it is not surprising that the architectural dimension is explored by Duhart by means of a linear sequence of narrow pavilions repeated in their proportions along the two main axis, but above all, in their maximum degree of permeability. The linear and modular pavilion, obviously dimensioned on the grid's module, takes on the traits of a prototype able to adapt to specific conditions but with a clear design intent to strengthen the spatial structure of the campus while completely liberating its ground.

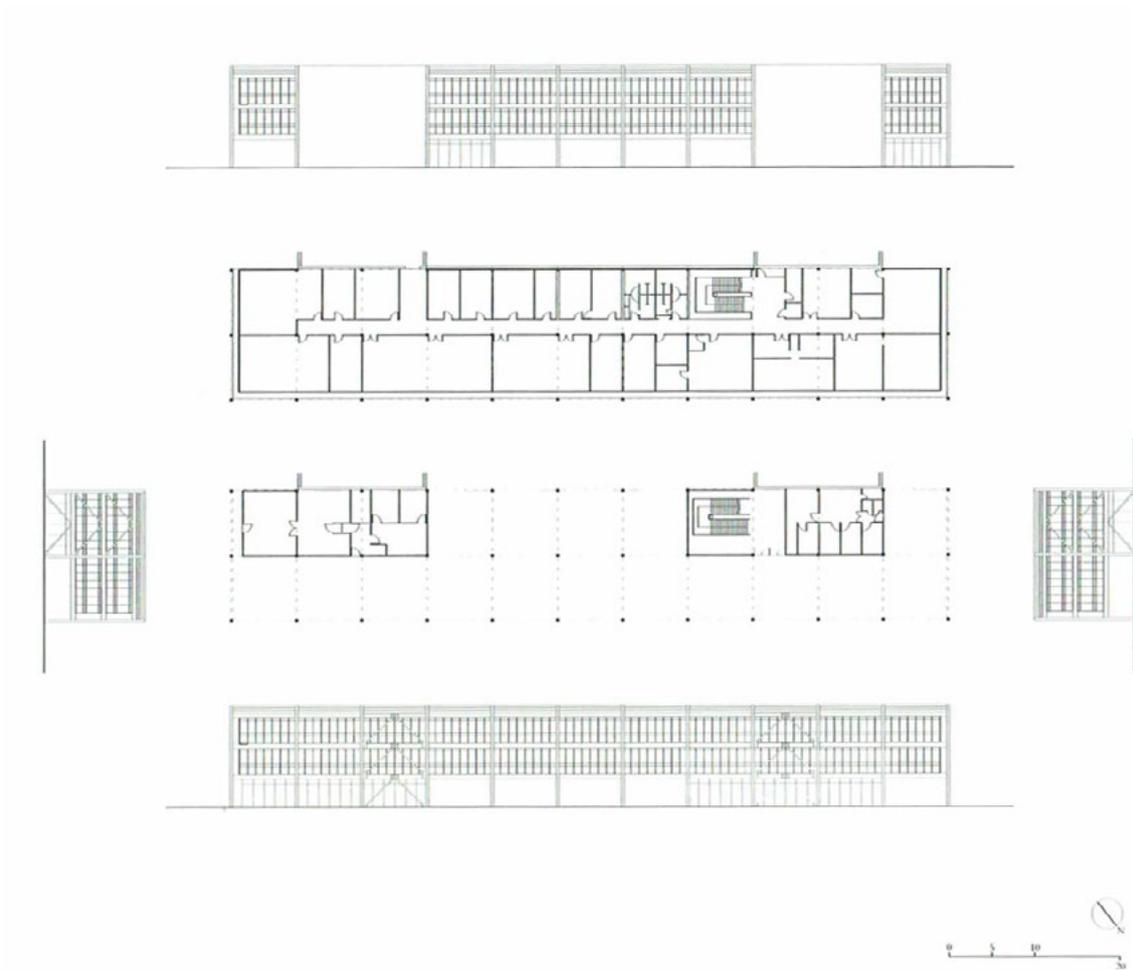
The pavilion of the Instituto de Ciencias Químicas best exemplifies Duhart's formal alternative to the principle of monumentality performed in Tucuman. The informal use of space in that case experienced within the monumental scale of university buildings such as 'Centro Comunal' and 'Vivienda Universitaria', is authentically brought back to the human scale of a simplified architectural device in the case of Concepción: a three-level structural steel skeleton supports a suspended glass pavilion above the ground. The internal organization of the suspended pavilion is regulated by a central corridor that distributes classrooms and laboratories on the East side, offices and services on the West side following the longitudinal development. A punctual structural system on the perimeter makes the interior highly flexible and adaptable with movable light partitions, even if respecting the basic grid – rooms could be adapted according to 0,95 meters multiples (1/8 of the basic module).

However, it is the ground floor entirely freed from specific programs, open and permeable on all sides, that guarantees the greatest success of Duhart's campus project where university can practice the un-programmed uses of urban life. This, without renouncing a spatial structure: the slender white painted steel structure that supports the pavilions is used to connect their ground floors with a network of covered walkways that circumnavigate the university complex. Starting from the showy ground manipulation that

³⁴ From Berríos (2017), p. 187.

³⁵ This principle of spatial modulation is often referred to IIT Chicago campus designed by Mies van der Rohe since 1936 based on the module 7,2 x 7,2 meters.

FIG. 96
*Duhart's Instituto de Ciencias Químicas can be assumed as the prototypical
narrow block of the entire campus extension.*
Image from Berrios (2017)



configures the 'Foro Abierto' as a three-dimensional square on several levels designated for the 'civic function' propagandized by the renewed CIAM discourse, it is important to consider the way in which three-dimensionality and stratification enter the design of the pavilions deliberately conceived by Duhart as an 'impersonal' prototype at the service of the urban spatiality of the entire complex. Therefore, the solution of a suspended pavilion supported by a steel point structure that allows to completely liberate the ground so that its public use can be extended well beyond the physical borders of the campus, is an essential operation in the process that introduces informality in the project of education, not only in the case of Universidad de Concepción and the radical reorganization of its bureaucratic apparatus, but also in the case of another project that was being developed in Santiago in the same years.

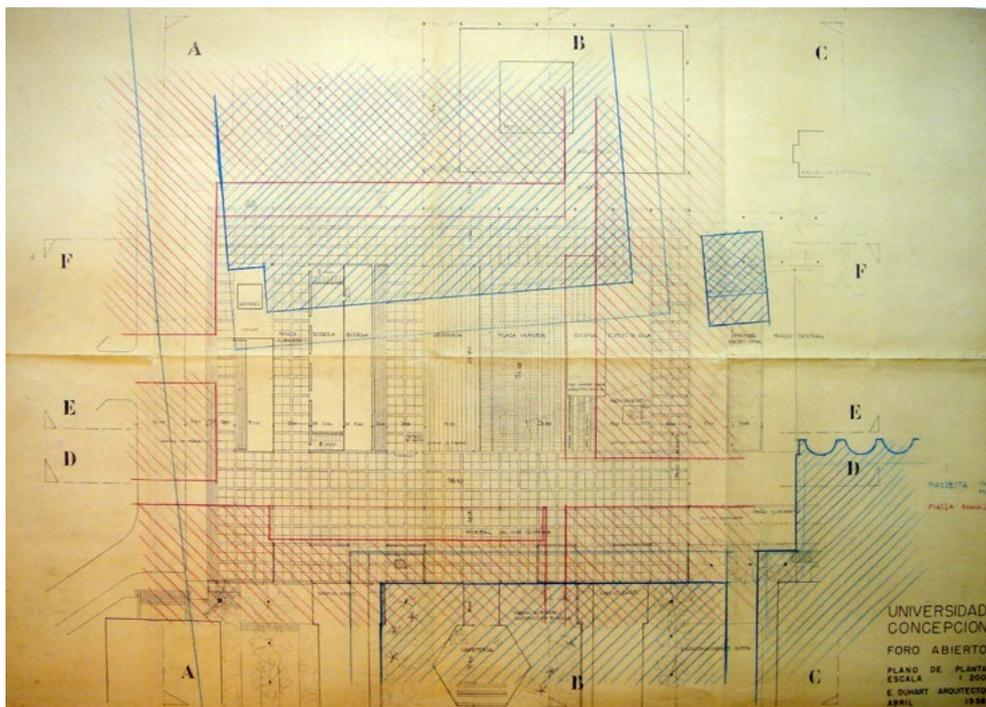
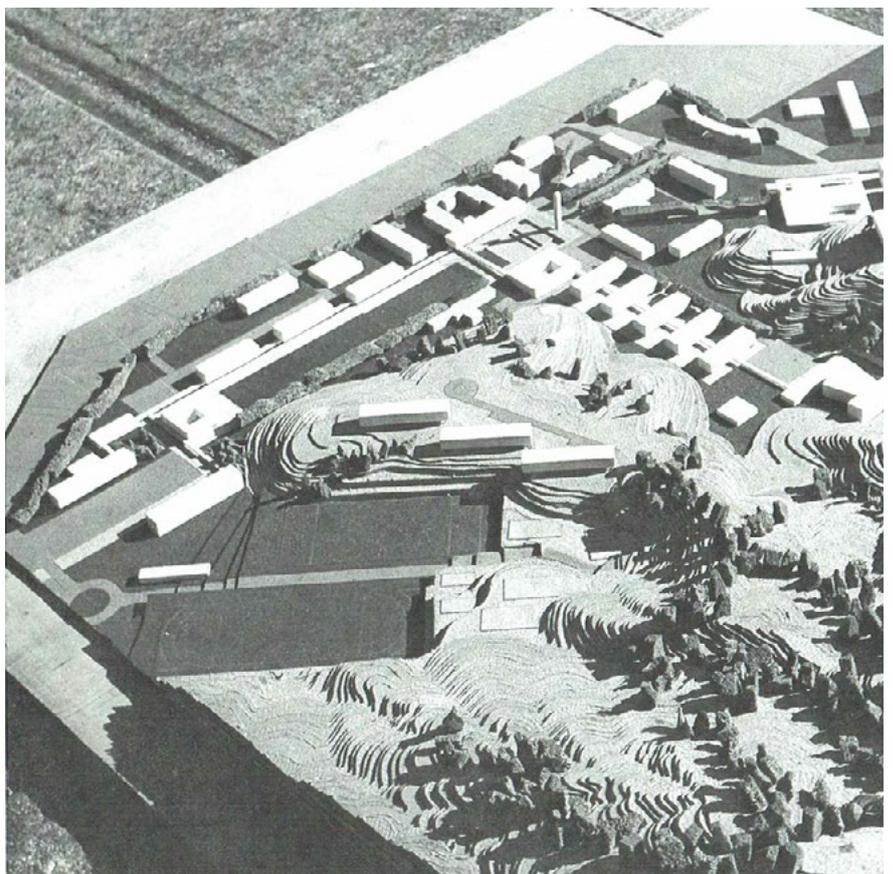
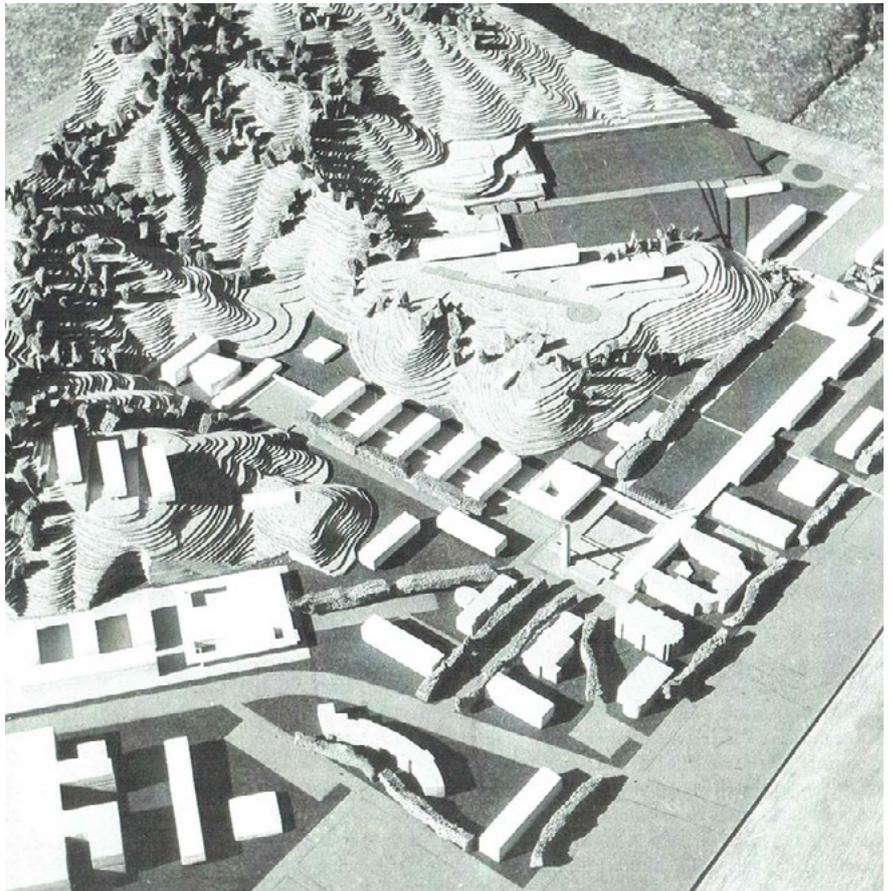


FIG. 97
 Duhart's modular grid superimpositions for the central area of "Foro Abierto".
 Fondo Emilio Duhart H.
 Archivo de Originales. FADEU.
 Pontificia Universidad Católica de Chile

FIG. 98

Campus model showing the repetition and variation of the prototypical narrow block.
Images from Berrios, 2017. (Archive Roberto Goycoolea)



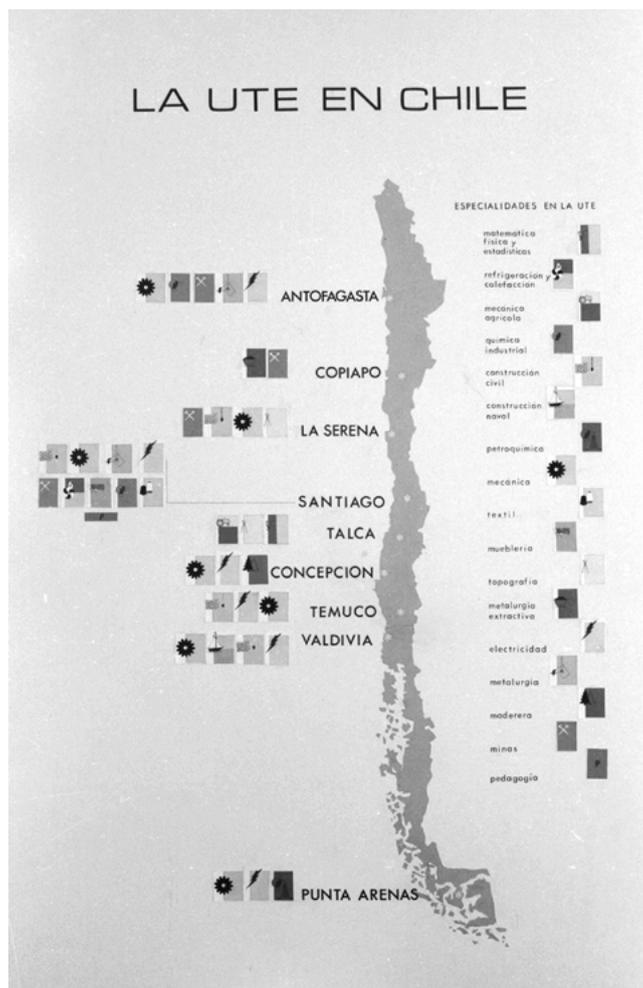


FIG. 99
 Distribution of Universidad Tecnica del Estado in the national territory.
 Fondos del Archivo Patrimonial del U. de Santiago de Chile

2.3 *Universidad Técnica del Estado. Evolution and dissolution of BVCH architecture office*

La más fuerte impresión que produce este conjunto es su gran liviandad: en amplia e ininterrumpida visión de lejanía, nada da sensación de demasiado grande, de demasiado fuerte; todo está a escala humana.³⁶

Ricardo Braun, 1962

The Universidad Técnica del Estado (UTE), currently Universidad de Santiago de Chile, was founded as a public higher education institution in 1947 with the aim of training qualified professionals for the national industrial development. The State could already count on the traditional technical education established since 1849 and equipped with mechanical workshops for training skilled workforce.³⁷ In this context, the Universidad Técnica del Estado assumes the features of a more ambitious educational project going beyond manpower.

The hypothesis elaborated through the critical analysis of this project, in fact, is that the highly qualified figure educated by a state university in that particular moment could not be limited to learning about innovative materials and methods in the field of production. On the contrary, a step beyond manpower could be taken by educating this new figure to develop other skills without which no field of production could effectively be considered competitive: managerial, multidisciplinary, collaborative and relational skills are all features that represent the most controversial and the least commented aspect on this experience, partially obscured by the symbolic value of the 'technological image' touted by the institution. And it is in this disputed land that the contribution of the Chilean office BVCH (Carlos Bresciani, Héctor Valdés, Fernando Castillo and Carlos García Huidobro) in charge of the university campus project is repositioned, parallel to their role as architects-educators shaped around the complicity between the office's flexible organizational form and the pedagogical approach invested by its partners in academic institution and public bureaucracy.³⁸

36 Ricardo Braun. *Bresciani, Valdés, Castillo, Huidobro*. Buenos Aires: Instituto de Arte Americano e Investigaciones Estéticas, 1962, p. 50.

37 In 1947, they all co-operated for the foundation of Universidad Técnica del Estado: Escuela de Ingenieros Industriales (1940), Instituto Técnico Pedagógico (1944), Técnicos de la Escuela de Artes y Oficios (1915), Escuelas de Minas de Antofagasta (1918), Copiapó (1857) and La Serena (1887), Escuelas Industriales de Concepción (1905), Temuco (1916) and Valdivia (1934).

38 This controversial aspect has been commented by Fernando Pérez Oyarzún, *Bresciani, Valdés, Castillo,*

The Universidad Técnica del Estado was a national-scale project with nine locations distributed throughout Chile.³⁹ But it was in 1954 that in the capital of Santiago there was a need to unite the various divisions hitherto dispersed in the city, stimulated by the increasing demand for technicians due to the growth of industrial production and, consequently, for technical institutes teachers. Therefore, what will be conceived 'Unidad Universitaria' by the Chilean office BVCH in 1957 was a merging operation associated with an expanding trend. The previous studies on this project have appropriately reiterated that this commission was based on the educational principles established by the university authorities of the time which introduced a 'learning-by-doing' approach in their study programs,⁴⁰ with this approach materialized in the projection of a 'technological image' clearly reflected in its architectures.⁴¹

Within an L-shaped lot in a strategic area near the park Quinta Normal anchored to the capital's traffic artery Avenida Libertador Bernardo O'Higgins which also intercepts the Central Station, the UTE campus project realizes the dream of a prefabricated, modular, and expandable architecture. With the old buildings of Escuela de Artes y Oficios occupying part of the lot, the new university campus program included the Casa Central, Instituto Pedagógico Técnico and Escuela de Ingenieros y Técnicos. A repeated and varied arrangement of narrow linear pavilions alternated with cubic volumes rigorously following an orthogonal grid plan represented the greatest energy and formal inventiveness invested by BVCH office to shape the institutional mandate around the principle of a technological image, resulting in the ingenious solution of mixed construction materials such as steel, glass and reinforced concrete – with a marked prevalence of the first two – which demonstrated both participation in the modern architectural discourse for a peripheral region such as Chile, and adherence to the concepts of flexibility and adaptability now assumed as a prerogative for educational spaces⁴² – all the more for an institution like Universidad Técnica del

Huidobro, Santiago de Chile: Editorial Universidad Católica de Chile, 2006. See also Aldo Hidalgo, 'Habitar la infamiliaridad del espacio de la técnica', "REVISTA AUS" no. 17, pp. 56-61.

39 The appointment of José Miguel Seguel as second rector of the UTE (1953-1957) coincided with the presidential election of Carlos Ibáñez del Campo (1952-1958) who initiated several socio-economic reforms, such as the creation of Banco del Estado - which brought together Cassa de Risparmio, Fondo de Crédito Hipotecario, Fondo de Crédito Agrario and Instituto de Crédito Industrial - in order to support state institutions. The development of the national industry therefore required professionals and specialized technicians, favoring the consolidation of the Universidad Técnica de Estado.

40 These ideas circulated since the publication of John Dewey. *Experience and Education*. New York: The Macmillan company, 1938.

41 For a deeper examination on the concept of a 'technological image' applied to UTE campus projects see Catalina Jara, *Innovaciones Tecnológicas en la Construcción del Espacio Moderno: El Proyecto de BVCH para la Universidad Técnica del Estado (1957-1967)*, Santiago de Chile: 2009.

42 The concepts expressed by Hudnut (1947).

FIG. 100

Site location of Universidad Tecnica and Unidad Vecinal Portales in Santiago's urban area of Quinta Normal: 1. public park - 2. UVP - 3. UTE - 6. Station - 9. Palacio de Gobierno - 12. Cerro Santa Lucia.
Image from Braun (1962)

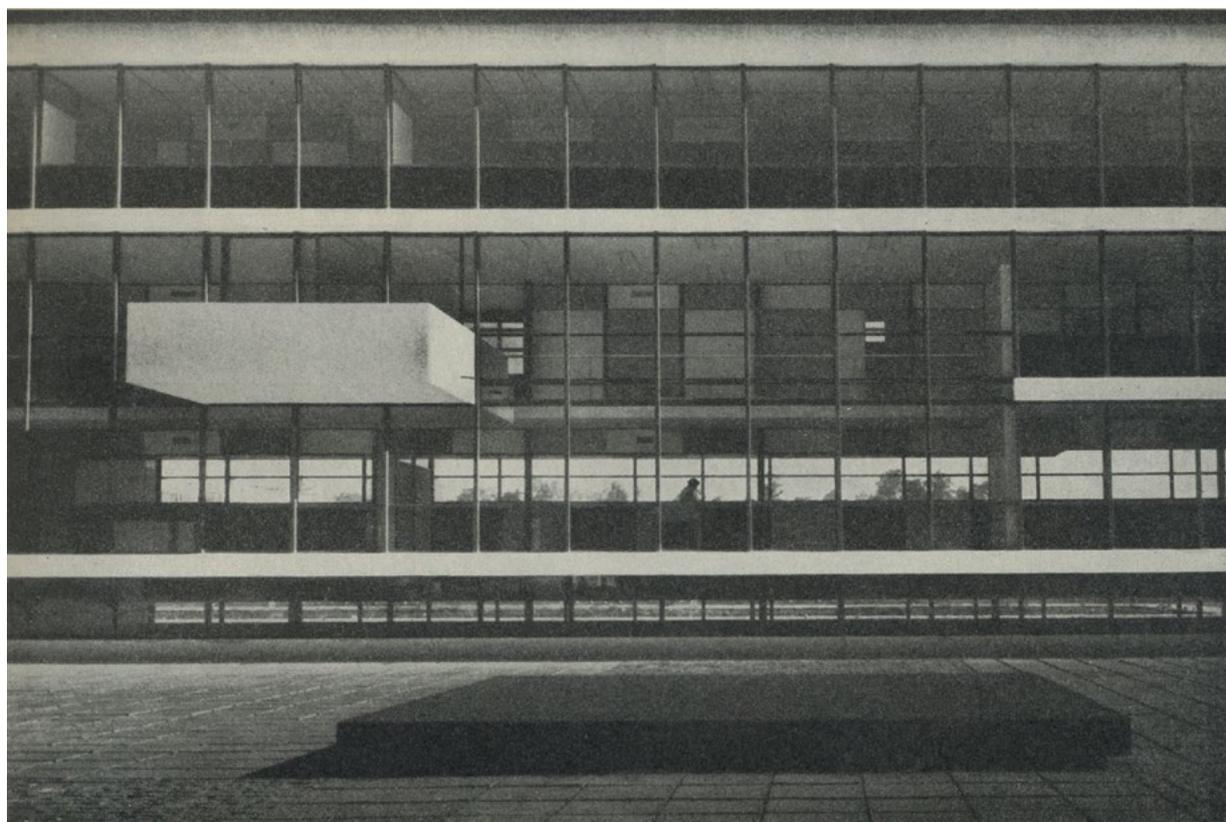
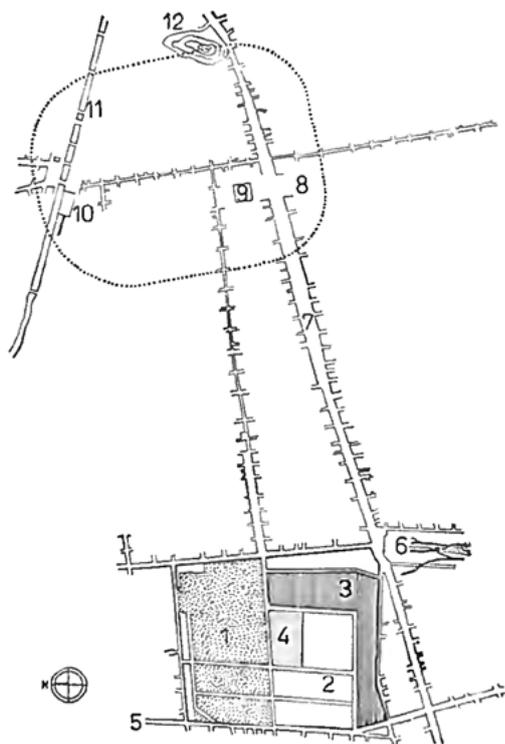


FIG. 101

Steel and glass facades provide for the 'technological image' with the highest level of transparency.
Image from "Auca" (no.8, 1967)

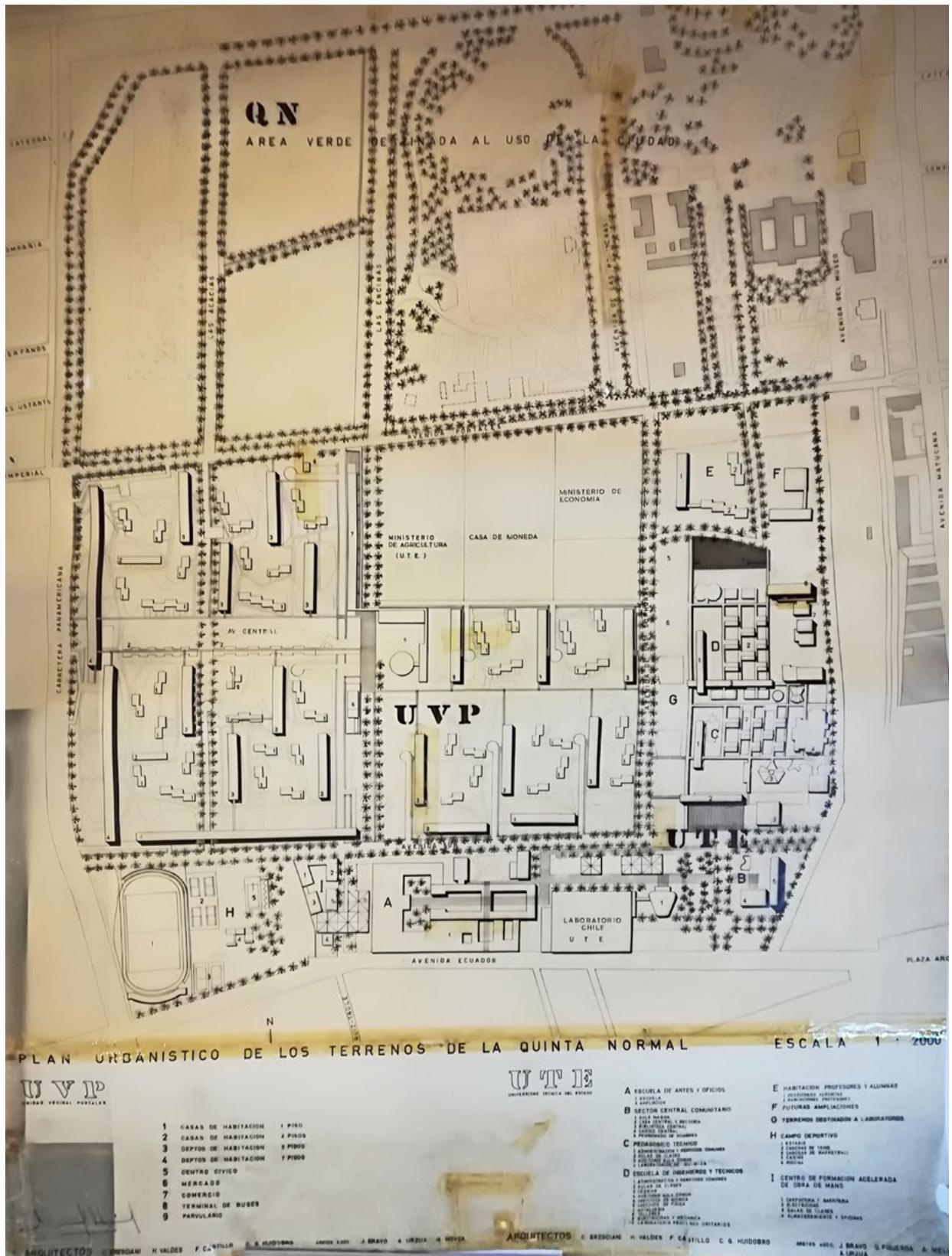


FIG. 102
 "Plan urbanistico del terreno de la Quinta Normal" including the university campus (UTE)
 and the housing complex (UVP) by BVCH architects (1957-58).
 Archivo de Originales. FADEU.
 Pontificia Universidad Católica de Chile

Estado founded on the alliance with Chilean technological progress.

The external image of the university is associated with the sense of levitation of the diaphanous and transparent linear pavilions, which exhibit spectacular volumetric interpenetrations when they are supported by solid reinforced concrete walls to absorb seismic activity. Internally, however, the rooms are divided by interchangeable prefabricated panels arranged according to a grid of 1,25 meters. The local architectural magazine AUCA (1967) celebrated this result:

“Se pretende – y se ha demostrado – rapidez de ejecución y posibilidad de realizar los cambios pedagógicos inevitables. Esta movilidad de paneles permite, por ejemplo, que la biblioteca, sólo con pequeños cambios funcione hoy en los recintos destinados, inicialmente, al canal de televisión”⁴³

Enthusiastically recorded also in those international publications where the UTE project appeared, as in the case of “Architectural Design” (1964):

“One of the main lecture halls has a seating capacity of 320 students, and can be sub-divided into two halls of 160 or four halls of 80 students each. The separation is made by sliding partitions. The inner curved end of the halls also slides back, following the curve, to form the background of the rostrum when the area is used as a single lecture hall. The side partitions are housed inside the split reinforced concrete structural members located on the perimeter of the building”.⁴⁴

The article in the North American magazine does not fail to report the use of traditional brightly coloured decorative ceramic tiles, as a tribute to the *synthesis of the arts* that had stimulated post-war architectural discourse,⁴⁵ along with the fact that ‘the roofs of the different buildings throughout the whole scheme are painted alternately red and white, with metal soffits of the covered walkways in venetian red’.

This network of covered walkways that materializes the continuous movement of users according to the orthogonal grid that regulates the whole

43 In “AUCA” no. 8, 1967, p. 56.

44 In “Architectural Design” Vol. 34 no.4 (April 1964), p.194.

45 In the Council Room was installed a mural donated by the painter Roberto Matta, who wanted to collaborate with a state project dedicated to educational development of Chile.

system is perhaps the most distinctive element of the UTE campus. In fact, more than a technical element of transit it represents the very spatial structure to which the mediating role of the campus' open configuration was attributed. The meticulous variation of the pedestrian paths conceived by the architects transforms a simple covered walkway into a gradually more protected and generous structure, such as porticos and halls of the linear pavilions to the point that one does not perceive a clear distinction between places dedicated to movement, short stay or long stay. Following a rather radical principle to say the least in the canonical relationship between circulation and use, the impression is that the contracted form of the linear pavilion for educational functions was conceived as a volumetric thickening, and little more, of the structure delegated to movement. It is no coincidence that the *critical note* that distinguishes the articles of the Chilean magazine AUCA (1967) focused on the 'linear solution' in the case of UTE campus project:

“Today we are experiencing an irreversible process of change in the university structure, in which specialist research and professional teaching converge. This implies the spatial differentiation of both categories of teaching [...] However, it should be noted that land conditions has generated a linear solution, with the problems that this causes: lack of zonification [...] and lack of large scale collective spaces.”⁴⁶

What on the one hand represents the lack of the project, that is spacious places designated for collective use, seems to represent on the other hand the most radical move in the perspective of the trajectory traced in this research, that is to obtain non-programmed empty space to increase relational skills and informal exchange well before this was associated with the neutralization or standardization of architectural form: with a marked reduction of the university 'protected' space, BVCH proposal projected academic life outwards. Even more so if we consider that UTE campus will be fenced off years later, almost betraying the

⁴⁶ Translated by the author from "AUCA" no. 8, 1967. The first issue of AUCA magazine was published in 1965 by the Sociedad Cooperativa Auca made up of architects from Universidad de Chile (Director Abraham Schapira S.). A.U.C.A. as an acronym means Arquitectura Urbanismo Construcción, that is a wide constellation of disciplines and techniques around the human habitat to promote and contribute to the discussion and dissemination of such matters in the national and Latin American sphere. A.U.C.A. as a concept is an Araucanian word that literally means 'rebelde' or 'indómito'. In this sense, it precisely expresses the spirit of a publication that while maintaining its necessary objectivity declares itself independent and deeply critical and uncompromising regarding its conception of architecture as a creative and active force at the service of the development of Chilean society.

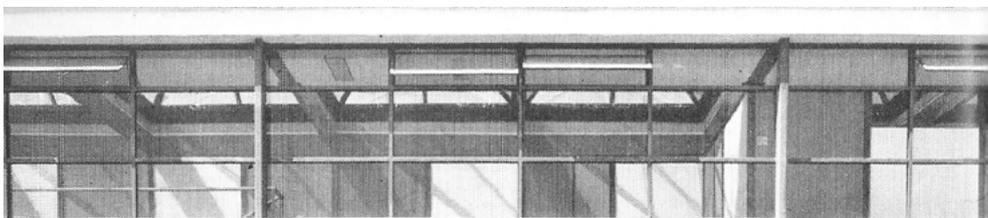


FIG. 103
*Universidad Técnica del Estado construction site (above) before the final completion of the campus liberated ground (below).
Fondos del Archivo Patrimonial del U. de Santiago de Chile and Braun (1962)*

original principle of cross-fertilization with ‘buildings clearly related to the park in an open way to make them and the gardens accessible to the public without interference with the students’.⁴⁷ Therefore, what should not go unnoticed is the daring urban vision of a university campus almost literally suspended on the ground of the city of Santiago. A vision that seems to inaugurate what, still today, represents one of the dominant lines of thought of contemporary campus project: the liberated ground.

It is not secondary to underline that UTE university complex is located in the adjacent plot to that of Unidad Vecinal Portales, the housing complex that the same Chilean office has been designing since 1954 as a residential experiment through which the modern city of Santiago was supposed to be built.⁴⁸ In fact, studies on this area by BVCH office begin with the acquisition of 31 ha of former university agricultural research lands by Empart, one of the companies that since the early 1950s financed large public housing projects thanks to the alliance between Caja de Empleados Particulares and Corporación de la Vivienda (CORVI), with the aim of settling 11,000 inhabitants for a total of 1860 units. Unidad Vecinal Portales was clearly set up to obtain the maximum density allowed by legislation, with a land occupation limited to 20%. Thus, a repeated and spaced sequence of slender five and seven storey housing blocks was designed to minimize their impact on the site, with open bridges and ramps articulating a network of public pedestrian circulation connected to collective facilities, and enhanced by an elevated street within the blocks through which vehicles could circulate.⁴⁹ Actually, this elevated street allowed the architects to circumvent height restrictions for the two seven floors blocks – 240 meters long – thus respecting the accessibility for apartments with no more than four floors without elevators.⁵⁰

Therefore, on the one hand critical design analysis on Universidad Técnica del Estado campus in Santiago acclaimed at the time both as a

47 In “Architectural Design” (1964).

48 In Chapter 1 reference was made to Luis Sert’s use of the concept of Unidad Vecinal, here recalled by Umberto Bonomo (2009) in the local context of Chile: “La unidad vecinal de la postguerra se puede considerar, entonces, como la síntesis del proceso de modernización de los instrumentos político-institucionales y económicos referidos a la producción de vivienda y, también, como el vértice de un proceso de perfeccionamiento de las estrategias proyectuales, técnicas y constructivas propias de la arquitectura moderna. La unidad vecinal condensa en su estructura formal, programática y social aquellas relaciones que, a escala mayor, se encuentran en la ciudad que ella pretende constituir”, p. 50.

49 See Pérez-Oyarzún (2006), p. 44.

50 While the elevated street (‘calle elevada’) has often been referred to the exemplary and well-known case of Pedregulho housing complex by Affonso Eduardo Reidy, it is noteworthy here how it was introduced in Chile in the context of reciprocal implications between the Unidad Vecinal Portales and the Universidad Técnica del Estado, also considering the previous episode in which the same circulation system was adapted to the case of Universidad de Tucumán.

‘project that broke with all the classical schemes that determined university architecture’ (AUCA, 1967) and as an example of consolidation of national modern architecture (Eliash and Moreno, 1989) cannot disregard the general concept of ‘spatial continuity’ which goes beyond material transparency.⁵¹ While on the other hand, it appears surprising that the educational project of an institution interested in shaping a specialized technical subject has instead explored the condition of a typically urban subject whose relational skills had to be continuously exercised on a much broader and more complex scale than that of a rigid industrial production line. There remains one last aspect to consider, in fact, with the BVCH partners personifying a variant of the prototypical figure of the architect-educator at the intersection between profession, education and public bureaucracy in this episode. BVCH was one of the largest Chilean offices in terms of staff and amount of work, but also supported by the complementarity talents of its members: ‘Carlos Bresciani’s strategic vision in large-scale projects; the technical expertise and tenacity of Héctor Valdés; the entrepreneurial instinct and inventiveness of Fernando Castillo; the attention to constructive detail and landscape of Carlos Huidobro’.⁵²

Locally, the office’s professional merit is often attributed to the proclivity for solving real problems of Chilean environment with precarious means, economic limitations, scarcity of materials and the construction industry.⁵³ Thus, the architectural office born in 1944 from the union of two young students – Fernando Castillo Velasco and Carlos Huidobro – and an assistant from Universidad Católica de Chile – Héctor Valdés – to whom a then young professor Carlos Bresciani from the same university joined in 1959, would have adopted a peculiar organizational structure between ‘genius’ and ‘bureaucracy’. The peculiarity of BVCH, however, lies not only in its origin within a university environment, but in the fact that pedagogical engagement individually carried out by partners continued over time parallel to the their thriving professional activity: Bresciani and Valdés have worked for fifteen years in architectural design studios at the School of Architecture of Universidad Católica de Chile, while Fernando Castillo professor of the 5-year design studio since 1960. Even if we cannot speak of a rigorously structured and standardized production system, the office followed a workflow ‘que obligaba a un debate permanente’:

51 In “Architectural Design” (1964).

52 See Pérez-Oyarzún (2006), pp. 8-12.

53 See Braun (1962), p.50.

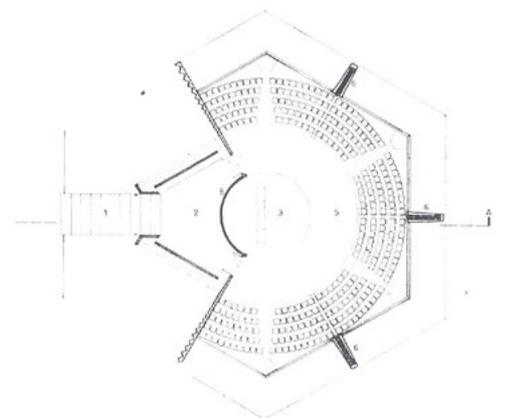
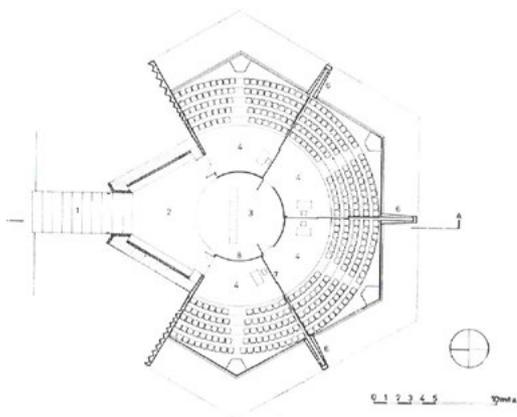
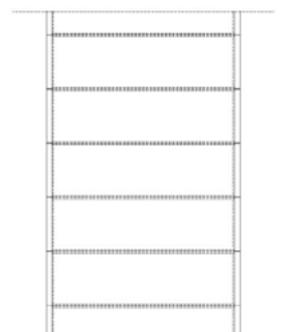
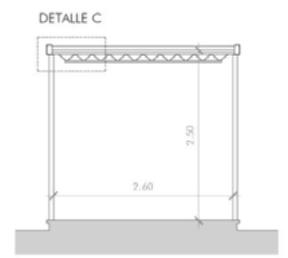
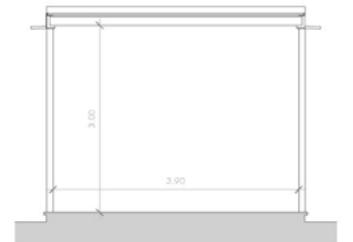
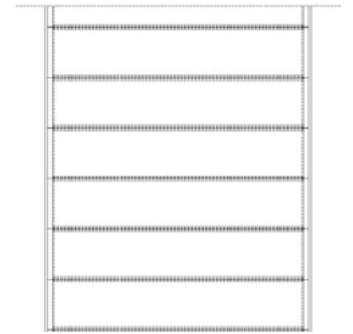
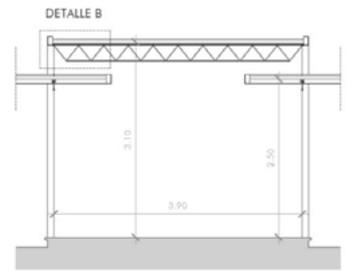


FIG. 104
*Universidad Tecnica del Estado top view, room adaptability
and technical elements showing variations of walkway sections.
Fondos del Archivo Patrimonial del U. de Santiago de Chile,
Braun (1962) and Jara (2009)*



“When a commission arrived, we did a collective analysis of the program and project’s requirements. Once this stage was over, we organized a small internal competition that we discussed until we reached an agreement on the general strategy. Frequently, whoever won that competition assumed the direction of the project even if, of course, we all followed its progress through a permanent collective review.”⁵⁴

This process, above all, favored the possibility that a project could be conducted by various partners at different times while maintaining a reasonable continuity in its progress and development, giving extreme importance to the relational component in solving real problems. But if it is true that this relational component that imbued office’s organization pursued the pragmatic goal of managing many commissions at the same time,⁵⁵ it assumed the traits of a pedagogical method that was constantly practiced within the university institutional apparatus, as emerges from Héctor Valdés’ words:

“By working at school you teach something, but you learn a lot more [...] I attach fundamental importance to it: teaching exercises mental capacity, intellectual restlessness.”⁵⁶

This alliance between education and profession produced consequences in both directions. On the one side, BVCH became an educationally-oriented office for the large number of collaborators, specialists and associates participating in the architectural production process based on the open and flexible organization. On the other side, it is not unusual to find these principles applied to design studio briefs developed by BVCH partners.⁵⁷ Therefore, by insinuating within the campus project for Universidad Técnica del Estado unexpected opportunities for informal exchanges, public confrontation and dialogical practices a more ambitious purpose emerged with respect to that of a still ‘protected’ technical image, even if by transparent steel and glass.

54 Translation by the author from Fernando Castillo Velasco interviewed by Humberto Eliash and Teresa Lima-Campos (1990), p. 211.

55 Ibid., p. 205.

56 Hector Valdes interviewed by Hugo Weibel Fernandez (2008): “Al trabajar en la escuela se enseña algo, pero se aprende mucho más [...] le atribuyo una importancia fundamental: la docencia ejercita la capacidad mental, la inquietud intelectual”, p.13. This sounds as reminiscent of the ‘dubbio metodologico’ associated with Ernesto Nathan Rogers’ pedagogical method described in Chapter 1.

57 Also on the occasion of the period of exile after the 1973 coup, when Fernando Castillo worked as a visiting professor at the Cambridge School of Architecture, he talks about having promoted a revolution in the examination brief with a real commission. See Eliash (1992), p. 23.

FIG. 105
*Unidad Vecinal Portales urban sections
 and typical plan of the linear housing block.
 Images from Braun (1962)*

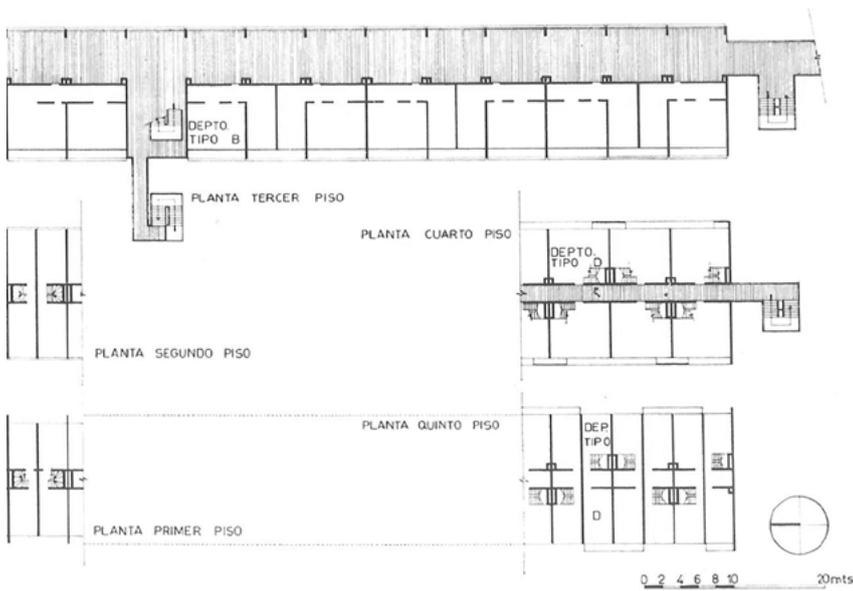
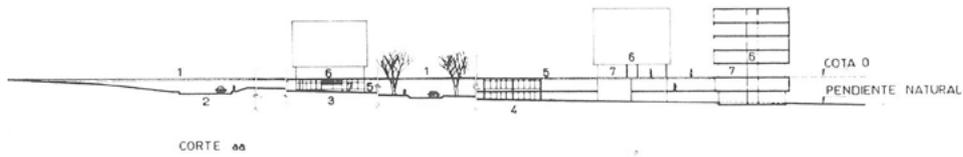




FIG. 106
Unidad Vecinal Portales elevated 'street' internalized within the housing block.
Images from Braun (1962)

2.4 *Profession, education and bureaucracy.*
The reciprocal implications of liberatory practices

A radical alternative to a schooled society requires not only new formal mechanisms for the formal acquisition of skills and their educational use. A deschooled society implies a new approach to incidental or informal education.”⁵⁸

Ivan Illich, 1971

One important aspect to consider for a better understanding of the favorable climate of those years, which was interpreting the university as a platform for change, is Chile as a place of transit for several South American intellectuals and educators rejected by other countries. Their radical thoughts matured in the Chilean context, also intersecting the path of some of the protagonists of the Chilean architectural scene mentioned in this chapter. In particular, this happened in the case of Paulo Freire (1921-1997), considered one of the most influential critical educators of the twentieth century, who spent in Chile five years of his exile from Brazil (1964-1969) where he elaborated his pedagogical thoughts based on dialogic practices as a strategy for the *liberation* of individuals. A few years before Ivan Illich (1926-2002), who was in the meantime operating between Puerto Rico and Mexico, expressed his positions in 1971:

“Work and leisure are alienated from each other as a result: the spectator and the worker alike are supposed to arrive at the work place all ready to fit into a routine prepared for them. Adaptation in the form of a product’s design, instruction, and publicity shapes them for their role as much as formal education by schooling.

A radical alternative to a schooled society requires not only new formal mechanisms for the formal acquisition of skills and their educational use.

58 Ivan Illich, *Deschooling Society*. London: Marion Boyars, 1971, p. 11.

A deschooled society implies a new approach to incidental or informal education.”⁵⁹

The radical positions on pedagogical issues that were developing at that time in several Latin America regions demonstrate, on the one hand, that the term *informal* applied to education and learning practices entered the vocabulary of pedagogues and radical thinkers in a more convenient way – even if not so much recurring – when compared to the parlance of those architects-educators who were making their own contribution on the spatialization of educational projects that aspired to radical changes, albeit instigated from within the institution.

In fact, this is where one of the crucial aspects of this research emerges. Not only investigate a precise moment in which education was intended as a project in a disputed territory between bureaucratic and anti-bureaucratic structures. But bring to light the concept of informality, even fleetingly recalled like in Illich’s words, as the most articulated, complex and ambitious object of this dispute. Institutional educational projects tended to incorporate into their bureaucratic apparatus the exercise of relational practices and human interactions to instigate a restructuring process from within their own organizational structure, as they recognized the transition towards the increasingly immaterial production of knowledge, *horizontally* developed through collaboration and inter-and-multidisciplinarity to be explicitly promoted by concrete actions.

These best assured by the formation of a more flexible and versatile subject compared to one rigidly encapsulated in a skilled, technical and professional education. It is essential to note that this transition went beyond the canonical contrast between real-world education and that detached from reality and protected inside academy enclosures. Even if sparsely but well in advance than in the rest of the world, all the episodes selected in this research are united by the fact that orientations towards real-world education were already taking place.⁶⁰

59 Ibid., p.11. Ivan Illich (1926-2002) was born in Vienna and completed his studies in theology and philosophy at the Gregorian University of Rome. Illich opted for a pastoral ministry and worked in New York with an Irish and Puerto Rican congregation until 1956, when he left to take up the position of Vice Rector of the Catholic University of Ponce in Puerto Rico. In 1961, he founded the Centre for Intercultural Documentation (CIDOC) in the city of Cuernavaca, Mexico. The purpose of CIDOC was to educate American missionaries in Latin America even if, over the years, it became the centre in which Ivan Illich’s ideas on ‘deschooled’ society were put into practice with him directing seminars on educational alternatives outside the industrial society school system. In the next book, *Tools for Conviviality*, Illich carried further his profound questioning of modern industrial society by showing how mass-production technologies are turning people into the accessories of bureaucracies and machines “when it undermines the texture of community by promoting extreme social polarization and splintering specialization”.

60 This depends, as mentioned, on the fact that the first student protests in Latin America date back to the 1910s for Argentina and the 1930s for Chile, with two neighboring countries that share this revolutionary impetus from which, albeit with its political contradictions, the experience of Tucuman descended already

The more interesting question was whether in the way of governing that real-world, now accepted in its uncertainties and unpredictability, by stimulating practices increasingly oriented towards flexible and adaptable attitudes, even for those minds educated within the institution.

This chapter in particular has punctually emphasised this ongoing transition through the critical design analysis of the two contemporary campus projects for the Universidad de Concepcion and Universidad Tecnica del Estado in Santiago by Emilio Duhart and BVCH, who both appropriated the figure of the architect-educator highly compromised with the profession while apparently opposed to each other according to the two Hitchcock's categories of *genius* and *bureaucracy*. However, what makes the current transition even more interesting in this precise context lies perhaps in the intersection and reciprocal influences between these representatives of the Chilean architectural profession and the radical thinkers who addressed the issue of education in their transit through Chile at the time.

As said, Paulo Freire's exile in Chile between 1964-1969 best exemplifies this condition. His radical thought on education as a 'práctica de liberación' was early expressed in his doctoral dissertation at the University of Recife, Brazil (1959), as well as in the early experiments with teaching methods for illiterates in the same country – this considered such a threat that Freire was jailed and forced into exile after the military coup in 1964. He lived in Santiago de Chile during the presidency of Eduardo Frei Montalva (1964-1970), working for the Chilean Institute for Agrarian Reform to develop programs for adult education in rural areas. This definitely stimulated his reflections on the importance of 'conscientizaçáo', in the sense of gain consciousness of social, political and economic contradictions in order to take action against the oppressive elements of reality:

“Proposing as a problem, to a European peasant, the fact that he or she is a person might strike them as strange. This is not true of Latin-American peasants, whose world usually ends at the boundaries of the latifundium, whose gestures to some extent simulate those of the animals and the trees, and who often consider themselves equal to the latter”.⁶¹

in the mid-1940s in parallel with the complex reform process carried out in the Chilean universities and in particular the Universidad Católica. On the Chilean case see Pablo Fuentes Hernández, 'Campus Universitarios en Chile: Nuevas Formas Análogas a la Ciudad Tradicional', in "Atena" no.496, 2007, pp.117-144.

61 Freire (1970), p.174. Freire collaborated with 'Movimiento de Reforma Agraria Demócrata Cristiano' and 'Organización para la Alimentación y la Agricultura' supported by UNESCO, while Chilean

Freire claims that every human being, no matter how ‘ignorant’ or submerged into what he used to call ‘culture of silence’, is able of looking at the world with a *criticizing* approach as long as it is constantly stimulated by dialogical encounters with peers. Which also represents the definitive overcoming of the paternalistic teacher-student relationship given that ‘people educate each other through the mediation of the world’.⁶² This occurred by providing people with the proper tools for such encounter, that is *Culture Circles* where itineraries of thematic research guided the problematization of real-life situations, excluding any official plans and programmatic contents prescribed by the educator. Such an approach experienced in the pedagogical context of agrarian reform, paved the way for extending the full potential of ‘práctica de liberación’ to the entire educational system which best epitomizes, in Freire’s most renowned theory, the condition of the oppressed.⁶³

Whether it is the widespread illiteracy of rural areas or an inadequate educational system, he argued, it is a question of problematizing culture. Not to destroy it, but to bring out through a maieutic process the possibilities that have been silenced over the centuries, assuming education as a political and collective *humanizing* (and not humanistic) pedagogical operations, which are incorporated into a pedagogy of revolution against oppressive practices and hierarchies. These practices are not necessarily applied to the oppressed in a blatantly violent manner, as shown by the *banking* concept of education in which ‘the scope of action allowed to the students extends only as far as receiving, filing, and storing pre-established notions and narrations’:

“In the banking concept of education, knowledge is a gift bestowed by those who consider themselves knowledgeable upon those whom they consider to know nothing. Projecting an absolute ignorance onto others, a characteristic of the ideology of oppression, negates

Corporación de Reforma Agraria (CORA) and Instituto de Capacitación e Investigación sobre Reforma Agraria (ICIRA) were also established as state organizations in that period and later increased during the government of Salvador Allende (1970-1973).

62 In the construction of Freire’s theoretical framework the word choice was obviously essential. The ‘culture of silence’ was responsible for causing “ignorance and lethargy [as] the direct product of the whole situation of economic, social, and political domination – and of the paternalism – of which they were victims. Rather than being encouraged and equipped to know and respond to the concrete realities of their world, they were kept “submerged” in a situation in which such critical awareness and response were practically impossible. And it became clear to him that the whole educational system was one of the major instruments for the maintenance of this culture of silence”. From the foreword by Richard Shaull to Freire’s *Pedagogy of the Oppressed* (1970), p.30. Even the use of unfinished verbal forms such as the gerund in the case of *criticizing* or *humanizing* was intentionally adopted to mark the action exercised in an ongoing process.

63 Freire’s first book *Educação como Prática da Liberdade* had already been published in Brazil (1967) and in Chile (1969).

This solution is not (nor can it be) found in the banking concept. On the contrary, banking education maintains and even stimulates the contradiction through the following attitudes and practices, which mirror oppressive society as a whole:

- (a) the teacher teaches and the students are taught;
- (b) the teacher knows everything and the students know nothing;
- (c) the teacher thinks and the students are thought about;
- (d) the teacher talks and the students listen—meekly;
- (e) the teacher disciplines and the students are disciplined;
- (f) the teacher chooses and enforces his choice, and the students comply;
- (g) the teacher acts and the students have the illusion of acting through the action of the teacher;
- (h) the teacher chooses the program content, and the students (who were not consulted) adapt to it;
- (i) the teacher confuses the authority of knowledge with his or her own professional authority, which she and he sets in opposition to the freedom of the students;
- (j) the teacher is the Subject of the learning process, while the pupils are mere objects.

It is not surprising that the banking concept of education regards men as adaptable, manageable beings. The more students work at storing the deposits entrusted to them, the less they develop the critical consciousness which would result from their intervention in the world as transformers of that world. The more completely they accept the passive role imposed on them, the more they tend simply to adapt to the world as it is and to the fragmented view of reality deposited in them.

The capability of banking education to minimize or annul the students' creative power and to stimulate their credulity serves the interests of the oppressors, who care neither to have the world revealed nor to see it transformed. The oppressors use their "humanitarianism" to preserve a profitable situation. Thus they react almost instinctively against any experiment in education which stimulates

education and knowledge as processes of inquiry [...] Education must begin with the solution of the teacher-student contradiction, by reconciling the poles of the contradiction so that both are simultaneously teachers and students”.⁶⁴

In Freire’s words, the *raison d’être* of libertarian education lies in its drive towards reconciliation. Those pedagogical operations which tried to eradicate authoritarianism and disciplinary hierarchies by exercising dialogical practices and collaboration will be discussed in Freire’s most well-known written work *Pedagogia del Oprimido*, completed in 1968 while he was in Santiago de Chile, and published in English for the first time in 1970.⁶⁵

While considered one of the most significant educators, the initial marginality of Freire’s work is partly due to the fact that educational institutions at the time were informed by the same ‘positivistic and management models that characterize the very culture of ideologies and practices to which Freire was in opposition all his life’.⁶⁶ On the other hand, striking parallels have recently been exposed with some of the most acclaimed *radical pedagogies* that distinguished Chilean architectural production through the work of Valparaíso School, culminating in the still ongoing experiment of Ciudad Abierta settled in the sandy beaches of Ritoque in 1971.⁶⁷

Though postponing the observations on this radical experience to the following Chapter 3 with the Italian architect Giancarlo De Carlo visiting Valparaíso and the Ciudad Abierta,⁶⁸ it is a very well-known fact that this

64 Freire (1970), p. 72.

65 Paulo Freire. *Pedagogy of the Oppressed*. New York: Herder and Herder, 1970 (translation by Myra Bergman Ramos and preface by the American theologian Richard Shaull). The first Italian edition was published in 1971 as *La pedagogia degli oppressi*, Milano, Mondadori) and only in 1975 in its original language.

66 From the introduction by Donaldo Macedo to the Anniversary Edition of Freire’s book (2000), p.16.

67 See Ana Maria Leon, ‘Prisoners of Ritoque. The Open City and the concentration camp’, in “Journal of Architectural Education” no. 66:1, 2012, pp. 84-97. This critical reconstruction placed the Ciudad Abierta radical experience in the framework of the political repression in Chile at the beginning of the 1970s, when the school of architecture and a detention center were settled as the two spaces of exception in Ritoque beaches. While the teachers formed a utopian enclave liberated from normative structures but limited in their political action, the prisoners transformed their forced isolation into an active political resistance with its occupants using games, events and performances as a similar repertoires of imaginary space. In general, the literature on the Valparaíso School is now very extensive and translated in multiple languages. The main summary text consists of a book edited by Raúl Rispa, with essays by Rodrigo Pérez de Arce and Fernando Pérez Oyarzún: *School of Valparaíso. Open City*. Santiago de Chile: Contrapunto, 2003. See also Horacio Torrent, Alejandro Crispiani and Rafael Moya, ‘La Escuela de Valparaíso y sus Inicios: Una Mirada a Través de Testimonios Orales’. Santiago de Chile: DIPUC, 2002, and Patricio Del Real, ‘Wandering Around. Architecture as Threshold between Territory and Poetry’ in “OASE” no. 80, 2009, pp. 61-70.

68 Giancarlo De Carlo will report on this visit in a short essay published in the magazine he directed: ‘L’utopia di Ritoque’ in “Spazio e Società”, no. 66, 1994, pp.24-25. This encounter is also reported on Ann M. Pendleton-Jullian, *The Road That Is Not a Road and the Open City, Ritoque, Chile*. Cambridge

pedagogical experiment claimed education as a collective experiential process with its promoters, Chilean architect Alberto Cruz and Argentinean poet Godofredo Iommi, adopting improvised poetic acts and creative performances as privileged instruments to gain consciousness of reality against a *banking* method, in Freire's words, which in their specific case was the excess of professional and marketable education. Even though, this pedagogical approach that they first exercised in a nomadic form,⁶⁹ finally resulted in self-isolation by dismantling any reference to Freire's political and transformative action:

“Nosotros [los fundadores de la escuela] nos desentendimos, radicalmente, de todo cuanto se llamó la acción ... ninguna clase de acción, categóricamente, ninguna: no mueve nada. Esto es una división dura, fuerte, peligrosa para la vida individual de cada uno. Inocua, para la vida política, sin ninguna trascendencia política, pero, sí, dura, para la vida individual de cada uno”⁷⁰

Against this backdrop, a less known and lesser explored aspect concerns instead those intersections between radical thoughts and other experiments occurring in Chile at the time, paradoxically related to the domain of the profession on which BVCH partners had shaped their figure of architect-educator examined in this chapter.

In fact, it must be remembered that Valparaíso School initiated its educational project institutionally, when Carlos Bresciani (B member of BVCH) will be appointed dean in 1952 – a position he will hold until his death in 1969 – with the university authorities accepting Alberto Cruz's proposal to incorporate the multidisciplinary education program which would lead to the subsequent radical experience of Ciudad Abierta.⁷¹ Paulo Freire's stay in

Mass.:MIT Press, 1996. See Chapter 3.

69 *Amereida* (1965) was the first of these pan-American journeys called 'travesías', aimed to provide a symbolic re-origination of the continent appealing to a mythical chronology rather than to any historical project. See the official website <http://www.ead.pucv.cl/amereida>.

70 Godofredo Iommi, *Hoy me voy a Ocupar de mi Cólera. Valparaíso: Taller de Investigaciones Gráficas*, Escuela de Arquitectura UCV, 1983.

71 The incorporation of Carlos Bresciani into BVCH office, Uruguayan by origin and assistant at the Pontificia Universidad Católica de Chile where he met his future office partners while they were students officially took place in 1959, considered as a strategic alliance to deal with large projects in complicated areas such as Arica or Punta Arenas financed with a public mechanism called Empart (Caja de Empleados Particulares ventured with private construction companies). See Pérez-Oyarzún (2006), p.14. Additionally, Bresciani's institutional role accompanies the birth of the most radical and celebrated educational project undertaken in Chile conceived by the Chilean architect Alberto Cruz and the Argentine poet Godofredo Iommi. In fact, he was appointed dean of the Faculty of Architecture of the Universidad Católica de Valparaíso a few years before the beginning of the most representative works of BVCH office including the

Chile, on the other hand, benefited from the support of Fernando Castillo Velasco (C member of BVCH) who in 1967 obtained the position of rector of the Universidad Católica by appointing the Brazilian philosopher Ernani Maria Fiori, also exiled to Chile, in role of vice-rector. Ernani Maria Fiori was considered a high-profile intellectual, so close to Paulo Freire that his manuscript of *Peadgogia do Oprimido* written in Chile in 1968 was not only invaluablely enriched by Fiori's comments, but also the very elaboration of the key concept of 'conscientização' was often referred by Freire himself to the conversations with his friend, hosted in Fiori family's house in Santiago which soon became a privileged place for debate and open discussion on Latin American issues, with education and its alternative forms in the foreground.⁷² In this context, after his initial involvement in the initiatives of the Instituto de Educación Rural (IER), Ernani Fiori became protagonist of the new educational project conceived by Fernando Castillo Velasco named rector of Universidad Católica on pressure of student mobilization, while also the other partners of BVCH were gradually leaving the anonymity of the acronym that distinguished them in the professional environment in order to obtain increasingly stable roles within the bureaucratic apparatus of the state.

The first interesting aspect of this venture is that the same horizontal, dialogic and collaborative structure that BVCH adopted as the most performing organizational complex for their professional work, had become the common ground with radical aspirations, thoughts and experiments. The second aspect, perhaps even more interesting, is the process of gradual incorporation of the same organizational structure experiencing dialogic and collaborative practices within the bureaucratic apparatus of university institutions. But if it is true that this process represents the common thread of all the six episodes selected in this research, it is equally true that it appears accentuated in this chapter due to a peculiar complicity between education, profession and public sphere.

In particular, Fernando Castillo Velasco plays his role as architect-educator in the fifth year design studios of the Universidad Católica de Chile – not occasionally called 'Taller Profesional', thus within the institution where he was educated participating in the long reform process initiated in the mid-1930s. Then, Castillo's deeper concern about the public sphere arose in two

Unidad Vecinal Portales and the new campus for the Universidad Técnica del Estado.

72 From a conversation between the author of this thesis and Jorge Fiori, son of Ernani Maria Fiori and currently professor at the Architectural Association in London (in December 2019). Fiori's contribution can be recognized in the prologue of the Chilean version of *Pedagogía del Oprimido*, dated 1967 and titled 'Aprender a decir su Palabra'. See also Beca, Richards and Bianchetti, 'Ernani Maria Fiori: un profesor brasileiro en tierras chilenas-testimonios', in "Educação & Realidade", vol. 38, no. 3, 2013.



FIG. 108
Collective act at the Ciudad Abierta de Ritoque, Valparaiso (1970s)

specific moments: first, he was elected mayor of the *Municipalidad de La Reina* in 1964 – Eastern outskirts of Santiago at the foot of the Andes; later in 1967, as mentioned, he was elected Rector of the *Universidad Católica* until the 1973 coup which forced him into exile, first in Cambridge UK, and later in Caracas.

Notable of his work outside BVCH office is precisely the continuity of dialogical approach that stimulated comparison, interaction and collaboration. From his first experience as mayor he recalls the formation of the first organizational structure of the public administration which adopted a horizontal, flexible and non-hierarchical scheme to govern a marginal and problematic territory of Santiago; while as rector of the *Universidad Católica* he recalls the process of reforming the structures of academic power with students as protagonists and promoters.⁷³ Cambridge's foreign experience was also marked by a radical contribution along the same lines, replacing the professional qualification exam hitherto intended as an individual performance with a real-world commission to be accomplished as a teamwork.⁷⁴ From an interview to Castillo's office partner Hector Valdes (V member of BVCH), with the emblematic title 'An Architecture for Men', still rises his attitude indifferently associated both with professional works, academic commitments, or public tasks. An attitude that significantly resulted in Castillo's 'sense of space':

“Castillo distinguished himself by his non-conformism and rejection of facile or obvious solutions, as well as by his inventive imagination. The handling of space was one of his main concerns [...] Castillo's work has not really changed over time [...] The sense of space is the same as that which characterized a project of four dwellings constructed on a corner of the Pedro de Valdivia Norte district so many years ago, where he eliminated privately owned spaces and created a single, common space, without enclosures or limitations, to be enjoyed not only by the four-owners but also by their neighbourhoods and the public in general”.⁷⁵

73 He was responsible for directing the university during the most agitated periods in the history of Chile. The profound reforms regarded the students' representation to Consejo Superior; commitment to social issues was expanded through a more targeted interdisciplinary research; doubling the number of teachers with full time contracts; balance the space for scientific-technological research and artistic creation.

74 “In this way they draw up a development plan for a sector of the city of Algiers, in accordance with an agreement signed with the Algerian government. Previous to this, the University of Cambridge School of Architecture had never worked in such a real-world context and facing the needs of a client”. In Eliash and Campos (1990), p.23.

75 *Ibid.*, p. 26.

This not only explains why single house projects were never abandoned even when BVCH business volume increased, but also make resonate certain radical thoughts with Castillo's laboratory of ideas on architecture 'which is consequent with his ideals regarding society and life at large' that 'transcends its own material structure, to become an architecture for man, for all men'.⁷⁶

Finally, the last aspect, perhaps the most interesting of this venture, concerns the slow and gradual dissolution of BVCH due precisely to the interference between their anonymous collective professional organization and individual aspirations to assume greater institutional roles to have an impact on the public sphere. As pointed out by Pérez-Oyarzún (2015),⁷⁷ these aspirations transformed into institutional commitments that went beyond the role of the professional could certainly not be considered irrelevant for the acquisition of new office's commissions. On the other hand, those same commitments kept the partners away from their office for long periods and this was allowed, paradoxically, precisely by that horizontal and flexible internal organization which: in order to increase office productivity and efficiency they opted for the abolition of any hierarchical relationship making partners and collaborators interchangeable to favour maximum adaptability to the number of unexpected variables that characterized the work of a large and wide-ranging architectural office such as BVCH, accepting that degree of anonymization that *architecture of bureaucracy* knew how to use to its advantage.

However, this trend prefigured by Hitchcock in 1947 would have produced a completely unexpected outcome in the anonymization process of this specific Chilean episode. Together with Castillo and Bresciani, also Héctor Valdés (V member of BVCH) who played his role as architect-educator at the Universidad Católica until 1959, first assumed the presidency of the Sociedad Constructora de Establecimientos Educativos (1964) and later the vice-presidency of the Corporación de Vivienda (1965), recalling these institutional tasks as the most fulfilling moments of his career for the opportunity to coordinate large teams of professionals lent to the public sector to face challenges of national importance.⁷⁸ Ultimately, the office and its professional prestige will

76 Ibid. Upon his return to Chile in 1977 he will devote himself to the so-called 'arquitectura comunitaria' which explored a form of self-construction without the support of the state. See Erique Browne, 'The Community Architecture of Fernando Castillo', in Eliash and Campos (1990), and Alejandro Crispiani 'The interior life', in "ARQ" no.105, 2020.

77 "El trabajo de la oficina no termina en una fecha precisa, sino que lo hace mediante un proceso de paulatina disolución", in Pérez-Oyarzún (2015), p. 48.

78 During his tenure at Sociedad Constructora de Establecimientos Educativos, Hector Valdés recalls having participated, together with other professionals, in the design of one of the first mediaguas presented to the then Minister of Public Works Modesto Collados and subsequently used as a temporary housing system after the 1965 earthquake. They were intended to replace more basic buildings, called rucos, which

dissolve into the institutional bureaucracy of the state thanks to the same rules that had made it possible its consolidation, namely allowing BVCH partners to undertake public and personal tasks simultaneously with those of their practice until the Chilean office has definitively lost its anonymity-based efficiency.

had been used in previous earthquakes. A few years later, he will assume the presidency of Colegio de Arquitectos de Chile (1970-75). See Weibel Fernandez (2008).



FIG. 109
BVCH architects discussing in their office

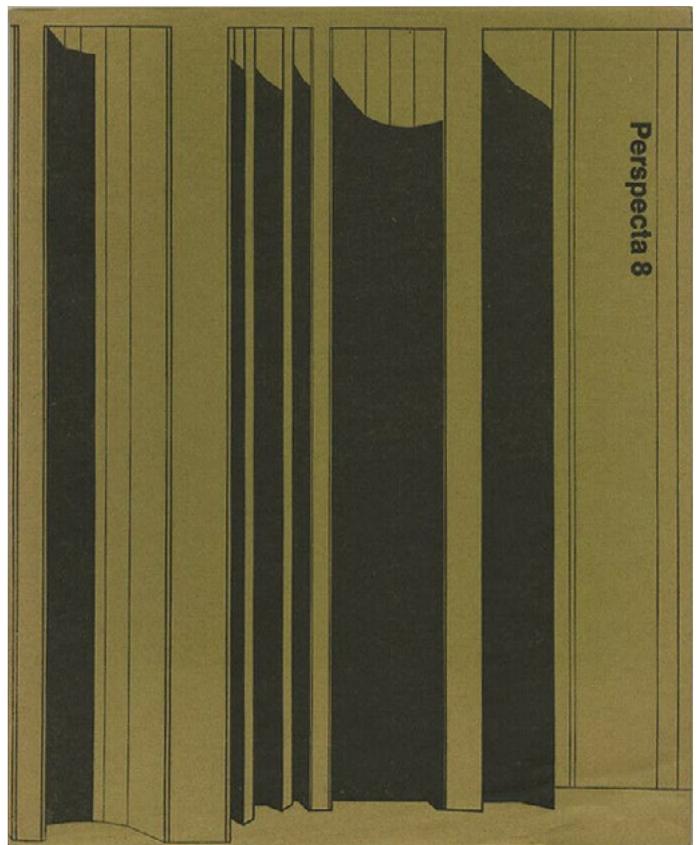


FIG. 110
*Front cover of "Perspecta" (no. 8, 1963) which contains Rowe and Slutzky
essay on literal and phenomenal transparency*

2.5 *The liberated ground, literal and phenomenal*

“Universities, by definition, establish and manage precincts, domains, ‘areas’ and ‘fields’. One way they do this is by drawing lines, that begin with the boundary of the campus itself most visibly drawn in brick, stone, iron, trees and grass that demarcate the campus and sorts its buildings into a departmental or disciplinary order. [When] avowedly interdisciplinary lines are drawn in steel and, most emphatically, in glass [...] the question is what the real effects of the transparent effort to produce transparency will be”.⁷⁹

Reinhold Martin, 2016

In 1960, while the campus project for Universidad Técnica del Estado by BVCH and the coeval expansion plan that Emilio Duhart conceived for Universidad de Concepción were underway (both started in 1957), the same authors competed for another project of national significance and public visibility: the United Nations headquarter in Santiago – with the winning proposal assigned to Emilio Duhart. Without venturing here into a critical design analysis on the two entries, it seems that the profile of the *genius* most attributable to Duhart has prevailed over the Chilean office *bureaucratic* organizational structure.⁸⁰ So strangely, if we think that Duhart was a student at Harvard Graduate School of Design when Gropius began to disseminate anonymity in the name of team-work and that, on the contrary, BVCH partners never hesitated to get out of the bureaucratic acronym of their office that rested upon dialogic and collaborative practices encouraged in the context of the academic restructuring of Universidad Católica culminating in the reform of 1949.

The first question concerning Duhart can perhaps be explained in the words of Klaus Herdeg from his critical survey *The Decorated Diagram* (1983) against the inadequacies of Gropius’ pedagogical method exported to

79 Reinhold Martin, ‘Made in Manhattanville’, in *Columbia in Manhattanville* edited by Caitlin Blanchfield, New York: Columbia GSAPP, 2016, pp. 128-136.

80 Duhart’s winning proposal for CEPAL headquarter in Santiago (Comisión Económica para América Latina y el Caribe) is structured on a quadrangular ring with various inhabited volumes inside the large-scale patio that clearly recall the formal language of Le Corbusier works for Chandigarh.

Harvard,⁸¹ arguing that ‘every new generation of architectural practitioners, critics, and educators reacts to the context it finds itself in with a matching program. While Gropius reacted against what he perceived to be the pernicious values of an intellectual, bookish, and egotistical architecture by crusading for the teaching and practice of a pragmatic and team-produced architecture, most of his students at Harvard, in turn, renounced their teacher’s more explicit exhortations by opening offices in their own names where they could indulge in the production of artistic masterpieces’.⁸² As for BVCH, instead, the increasingly frequent public responsibilities assumed by office’s partners have progressively incorporated the organizational, collaborative and dialogic practices from professional to institutional apparatus, also intersecting some of the more radical experiences emerged in Chile between at the time.

Therefore, rather than persisting in the categorizations of the unsolved problem between *genius* and *bureaucracy* exposed by Henry-Russell Hitchcock in his influential article of 1947, the most interesting aspect here is how the reciprocal contaminations between pedagogical methods and professional procedures then conditioned a different bureaucratic apparatus, that of the university institution, which intends to revolutionize its organization starting from the formulation of a new educational project. On the other hand, it was Hitchcock himself together with the photographer Rollie McKenna on a mission for MoMA in 1954 who recognized the favorable climate in the field of education in the face of a still limited presence of modern ‘existing completed buildings’.⁸³ Both BVCH partners and Emilio Duhart not only had participated in this favorable climate as students, but became protagonists until they were incorporated into the bureaucratic apparatus of the universities where they carry out their role as architect-educator outlined in this research, and shaped in this particular episode around the professional domain.

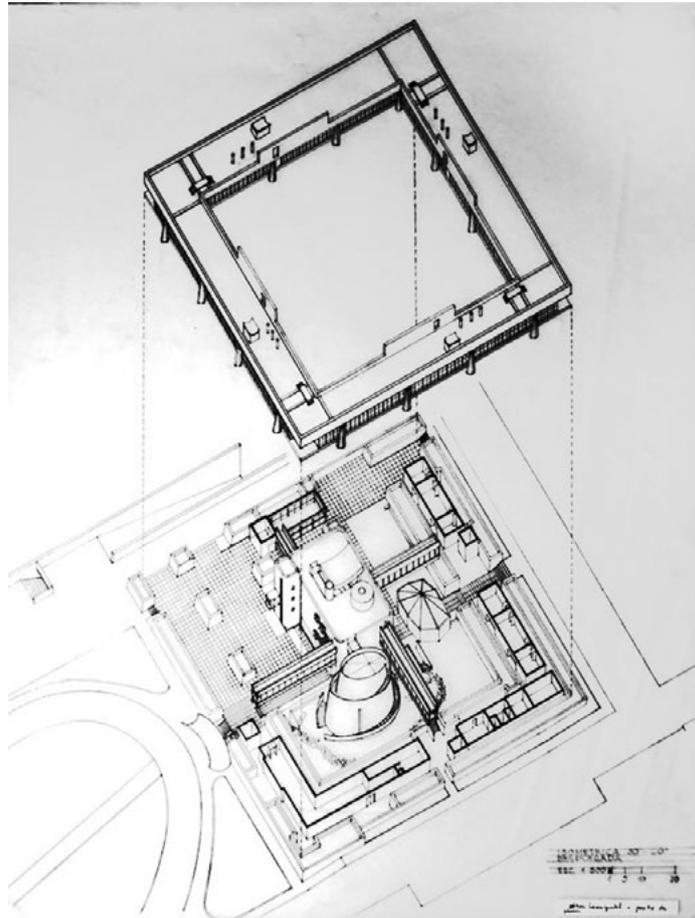
Not occasionally, both the new educational project of Universidad Técnica del Estado as well as that of Universidad de Concepción were structured around the objective of a competitive technical-professional

81 In 1983, Klaus Herdeg articulates one of the most ardent criticisms against the legacy of Gropius’ teachings during his years at Harvard Graduate School of Design: “In much of Gropius/Harvard-influenced architecture, it is the lack of control over apparent analogies, intended or unintended, which makes one doubt whether the formal characteristics of a given building (as representable in drawing form) were ever recognized, much less employed to ends beyond the diagram and some retinal stimulation [...] The result of a decorated diagram came out as a way of describing the process by which the plan as diagram diverged from appearance as decoration [...] contradictory design decisions are camouflaged by means of architectural cosmetics, giving an appearance of simplicity, indeed, almost banality”, in Klaus Herdeg. *The Decorated Diagram. Harvard Architecture and the Failure of the Bauhaus Legacy*. Cambridge: The MIT Press, 1983, pp. 26-27.

82 From Herdeg (1983), p. 96.

83 Letter from Rollie McKenna to Porter McCray (1954).

FIG. 111
Emilio Duhart winning proposal for Santiago's CEPAL building (1960).
Fondo Emilio Duhart
Archivo de Originales. FADEU.
Pontificia Universidad Católica de Chile



education, and for this reason they have already been legitimately compared to each other, and also to other technological-based precedents like Mies van der Rohe Illinois Institute of Technology in Chicago (1939-1946), from which the modular grid ordering principle, the longitudinal development of narrow pavilions and the technological image conveyed by a precise idea of transparency are all clear sources of inspiration.⁸⁴

A not insignificant question, in fact, is about the concept of transparency and how it was declined in the spatialization of the two Chilean university campuses which both associated the liberation of the ground with the 'technological image' entrenched in their educational project. As recently noticed by Reinhold Martin (2016):

“Universities, by definition, establish and manage precincts, domains, ‘areas’ and ‘fields’. One way they do this is by drawing lines, that begin with the boundary of the campus itself most visibly drawn in the brick, stone, iron, trees and grass that demarcate the campus and sorts its buildings into a departmental or disciplinary order. [When] avowedly interdisciplinary lines are drawn in steel and, most emphatically, in glass [...] the question is what the real effects of the transparent effort to produce transparency will be”.⁸⁵

These words come from Martin's commentary on the recent interventions for Columbia University urban campus in Manhattanville, New York, with the university promoting – and demanding – the highest degree of permeability, openness, and transparency architecturally translated into a perfect flow continuity of urban ground.⁸⁶ But the same words are useful here to understand how that visual attribute associated by the Modern Movement with the virtues of an open democratic society has been assumed in the two Chilean projects in a more complex relationship with the pedagogical mandate imbued with *literal*

84 As mentioned before, Mies' Chicago IIT represents a paradigm for Duhart's ordering system in Concepción.

85 Martin (2016), pp. 128-136.

86 Columbia University historian Reinhold Martin examined the most recent interventions in Manhattanville urban campus, New York, by SOM and RPBW. Martin's line of argument lingers around the paradox of the twinned smockestacks atop the scientific knowledge factory since 'they are traces of the great underground machine that will help the university do what it must do. By its very nature, however, that machine must visibly disappear. What is more, its visible invisibility must be made to mean something-openness, publicness, *democracy*-even as the campus requires a line around it that cannot and should not be erased, grids and glass notwithstanding [...] Today, the new campus reverses the equation, gesturing toward the surrounding city rather than withdrawing from it. In doing so, however, it does not reflect the inherent conflicts and contradictions that divide the urban field. Instead, as an inverted image of the 'original' Morningside campus, it reflects mostly itself". See Martin (2016), pp. 135-136.

transparency to return a promotional, unusual and eye-catching ‘technological image’. A concept that was put into question through a written work circulating, in those same years, in a draft form due to its eccentric position with respect to the post-war architectural discourse dominated by CIAM leaders.

As Bernhard Hoesli recalls, in fact, a critical text on the concept of *transparency* was conceived in the Spring of 1955 by Colin Rowe, student of architectural historian Rudolf Wittkower, and by Robert Slutzky, painter and student of Josef Albers, when they both were teaching at the University of Texas, Austin. After a rejection by “The Architectural Review” asking for the omission of certain sections concerning Gropius’ work, the piece ‘Transparency: Literal and Phenomenal’ finally appeared in Yale Architectural Journal “Perspecta” (no. 8, 1963), declaring the attempt to expose a higher level of complexity to which the concept of *transparency* has become endowed, with those terms often used interchangeably – ‘simultaneity, interpenetration, superimposition, ambivalence, space-time, transparency’ – rather assumed as ‘the specific formal characteristics of modern architecture’.⁸⁷

Thus, the essence of *phenomenal* transparency which has been noticed as characteristic of post-Cubist tradition finds a spatial counterpart in stratification as ‘a device by means of which space become constructed, substantial, articulated’ showing a sense of ambiguity that any *literal* transparency provided by material qualities can bring into play.⁸⁸ When Rowe and Slutzky set their well-known architectural analysis on the comparison between Gropius’ Bauhaus Dessau and Le Corbusier’s League of Nations project as an example of ‘extended organization’ resolved through the common ‘narrow block’,⁸⁹ both Chilean university campuses were measuring up on the same principle. A set of architectural operations applied to a discrete narrow blocks provides the two campuses with clear formal structures, both informed by a higher degree of complexity of the concept of transparency

87 The date of publication of the sequel article also differs by several years from its first writing in 1956: ‘Transparency: Literal and Phenomenal part II’ appeared in “Perspecta” no.13-14 (1971) with the two authors assuming phenomenal transparency as a method of analysis.

88 From Colin Rowe and Robert Slutzky, ‘Transparency: Literal and Phenomenal’, in “Perspecta” no. 8, 1963.

89 “Le Corbusier’s League of Nations project of 1927, like the Bauhaus, possesses heterogeneous elements and functions which lead to an extended organization and to the appearance of a further feature which both buildings have in common: the narrow block. But it is here again that similarities cease [...] At the Palace of the League of Nations corners and angles, as the indices of spatial dimension, are assertive and definite. At the Bauhaus, Giedion tells us, they are ‘dematerialized’. At the Palace of the League of Nations space is crystalline; but at the Bauhaus it is glazing which gives the building a ‘crystalline translucence’ [...] Le Corbusier’s planes are like knives for the apportionate slicing of space. If we could attribute to space the qualities of water, then his building is like a dam by means of which space is contained, embanked, tunneled, sluiced, and finally spilled into the informal gardens alongside the lake. While by contrast, the Bauhaus, insulated in a sea of amorphic outline, is like a leaf gently lapped by a placid tide”. From Rowe&Slutzky (1963).

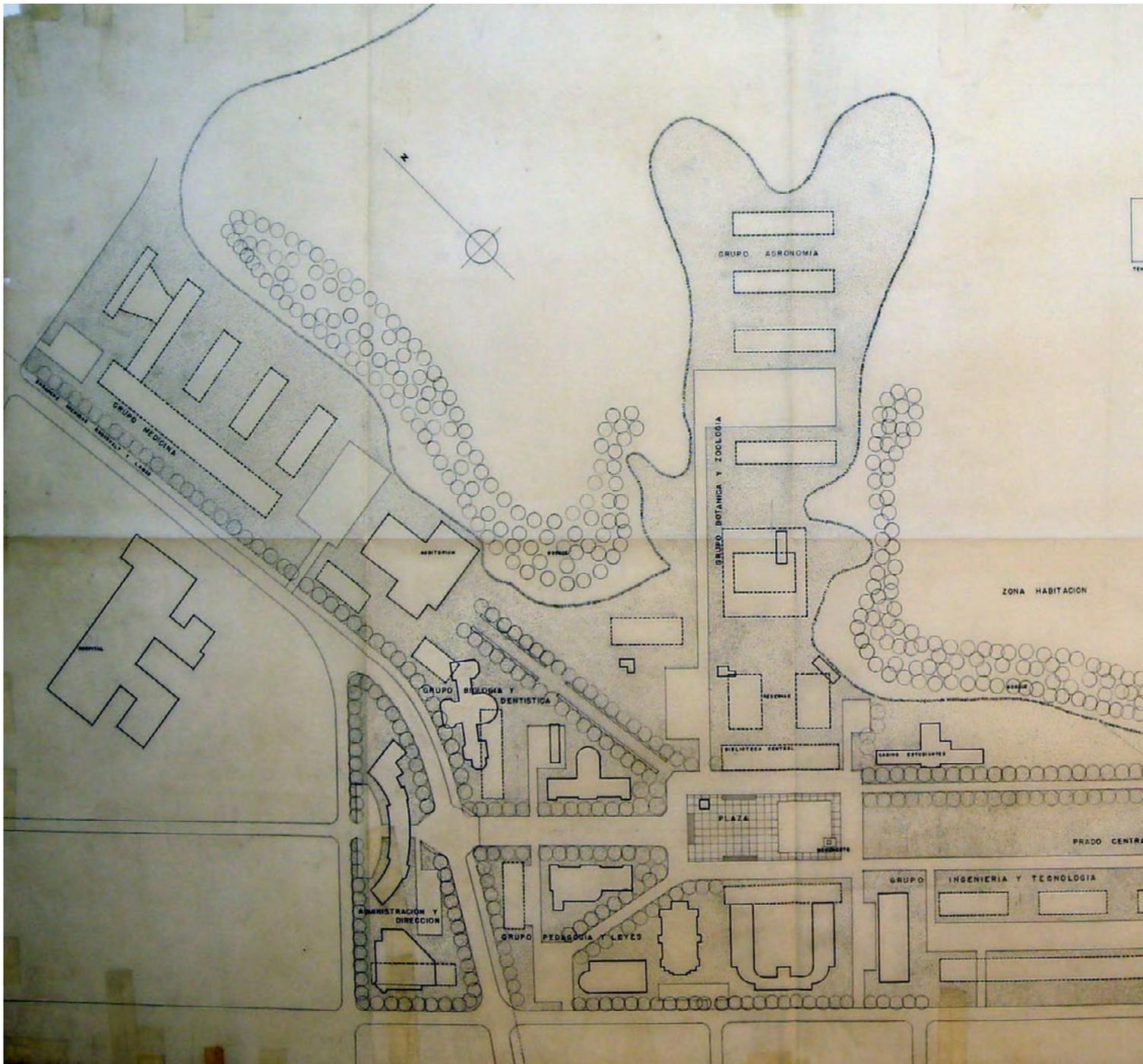


FIG. 112

Duhart campus plan for UdC extension showing in dashed lines the prototypical above-ground narrow block used as a discrete element.

Fondo Emilio Duhart H.

Archivo de Originales. FADEU.

Pontificia Universidad Católica de Chile

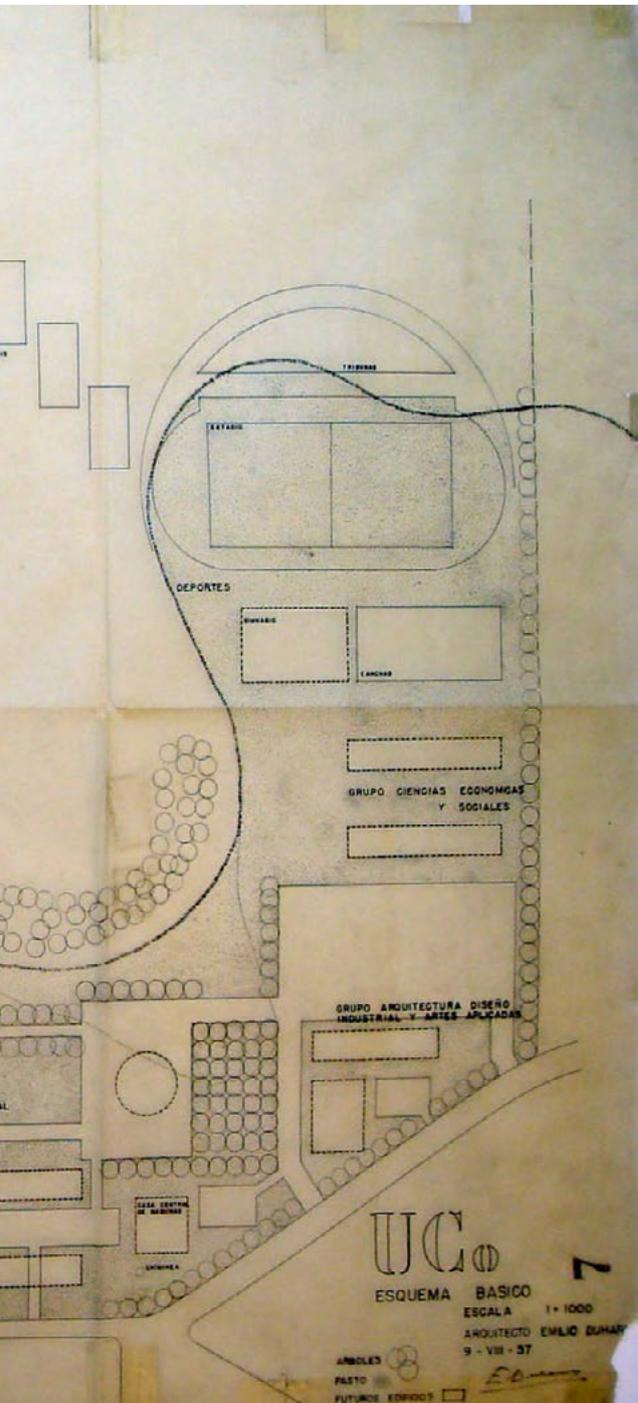
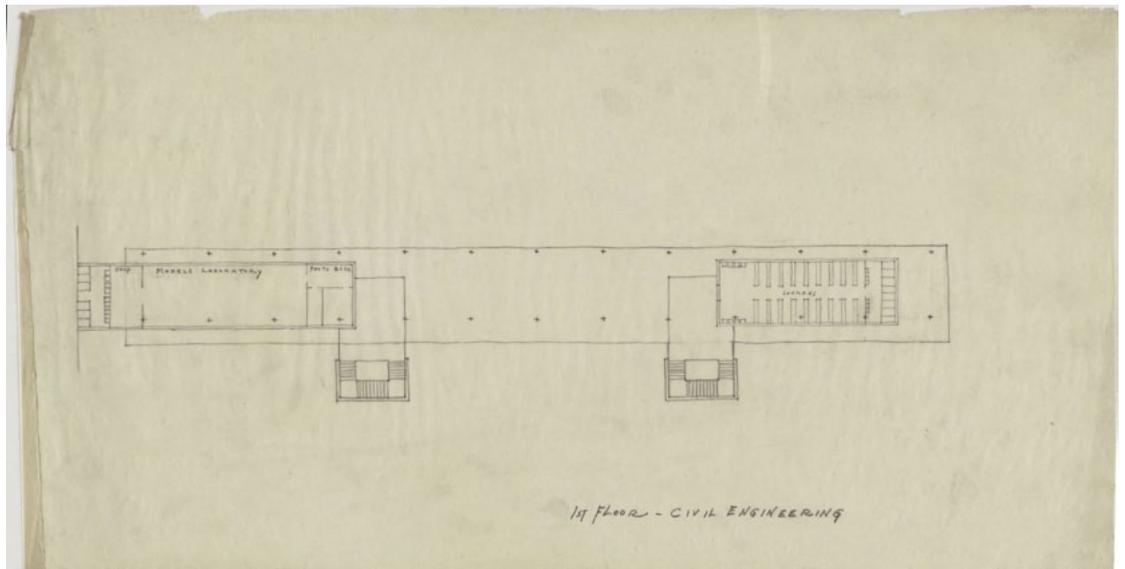


FIG. 113
 Mies van der Rohe sketch of the first floor of the Engineering linear block
 at IIT campus Chicago (1939-41).
 MoMA Archive



at work to stimulate, encourage and instigate the deployment of informal situations in which knowledge could be occasionally exchanged. For a better understanding, however, we should refer to the educational project established by the two university institutions. Although both emphasized advancement of technical-scientific and professional education, they emerged from apparently opposing premises: a national scale plan that consecrated technical education with the project of Universidad Técnica del Estado in Santiago counterbalanced the academic reorganization suggested by UNESCO adviser Rudolph Atcon appointed by Universidad de Concepción.

In the case of Concepción, as said, the horizontal reorganization of university bureaucratic apparatus according to Atcon's integrated system was intended to affect the knowledge deficit caused by the excessive professionalization of Chilean education. This, to make the university responsible for a highly diversified scientific production which could only be achieved through the development of a 'nueva actitud'. In more detail, as it turns out from Atcon's letters, these attitudes should not only be open to integration, but also to an 'institutional flexibility':

“It appears to me that there is every cause for satisfaction with the results obtained to date, in this incredibly short period of time, forces have gathered which are substantial no matter what measure-stick is applied.

These forces have been directed toward a single purposeful goal: the radical change of a Latin American University from a loose aggregate of professional schools to a close-knit carpus on which knowledge can be acquired for its own sake, institutional flexibility will be possible and professional careers are diversified all within a framework of real academic freedom and a spirit of free enterprise”.⁹⁰

In fact, this 'spirit of free enterprise' is reflected in the above-mentioned diagram of secant circles conceived by Atcon, whose meticulous calibration of linetypes and thickness is anything but accidental: the research institutes as well as the areas of knowledge are continuous line as they are considered permanent activities, while the small circles that schematize professional institutes are dashed since they have to be considered variable in accordance to market demand.⁹¹

90 Letter from Rudolph P. Atcon to Mr. R. Galindo (Chief Bureau of relations with Member States UNESCO) and Rector David Stitchkin, 7 January 1958, reporting on his activity in Chile between August-December 1957.

91 See Molina (1995), p. 74.

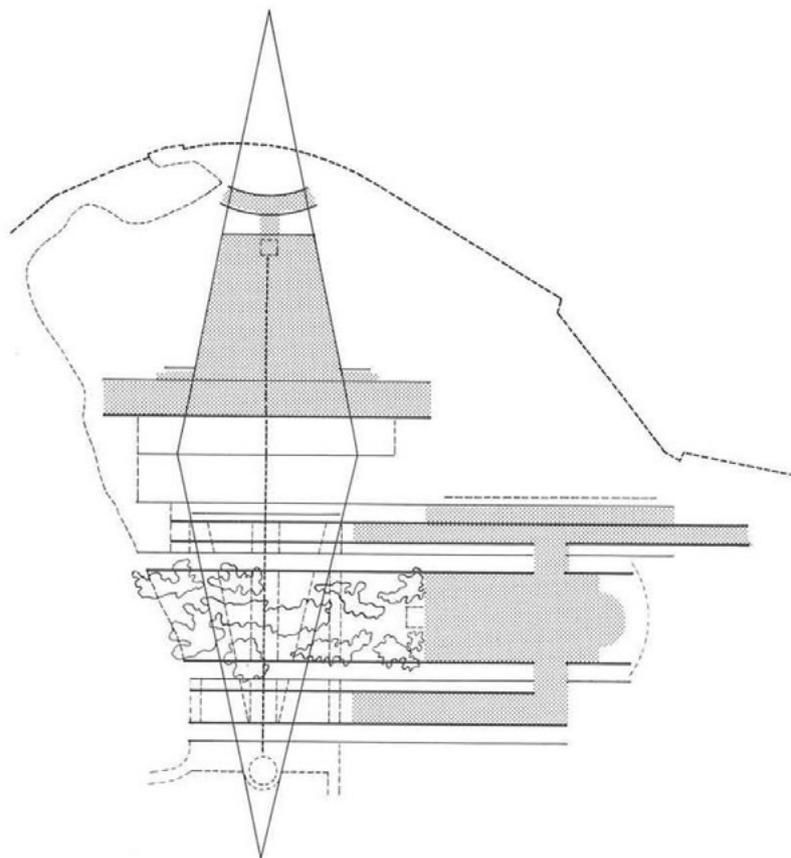


Plate 69 Palace of the League of Nations.
Analytical diagram.

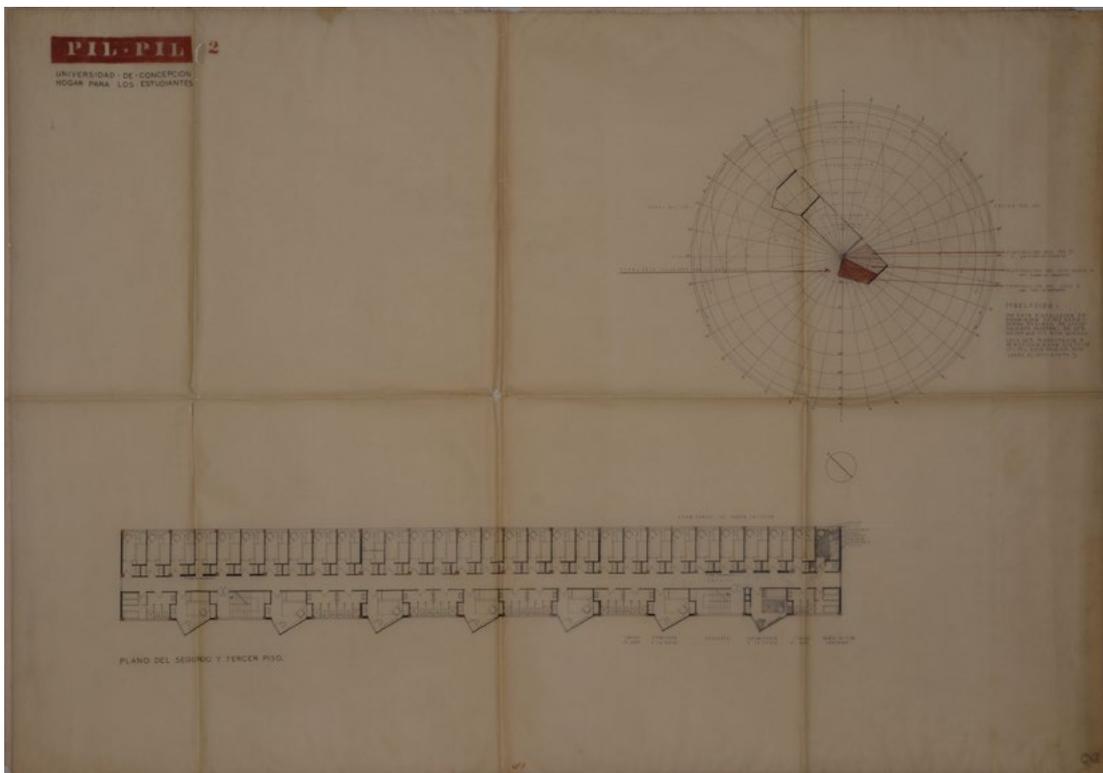
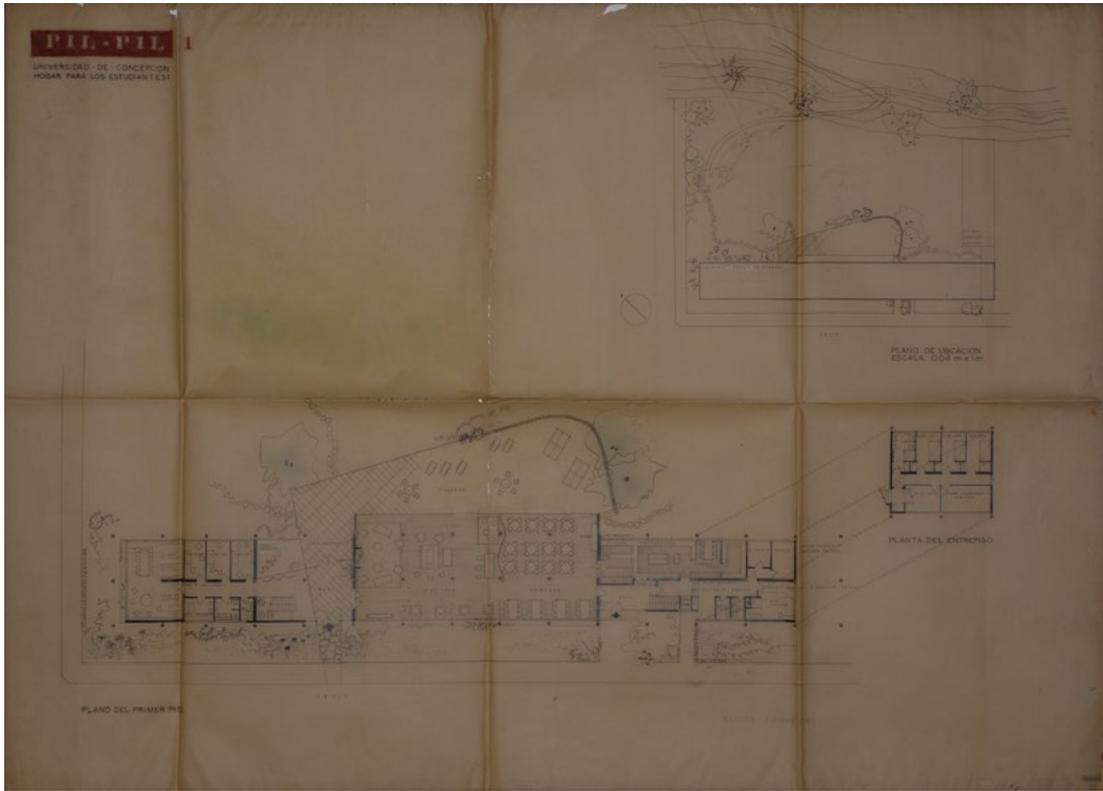
FIG. 114
*Colin Rowe and Robert Slutzky analytical diagram
of Le Corbusier Place of the League of Nations.*

Hence, if a certain proclivity for analytical conceptualizations on the part of Emilio Duhart can derive from his Harvard training under the guidance of Gropius – not by chance attacked by his major critics for a pedagogical method that induced students to create nothing more than ‘decorative diagrams’ (Herdeg, 1983) – this clarification about Atcon’s contribution should not go unnoticed as it reveals something more about the apparently banal graphics with which the first spatialization attempt was conducted in Duhart’s early studies for Concepción: the distribution and intensification of concentric circles mapping campus’ areas where interaction increases, also shows how ‘institutional flexibility’ was applied to educational spaces and where a new attitude towards unpredictability could best be exercised. The informal exchange and the compromise with city’s urban life were guaranteed by the continuity of movement, crossing and circulation that usurped the ground floor of the narrow blocks, thus extending far beyond those generally designated community place like the iconic central lawn (existing) and ‘Foro Abierto’ designed by Duhart.

Certainly, the narrow block in Concepción was reduced to the most simple solution, in terms of spatial articulation: a suspended and transparent volume hardly traceable to a more ambitious concept than that of a *literal* transparency, especially when compared to the first experiment Duhart made for the same university in 1948 – just got back from the United States. It was a competition launched by Universidad de Concepción asking for a ‘Hogar para Estudiantes Universitarios’ (a students’ residence with public functions) to which Duhart responded with a narrow block whose location already referred to Karl Brunner’s 1931 campus plan: 82,50x11,00 meters on three levels. Here, the ambiguity between the level of the exposed load-bearing structure and that of the windows is much greater, accentuated by the sequence of bow windows on the less exposed side. But it is in the ground floor public dimension that the greatest quality of this proposal can be found, with a higher degree of spatial articulation accompanying transparency effects. In fact, the glazed ground floor – hall, common areas and canteen – is accessed via a sloping surface reaching the raised podium of about 0,80 meters following a diagonal tension that intercepts the movement from the outside and transversely penetrates the building’s public functions up to a large terrace on the opposite side that overlooks the impressive landscape of Cordillera.⁹²

92 Even if Duhart’s design proposal did not win the competition, ambiguity and spatial complexity that articulate the narrow block ground floor represent the formal structure of this early experiment, even attaching a symbolic value looking at Cordillera that echoes Braun’s words describing a ‘hard and

FIG. 115
Duhart early design project for Universidad de Concepción asking for a
'Hogar para Estudiantes Universitarios' in 1948.
Fondo Emilio Duhart H.
Archivo de Originales. FADEU
Pontificia Universidad Católica de Chile



However, while grasping the undeniable turn from this single architectural experiment of 1948 towards Duhart's urban vision and 'impersonal architecture' applied to the campus commission ten years later, it is possible to recognize a clear formal structure that materialized Universidad de Concepción educational project: the narrow block used as a discrete element to be repeated, varied and expertly placed according to specific conditions, ambiguously superimposes an autonomous layer on the campus surface increasing complexity and spatial articulation – while guaranteeing the basic principle of the maximum permeability between campus and city. After all, Duhart acts on a pre-existence and adopts the strategy of the discrete element to reinterpret an urban vision he had inherited when, after the 1939 earthquake that destroyed much of the city of Concepción, it was decided to extend one of the two diagonals conceived by Brunner for the new campus plan in the direction of the central square of the city of Concepción resulting in Diagonal Pedro Aguirre Cerda, an urban intervention that literally connected the university and the city by crossing the foundation grid.⁹³

As for the campus of the Universidad Técnica del Estado, however, it is found in Atcon's words that the 'Concepción Experiment' was about to travel towards Santiago:

“The ideas represented and applied at Concepción are also spreading to Santiago. Undeniable proof of this is the ever-increasing desire of the Rector of the University of Chile - the Nation's control-university - to integrate his thinking and planning with the ideas proposed and carried out at Concepción. [Although] conditions in Santiago are certainly quite different from those found at Concepción, the utility to all of permitting uniform thinking on university organizational matters to permeate the entire structure of Chilean higher education cannot be overstated”

Declaring after a few lines the explicit content of his mission:

“It will prove to other countries of this region that diversification of higher education, liberation from professional domination and flexibility of instruction can be made to work in Latin America”.⁹⁴

poor country, where the inhabitants of Chile must be resourceful and hard-working to operate in that environment'. See Braun (1962), p. 50.

93 See 'Plan Seccional Diagonal Pedro Aguirre Cerda' in "AUCA" no.3, 1966.

94 Letter from Rudolph Acton to Mr. R. Galindo (1958).

As mentioned, the universities of Santiago were facing a reform process since the early 1940s that clearly conditioned also the authors of the projects selected in this episode – both Emilio Duhart and the BVCH partners shaped their role of architect-educator within Universidad Católica in those years. But in this regard, it is worth mentioning the contribution of the Bauhaus-trained architect of Hungarian origin Tibor Weiner (1906-1965) who takes advantage of this favorable climate – also propitiated by the demand for architects for the reconstruction after the abovementioned 1939 devastating earthquake – to transfer his pedagogical vision developed alongside Hannes Meyer to Universidad de Chile in the years 1946-47.

As reported by Daniel Talesnik who studied this experience in detail, Tibor Weiner began to teach architecture at the University of Chile ‘involved with the student-led reform movement which aspired to modernize Chilean architectural education and introduce a greater degree of social consciousness to the curriculum’.⁹⁵ Weiner’s contribution is contained in the introductory course for first and second year students with exercises aimed to analyse human scale related to variables that condition people behaviours like functions, climate, circulation, visual and social relationships. Avowedly, ‘análisis’ was assumed in the reform as in the courses thought by Weiner as an architectural exploration method, generally applicable to all problems concerning reality with a graphic language materialized in those diagrams that echoed systemic approaches adopted years later. Interestingly, it was as if this language at the time incorporated within a formal curriculum had become fertile ground for being transferred to the flexible, adaptable and self-entrepreneurial vision proposed by Atcon for Chilean university institutions.

However, Universidad Técnica del Estado was the most prominent case in the capital where the spatialization of an educational project was underway, promoted by the state and conceived by the Chilean office BVCH. What we see at work in Santiago is a decidedly more complex, more ambiguous and spatially articulated variation on the narrow block theme even if conceived, paradoxically, by what was perhaps the largest Chilean architecture office at the time. BVCH did not simply reflect the antithetical profile to the *genius*

⁹⁵ Daniel Talesnik meticulously explored this episode in his research with a particular focus on architectural pedagogy and relationships between architecture and political ideologies. Tibor Weiner became one of the members of the Red Bauhaus Brigade who joined Meyer in the Soviet Union, then moving to Chile in 1939 most likely favoured by the post-earthquake reconstruction that created a demand for professionals. Mayer instead had migrated with his family to Mexico some months earlier and from March 1940 got the role of director of the Instituto de Urbanismo in Mexico City. See Daniel Talesnik Ph.D. diss. ‘The Itinerant Red Bauhaus, or the Third Emigration’ at Columbia University, 2016, and ‘Moving Away to the Other End of the World. Reflections on the Letters Between Tibor Weiner and Hannes Meyer from the DAM Archive’ in Bauhaus-Imaginista.org.

outlined in Hitchcock's 1947 article in the work of Albert Kahn, since an even more advanced bureaucratic organization based on non-hierarchical, open and flexible workflow could obtain and manage many commissions. This form of horizontal work performed through questioning, dialogue and multidisciplinary collaboration to solve real problems, had a pedagogical derivation from each partners experiences in the role of architect-educator. But above all, as said, this same form of work led to the office dissolution with each of the partners professional commitment progressively usurped by public interests within the state bureaucracy: academic like in Carlos Bresciani's Valparaiso experience, and political like in Castillo Velasco's as rector and mayor. Furthermore, these experiences outside the office contribute to the moment in which the project of modernity promoted by Chilean governments was about the most radical in Latin America in terms of housing, planning and of course education policies to the point of generating intersections with South American intellectuals such as Paulo Freire and Ivan Illich who would affirm their revolutionary thinking only in the early 1970s.

Without detracting from the influence of the 'technological image' propagated by the Universidad Técnica del Estado which evidently places the BVCH proposal within the canons of *literal* transparency, the campus liberated ground in continuity with the city was obtained in Santiago by increasing the spatial articulation in such an ambiguous and complex way that above-ground interpenetrations of narrow blocks stimulates thinking about *phenomenal* transparency. The unscrupulousness also admitted by authors themselves in interpreting modern architectural discourse,⁹⁶ places this project on the same domain as Rowe and Slutzky essay: the internal critique of modern postulates in the aftermath of the WWII, with a high degree of experimentation facilitated by a peripheral position, and perhaps for this very reason a privileged position. As an alternative to the Tucuman monument, the two Chilean campuses speculate on the opportunities of a narrow block to reduce the university 'protected space' and project academic life outwards, also using a discrete element to organize the formal structure of the empty liberated ground.

Finally, as Duhart's urban vision responded to the inherited at the scale of the city of Concepción, also BVCH develop their urban vision on the basis of a pre-existence: their own project for Unidad Vecinal Portales where the multiplication and stratification of the ground, together with the compromise between circulation and inhabited space were already at work before UTE campus. For which, not occasionally, BVCH reserves an unforeseen and disproportionate

96 See Eliash (1990), p. 209.

space to develop relational skills rather than merely fabricate a technically specialized subject trained inside steel-and-glass transparent cases with industrial appearance. Not surprisingly, the high degree of advanced experimentation in Chile at the time paves the way for the third episode with Universidad Católica shaping its own educational project around the revolutionary concept of 'condicionalidad arquitectonica', materialized in the new Campus San Joaquin, in the outskirts of Santiago.

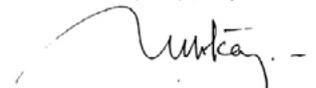
It appears to me that there is every cause for satisfaction with the results obtained to date. In this incredibly short period of time, forces have gathered which are substantial no matter what measure-stick is applied. These forces have been directed toward a single purposeful goal: the radical change of a Latin American University from a loose aggregate of professional schools to a close-knit campus, on which knowledge can be acquired for its own sake, institutional flexibility will be possible and professional careers are diversified - all within a framework of real academic freedom and a spirit of free enterprise. (Interview; XVII - XXI)

In the same short period of time concrete steps have been taken to put these plans into operation and the necessary preliminary contacts made to ensure outside future financial and technical cooperation. Most important of all, the ideas represented and applied at Concepción are also spreading to Santiago. Undeniable proof of this is the ~~announcement~~ ~~action~~ of the Rector of the University of Chile -

the Nation's control-university - to integrate his thinking and planning with the ideas proposed and carried out at Concepción. There are no illusions as to the difficulties involved in successfully penetrating the existing structure of the State University of Chile. Conditions in Santiago are certainly quite different from those found at Concepción. Nevertheless, the utility to all of permitting uniform thinking on university organizational matters to permeate the entire structure of Chilean higher education cannot be overstated. For, if it should be possible to establish such uniform thinking and succeed in some measure to apply these concepts in Chile, an invaluable precedent will have been set. It will prove to other countries of this region that diversification of higher education, liberation from professional domination and flexibility of instruction can be made to work in Latin America just as these concepts have come to work with great success in Europe and the United States.

I can only reiterate again my fervent hope that UNESCO will act speedily and successfully toward the implementation of my recommendations to you, by incorporating the "Concepción Experiment" among its own permanent technical assistance projects.

Very truly yours,



Rudolph P. Atcon

cc: Rector David Stitckin B.
Dr. Osorio-Tafall
Dr. Malcolm Adiseshiah

FIG. 116
Letter from Rudolph P. Atcon to Mr. R. Galindo (Chief Bureau of relations with Member States UNESCO) and Rector David Stitckin, 7 January 1958.

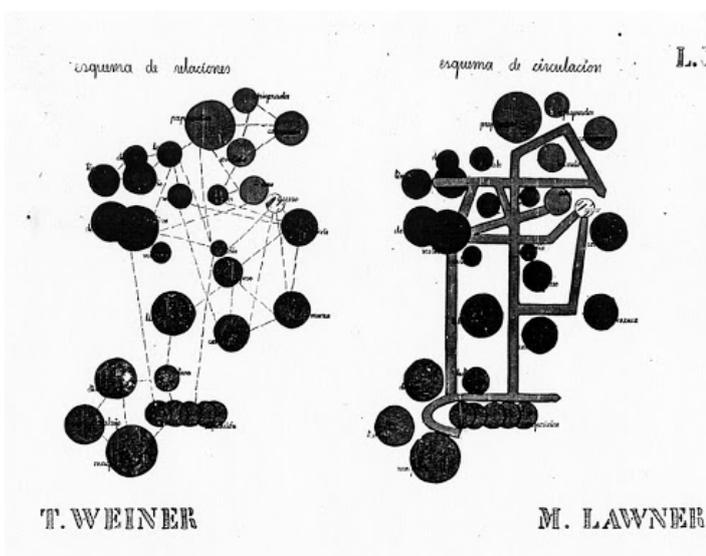


FIG. 117
Scheme of relationships and scheme of circulation by Miguel Lawner as student of Tibor Weiner's Architectural Analysis class (1946).





FIG. 118

Universidad Técnica del Estado final result is a compenetration of transparent and solid volumes that inaugurated the multiplication and stratification of urban ground.

Fondos del Archivo Patrimonial del U. de Santiago de Chile.

Chapter 3

How (difficult it is) to recognise and read mat-building.

'Condicionabilidad arquitectónica' at Universidad Católica de Chile campus San Joaquín

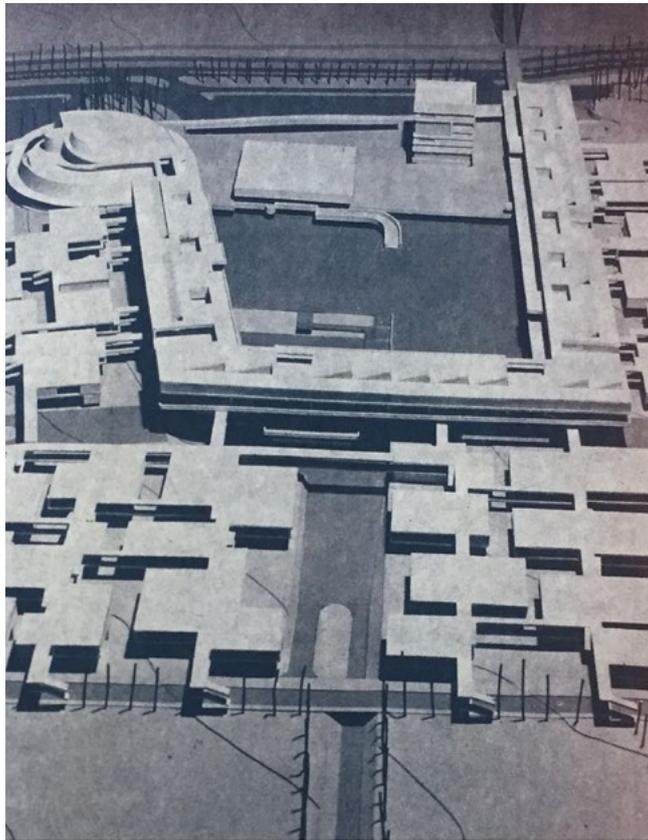


FIG. 119
Campus San Joaquín (1963).
Archivo de Originales Archivo de Originales.
FADEU. Pontificia Universidad Católica de Chile

ABSTRACT (ITA)

Nel 1959, mentre in Cile è già in corso la costruzione dei due campus della Universidad de Concepción e della Universidad Técnica del Estado accomunati dalla liberazione del piano terra, il contrasto generazionale presso i CIAM diventa esplicito con i giovani del Team X che ne decretano il decadimento in occasione dell'ultimo congresso ospitato a Otterlo, Netherlands. Le giovani teste calde si impadroniranno della scena architettonica internazionale, impegnati soprattutto nella florida stagione di concorsi per le nuove università europee fin dai primi anni '60 grazie ai quali stabilirono i principi essenziali del nuovo paradigma progettuale: cambiamento, crescita e indeterminatezza. Il Capitolo 3 offre uno sguardo laterale su questa vicenda, con il progetto vincitore dalla nuova Ciudad Universitaria della Universidad Católica de Chile che irrompe nella scena locale facendo ricorso a una soluzione radicale e inedita che stimola il confronto con i casi esemplari della stagione appena descritta, segnata dalle immagini delle megastrutture territoriali concepite per Bochum (1962), Berlino (1963) o Dublino (1964), con un contributo dell'Italia per nulla secondario.¹

La Universidad Católica annuncia il concorso di progettazione per il nuovo campus universitario nell'area di San Joaquín, a sud della città di Santiago, nel febbraio del 1962. Nello specifico, si tratta di un concorso interno aperto ai professori della scuola di architettura che elaborano le loro proposte da una posizione particolare, ovvero come dipendenti dell'università chiamati a contribuire alla 'spazializzazione' del processo di rinnovamento della struttura organizzativa e burocratica a cui appartenevano, alla ricerca di una soluzione che per soddisfare i requisiti di unitarietà, interconnessione e flessibilità espressi nel bando, prediligeva il concetto di 'condicionalidad arquitectonica, más que arquitectura'.²

L'ipotesi di Germán Brandes, giovane architetto cileno che insegna nel laboratorio di progettazione del secondo anno, sperimenta un'evoluzione estremamente radicale della forma architettonica esplorata a una scala inedita, quella della città, il cui grado di sperimentazione e complessità richiamava in maniera sorprendente alcune delle proposte menzionate che si misuravano sulla capacità di istigare la moltiplicazione e intensificazione di interazioni informali e spontanee dentro gli ambienti accademici. In questo contesto, la proposta di Germán Brandes che connette una struttura ramificata, estesa e sospesa sul suolo (per le attività didattiche) a un grande blocco a C monolitico e terrazzato (per le attività collettive), assume i tratti di un esponente periferico sottostimato ed escluso dal dibattito internazionale sul nuovo paradigma progettuale, che avrebbero trovato nella definizione di mat-building di Alison Smithson o in quella di groundscraper di Shadrach Woods alcune delle metafore decisamente più frequentate in ambito occidentale. Tuttavia, la stessa condizione periferica fornisce al caso San Joaquín – come anche per tutti gli altri episodi che tratteggiano la traiettoria descritta in questa tesi – uno spazio privilegiato di riflessione più approfondita dello stesso paradigma. Con la dimensione locale che da mero contesto di ricezione di un'idea prevalente diventa fattore determinante nel mediare criticamente gli input provenienti dai centri di distribuzione ufficiale del dibattito. In questo senso, Germán Brandes impersona forse la variante più convenzionale di architetto-educatore delineata in questa ricerca. Rinunciando alla complicità con la professione che aveva certamente contraddistinto il ruolo di Emilio Duhart e BVCH descritto nel precedente capitolo, Brandes opera esclusivamente nel contesto locale come dipendente dell'università a cui dedica la sua intera carriera, lavorando al progetto del campus San Joaquín fino al 1978

al fianco della Commissione Edilizia della Universidad Católica cercando di difendere i principi da lui formulati nel concorso del 1963 dai ripetuti aggiustamenti richiesti. Tra questi principi che regolavano la complessa e ambiziosa proposta, si distingueva l'introduzione di un sistema ordinatore ottenuto da una sequenza di anelli concentrici che conducevano dal bordo dell'impianto orizzontale, ramificato ed espandibile, al suo centro denso e monolitico sviluppato verticalmente. L'aspetto interessante risiede nel fatto che la sopravvivenza di un ordine gerarchico combinato a sistemi di relazioni aperti e flessibili, era il tema centrale e diviso del colloquio megastrutturale intrapreso dai protagonisti di quella stagione, con il campus San Joaquín ripositionato in quel dibattito per l'elevato grado di appropriazione, manipolazione e sperimentazione spesso sottostimato rispetto all'immaginario rivoluzionario e anti-istituzionale comunemente associata all'America Latina.

Da questo immaginario viene colpito anche Giancarlo De Carlo che nel 1994 visita la Ciudad Abierta, l'esperimento cileno di autoisolamento di studenti e professori della scuola di Valparaíso che nel 1971 avevano iniziato a costruire il loro insediamento universitario nella spiaggia di Ritoque come alternativa stanziale al progetto educativo nomadico che li aveva contraddistinti fin dalla metà degli anni '50.³ Installazioni effimere e performance creative davano vita a un laboratorio sperimentale guidato dai suoi promotori, l'architetto cileno Alberto Cruz e il poeta argentino Godofredo Iommi, dove il pensiero architettonico coagulava spontaneamente in assenza di principi regolatori formali, e deliberatamente sottratto a qualsiasi impegno di carattere politico nei confronti della società esterna alla comunità. Se da un lato la matrice esperienziale del progetto educativo di Valparaíso aveva comprensibilmente catturato l'attenzione di De Carlo, impegnato fin da subito come promettente allievo di Rogers nella elaborazione di un pensiero critico nel campo dell'educazione, è altrettanto comprensibile che l'autoisolamento privato di qualsiasi possibilità di azione politica sulla realtà potesse provocare in lui delle perplessità.⁴ In questo senso, il contributo di De Carlo si deve infatti alla sua analisi critica dei sistemi organizzativi dell'istituzione universitaria ancora governati dall'autoritarismo, e ai conseguenti tentativi di istigare modalità di apprendimento alternative che vanno dalla costellazione di interventi puntuali e multi-scalari nel caso di Urbino (iniziata nel 1952), alla struttura universitaria che esplora la macro-scala territoriale nel concorso per il nuovo University College of Dublin (1964).

In conclusione, l'analisi progettuale compara l'episodio periferico di San Joaquín con un caso esemplare di quella stagione, la Free University di Berlino. Non sulla base delle rispettive premesse che risultavano chiaramente contrapposte se si pensa che il progetto di Germán Brandes esplorava le potenzialità della megastruttura mantenendo un sistema ordinatore gerarchico, mentre Candilis-Josic-Woods scommettevano su quelle stesse potenzialità per eliminare ogni forma di gerarchia. Al contrario, l'analisi è condotta guardando allo stadio più recente della loro evoluzione progettuale, osservando come entrambe le proposte siano state progressivamente semplificate, attenuate e mitigate proprio nei loro rispettivi punti di forza. Nel caso cileno, che manteneva un sistema ordinatore nel passaggio dal bordo esterno ramificato e fragile al monolitico blocco a C, l'unica porzione costruita dopo ripetuti aggiustamenti e semplificazioni non ha avuto la forza di concretizzarsi come progetto urbano e contrastare una logica di spartizione dei lotti che ha trasformato il campus San Joaquín in una costellazione di oggetti architettonici autonomamente risolti.

Rispetto a questo scenario, resta sullo sfondo una terza proposta di De Carlo elaborata per l'Università di Pavia (1972-1975), dove l'idea di un sistema educativo esplosivo e disperso nella città assume i tratti di una controffensiva rispetto al destino riservato a San Joaquín, o più in generale come strategia urbana definitiva e per incidere concretamente sulla realtà esterna. Una nuova alleanza tra università e città iniziava ad apparire come paradigma dirompente, con il progetto educativo che assume una connotazione di informalità adattata alle logiche urbane che Enrico Tedeschi, architetto italiano che nel 1948 arriva in Argentina insieme a Rogers e il gruppo di italiani che partecipano all'esperienza di Tucumán, interpreta ed esplora nel suo nuovo progetto per il campus della Universidad de Mendoza (1960) avanzando il pensiero sulle implicazioni formali dell'università dissolta nella città.

NOTE

1. Uno degli studi più completi su questa stagione di concorsi è offerta da Stefan Muthesius. *The Postwar University: Utopianist Campus and College* (New Heaven: Yale University Press, 2000). Sul contributo italiano si veda il recente lavoro di Francesco Zuddas, *The University as a Settlement Principle. Territorialising Knowledge in Late 1960s Italy* (London: Routledge, 2019).
2. Il documento del 1965 intitolato "Informe complementario del anteproyecto de plano regulador para el conjunto universitario de la Universidad Católica de Chile", sintetizza le prescrizioni del bando di concorso, i risultati dei vari concorrenti e lo stato di avanzamento del progetto vincitore per il nuovo campus San Joaquín affidato all'architetto e professore cileno Germán Brandes (consultato presso Archivo de Originales. FADEU. Pontificia Universidad Católica de Chile).
3. Visita riportata in Giancarlo De Carlo, 'L'utopia di Ritoque', "Spazio e Società" (no.66, 1994). La letteratura sulla Scuola di Valparaíso è piuttosto ampia e tradotta in più lingue. Il testo principale risulta ancora essere *Scuola de Valparaíso. Ciudad Abierta* (Santiago de Chile: Contrapunto, 2003) a cura di Raúl Rispa con saggi di Rodrigo Pérez de Arce e Fernando Pérez Oyarzún. Si veda Ann M. Pendleton-Jullian. *The Road That Is Not a Road e the Open City, Ritoque, Chile* (Cambridge Mass.:MIT Press, 1996) e Patricio Del Real, "Wandering Around. Architecture as Threshold between Territory and Poetry", in "OASE" n. 80, 2009.
4. Tra i primi contributi critici di De Carlo sulla questione educativo, un articolo intitolato 'La Scuola e l'Urbanistica' compare in "Domus" (no.220, 1947), ancora diretta da Rogers poco prima del suo viaggio a Tucumán.

3.1 *'Condicionalidad arquitectonica'*
The (in)formal basis of the renovated Universidad Católica de Chile

By the mid to later 1960s we meet, in the advanced design and critical circles, a vast conglomerate of problematisations. Virtually everything that has been discussed so far was put into question. There was to be the end of the grand gesture, the end of any certainty in planning, and even, for some, the end of university as a self-contained institution. ¹

Stefan Muthesius, 2000

The social, political, and economic circumstances of the post-war era influenced professional discourses on the future of the university campus. University expansion occurred during a favorable climate that encouraged growth and change even in a peripheral context such as that of Chile and Argentina where ideas of social welfare and higher education accessible for all were emerging in alliance with technological progress. In response to this perspective of evolution of social norms and students preferences, the university campus was in the midst of a period of transition with many campuses reaching the size and complexity of real cities. If on the one hand there was pride in the results obtained by the heroic modernism represented by those iconic examples like Mexico City and Caracas gigantic complex in Latin America, on the other it was the inability to control future growth which led to the crisis of post-war masterplans and the explicit introduction of concepts such as *change* and *flexibility* in campus planning, as already demonstrated in Tucumán's experience (1947-1955) where the new Ciudad Universitaria conceived by the heterogeneous group of Italians and Argentines forming the collective of architects-educators (IAU) worked for an alternative idea of the modern monument to education (see Chapter1).

In the Chilean national panorama, instead, the concept of university campus significantly differs from canonical examples and monumental complexes from South American capitals, with the construction of the first modern campus dating back to 1921 at Universidad de Concepción. Although this was a fairly early example in the region, the period of greatest importance in campus design

¹ Stefan Muthesius. *The Postwar University: Utopianist Campus and College*. New Heaven: Yale University Press, 2000, p. 268.

corresponds to the mid-50s with the increasing university population sustained by the alliance between Chilean state and technological progress. In fact, it was in these years that the concern for ‘Unidad Universitaria’ arose for the first time,² that is bringing together the largest number of university units in a single complex system like in the two 1957 concurrent projects of Universidad de Concepción expansion plan, by Emilio Duhart, and Universidad Técnica del Estado in Santiago by BVCH (see Chapter 2).

However, the radical move of complete liberation of the ground that united these two Chilean episodes in the name of uninterrupted continuity with the city was about to experience the highest degree of complexity, rather surprising for that apparently peripheral context underestimated by the post-war modern architectural discourse. While the two campuses under construction responded to the will of Chilean universities to incorporate flexibility, adaptability and unpredictability to instigate the relational component in their educational projects, Team X members in Europe were bringing these topics to the tables where the official distribution of debate was still taking place. The young insurgents calling themselves Team X to mark their emergence at Dubrovnik meeting (1956), broke from CIAM on ideas such as the need for a *new monumentality*, preferring the ideas of growth, change, and mobility advocated by other popular movements of the time envisioning a urban image that definitely replaces monuments and axes with human interactions. Despite this was an aspect that had already entered the CIAM discourse about ten years earlier, thanks to the internal criticism largely conducted by Ernesto Nathan Rogers’ assumptions on the heart of the city and his pedagogical mission, Team X established themselves as the new prophets of modern architecture at a final congress held in Otterlo (1959), where they jubilantly celebrated their parent’s relegation to history.³

Thus, Team X played a pioneering role in exploring the concept of *change* and *growth* with architecture itself incorporating circulation and movement to create a new sense of human integration. This not only broke with CIAM rigid separation of the four functions, but it clearly barged in the formal argument on the fifth *civic* function on which post-war CIAM had most invested for its revision. All Team X members – Aldo van Eyck with Alison and Peter Smithson among

2 The notion of ‘Unidad Universitaria’ is reported on “AUCA” no. 8, 1967. See also Chapter 2.

3 In his lecture titled ‘Architectural Fashions and the People’ given at Harvard in 1959, Sert referred to the group of *youngers* saying that the post-war discourse on the ‘heart of the city’ already amounted to a substantial revision of interwar functionalism and a new direction for modern architecture. In Eric Mumford (ed.), *The Writings of Josep Lluís Sert*. New Haven: Yale University Press, 2015. For a deeper examination of this transition moment of post-war CIAM discourse see Oscar Newman. *CIAM ‘59 in Otterlo*. Stuttgart: Karl Krämer Verlag, 1961.

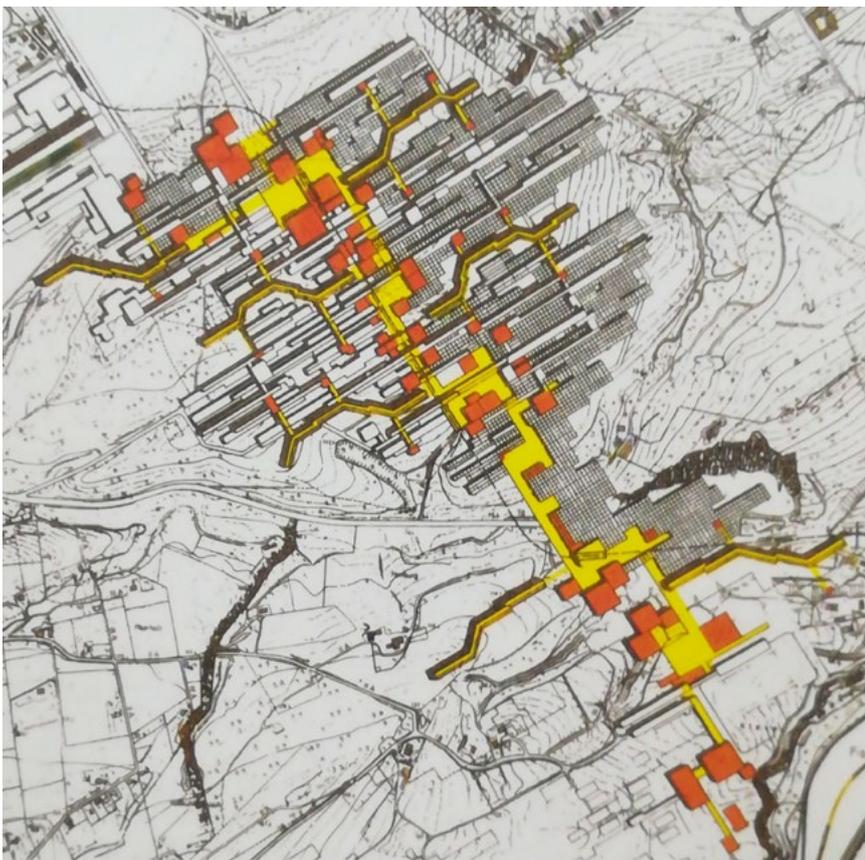
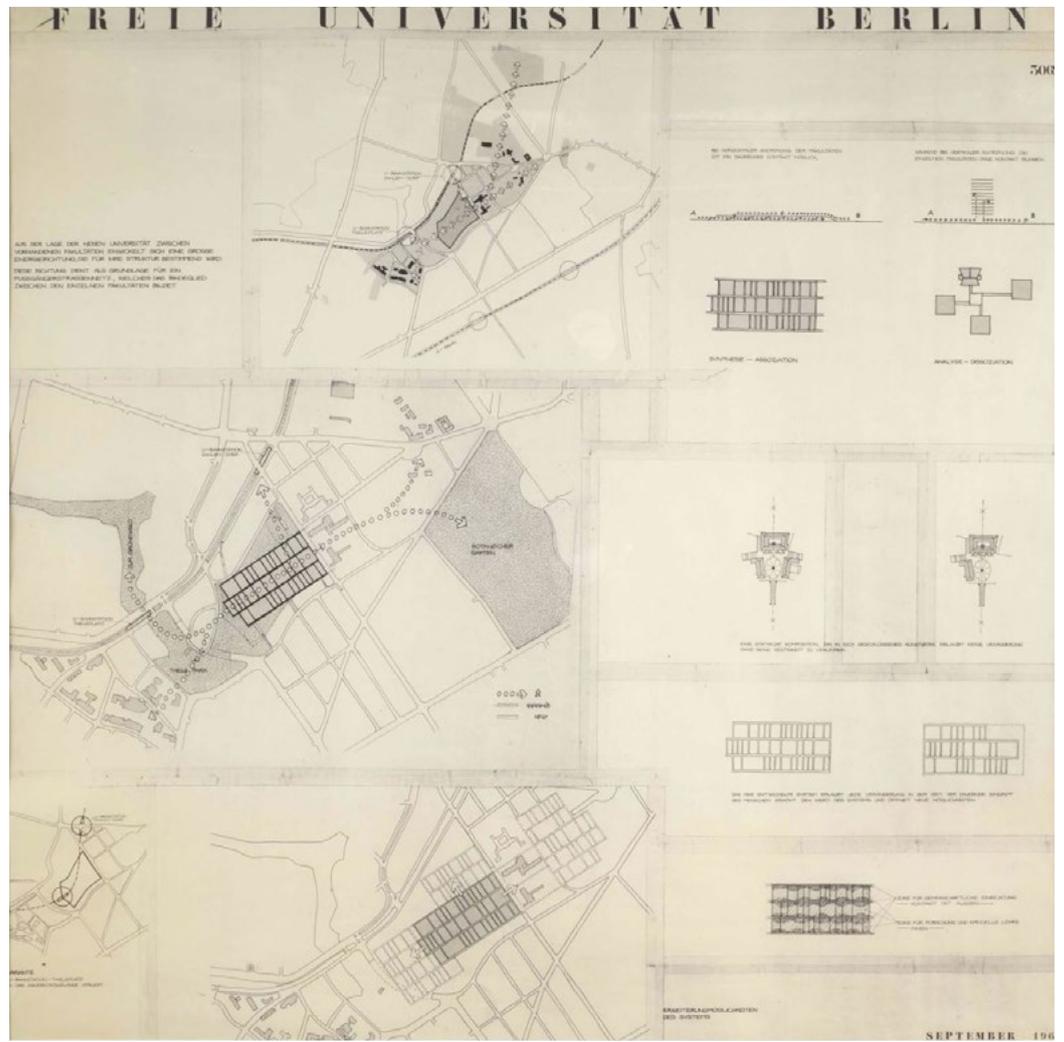


FIG. 120
The great season of design competitions for postwar European universities begins in early 1960s including some well-known examples such as the the University of Bochum in 1962 (left) and the Free University of Berlin in 1963 (above). Both images are from Candilis, Josic and Woods, with Berlin proposal winning the first prize.

the protagonists – were required to be practicing architects and have theoretical views aligned with the group’s core values, that is ‘urban re-identification’ by considering contemporary issues through the lens of early modernism.⁴ This furthered, paradoxically, blindly optimistic utopian hopes about architecture as an instrument for social change based on the recurrent argument on how to ‘design a community’.⁵

In this context, *mat-building* became one of the most successful metaphors for envisaging an interconnected system of space, circulation, and program forming an open and flexible armature not to be looked too closely at its detailed language. Admittedly, the written work that consecrates this spatial invention comes after many design experiences had already been advanced, with Alison Smithson praising those process-oriented projects that tell us ‘how to recognize and read mat- building’ in her 1974 seminal article for “Architectural Design” which identified the project for the new campus of the Free University of Berlin as eloquent example, designed by the Paris-based firm Candilis-Josic-Woods in 1963, by then in the second phase of construction.⁶ As noticed by Muthesius (2000), who investigates the end of the great planning gesture associated with post-war university institutions, the ‘net’ or ‘mat’ principle was instigated by three main sources of inspiration.⁷

Firstly, the way in which the grand regular form was replaced in favour of agglomerations of an infinite number of small-scale spaces, where small groups of people can meet. The second ideal was rooted in the concept of *megastructure* which mainly propagated in England and Japan, meant for describing whole new cities or equally applied to large types of buildings that required a complex organization: ‘in a narrower sense, the megastructure dream evolved during the 1960s around the notion of gigantic permanent infrastructure

4 See Sarah Deyong, ‘An Architectural Theory of Relations: Sigfried Giedion and Team X’, in *Journal of the Society of Architectural Historians*, no. 2, 2014.

5 Shadrach Woods published his thoughts in “Architectural Design” (no. 5 1960) and the avant-garde periodical “Le Carré Bleu” no.3 (1962). In his essays, Woods discussed the concepts of ‘stem’ arrangement and ‘web’ explored in Team X conversations, with the latter evoking the shift from geometries to activities as a crucial detachment from the traditionally modern architectural principles.

6 Alison Smithson, ‘How to recognize and read matbuilding. Mainstream Architecture as it has Developed Towards the Mat-Building’, in “Architectural Design” no. 9, 1974, pp. 573-90. As recalled in “Architecture Plus” no.4 (1974), “the Free University Berlin began in rebellion, and its 25-year history has been one of continual controversy. It was formed in West Berlin in 1948, during the cold war by a group of teachers and students who had left East Berlin Humboldt University in protest against Communist interference. It served 2,140 students in that first year; by 1960 the student body had grown to 10,900; now it is 26,500. Few conventional building systems could have accommodated such growth”, pp.32-51. See also Karl Kiem. *The Free University Berlin (1967-73). Campus design, Team X Ideals and Tectonic Invention*. Berlin: VDG, 2008 (Trans. Mary Pepchinski).

7 See Muthesius (2000), p.271.

with interchangeable temporary utgrowths'.⁸ Although not 'mega', the Berlin university project by Candilis-Josic-Woods was also assumed by Reyner Banham as the 'nearest thing' to a built megastructure, with the British historian trying to justify the label by emphasizing its qualities of modularity and extensibility.⁹ This leads to the third source of inspiration, that is 'indeterminism' as a new planning strategy for the whole. Large educational institutions have in their possession all the ingredients for experimenting with indeterminism, motivated by their increasing need for change and growth powered by the intention to facilitate interdisciplinary collaboration and relational skills like in many 'new universities' of the 1960s, including the FU Berlin project that in fact was not intended as a work of architecture, but as a 'ordnungsprinzip' (framework) or a 'method into which the university can develop'.¹⁰ A great season of international competitions was inaugurated in Europe, calling upon many Tam X members to take a leading role in the development of a new modernity, with university and the city clearly assumed as a platform for a democratic exchange: Frankfurt City Center (1961), Ruhr Bochum University (1962), FU Berlin (1963), Dublin University College (1964) – accompanied with illustrious commissions such as Denys Lasdun University of East Anglia (1962) and Le Corbusier Venice Hospital (1965). These are all projects concentrated in the first five years of the 1960s,¹¹ that is exactly when the authorities of Universidad Católica de Chile were preparing the competition brief for the new campus in San Joaquín, Santiago.

On April 1961, in fact, the Consejo Superior of the Pontificia Universidad Católica de Chile agreed to transfer the university's branches to a designated site, thus in February 1963 a design competition was organized calling for proposals that will be evaluated and selected on the basis of a very peculiar quality. That is, to be able of establishing what might be called:

“condicionalidad arquitectónica, más que una arquitectura”.¹²

8 Ibid., p. 272.

9 According to Reyner Banham, 1960s university campuses are the fulfilment of certain urban utopias which, in many other cases, never got off the drawing board. See Reyner Banham, *Megastructure: Urban Futures of the Recent Past*. London: Thames and Hudson, 1976, p.131.

10 Before Alison Smithson called this type of architecture 'mat-building' in 1974, Shadrach Woods had already referred to the Free University of Berlin as a 'groundscraper', whose horizontal organisation provide for greater possibilities of community and exchange compared to the typical skyscraper characterized by segregation between different floors where relationships are tenuous, almost fortuitous, passing through the space-machine-lift. In Shadrach Woods, *Candilis-Josic-Woods: Building for People*. New York: F.A. Praeger, 1968, p. 208.

11 An in-depth comparative study between design strategies under the mat-building category comes from Débora Domingo-Calabuig, Raúl Castellanos-Gómez and Ana Ábalos Ramos, 'The Strategies of Mat-building', in "The Architectural Review" no. 1398, 2013, pp. 83-91.

12 The university report titled "Informe complementario del anteproyecto de plano regulador para el conjunto universitario de la Universidad Católica de Chile" (1965), summarizes the requirements from

The perfect synchrony between this intriguing definition and those radical speculations underway in Europe at that time might sound exceptional. Especially, if compared to the abovementioned FU Berlin's 'method into which the university can develop'. Unless we take into account what was already happening in Chile in the mid-1950s, with the two campus projects of the Universidad de Concepción and Universidad Técnica del Estado spatializing their educational project of the two public institutions through a single radical move: liberate the ground, and make the formal structure more *transparent* by using narrow blocks in discrete disposition or volumetric interpenetrations (see Chapter 2). Most likely, these were the certain antecedents for the new campus project of Universidad Católica, since they were stimulating the process of internal revision of the modern architectural discourse from a peripheral position with respect to that of CIAM leaders, as shown so far, but also with respect to that of self-proclaimed holders of 'true modernism' such as Team X members.

It should be remembered here, in fact, that Universidad Católica had been a privileged laboratory for academic reforms from the mid-1940s where collaborative, dialogical and relational practices have been incorporated into pedagogical methods at the service of real problems, with the authors of the aforementioned university projects – Emilio Duhart and BVCH partners – actively participating in this process as students. To the point that the figure of architect-educator they would interpret during their career was shaped around the profound complicity between profession and academic commitment, resulting in a rather unexpected outcome, that is, to benefit from the highly flexible organization system practiced both in the profession and design studios to be incorporated within the public and institutional bureaucratic apparatus which provided them with strategic roles.¹³

Between 1961 and 1963, it seems that the authorities of the Universidad Católica had decided to seal the incorporation of those practices within their university organizational complex in support of a new educational project:

“We try to avoid the dispersion of scientific work in organizations of different nature such as Institutes, Schools, Departments, Centers,

1963 competition brief, the results of the various competitors and the progress of the winning project for the new campus San Joaquín entrusted to the Chilean architect and professor Germán Brandes. From Archivo de Originales. FADEU. Pontificia Universidad Católica de Chile.

13 It is worth mentioning here that San Joaquín anticipates the election as rector of Universidad Católica de Chile of Fernando Castillo Velasco (C member of BVCH), who will encourage advancements in the project as evidenced in the letters between him and Germán Brandes, even if the economic and political conditions are about to change drastically until the coup in 1973.

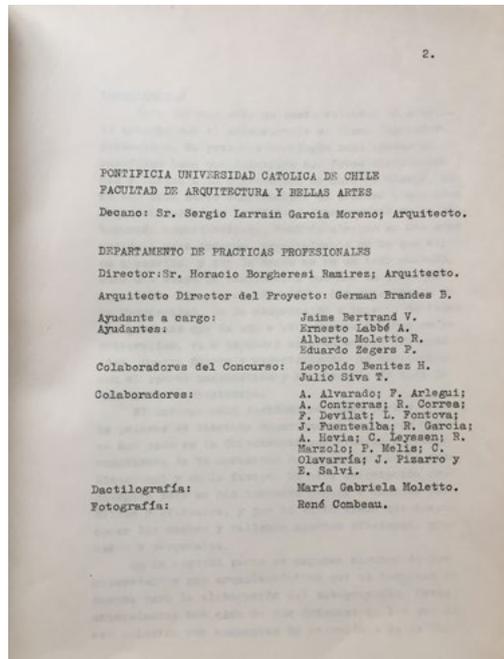
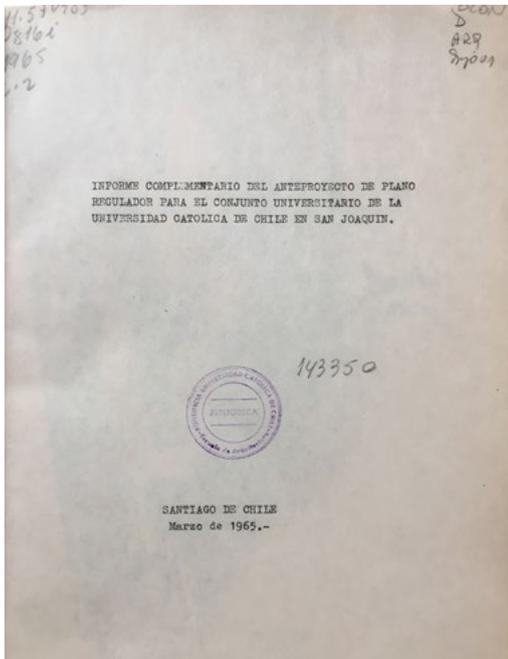
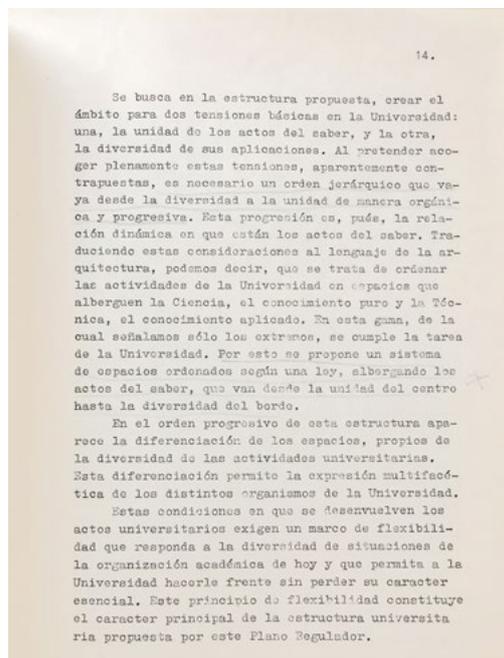
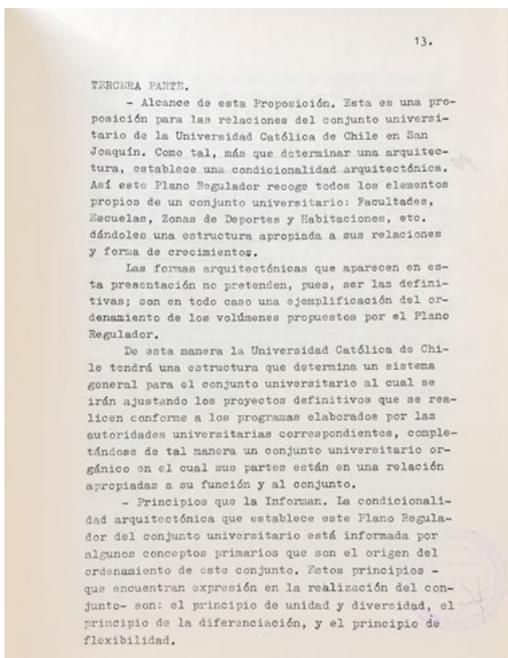
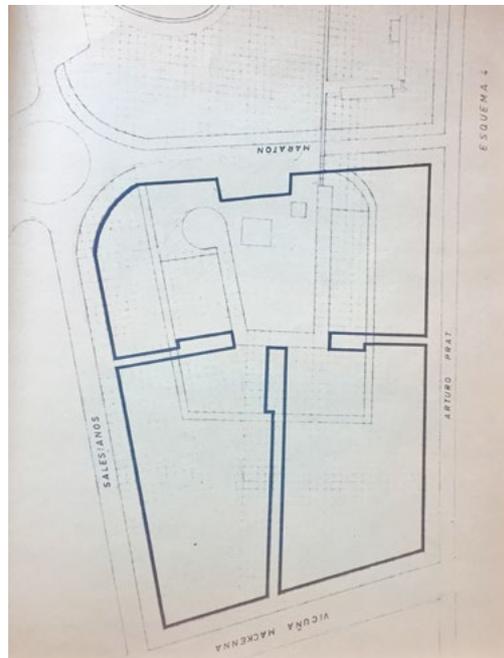
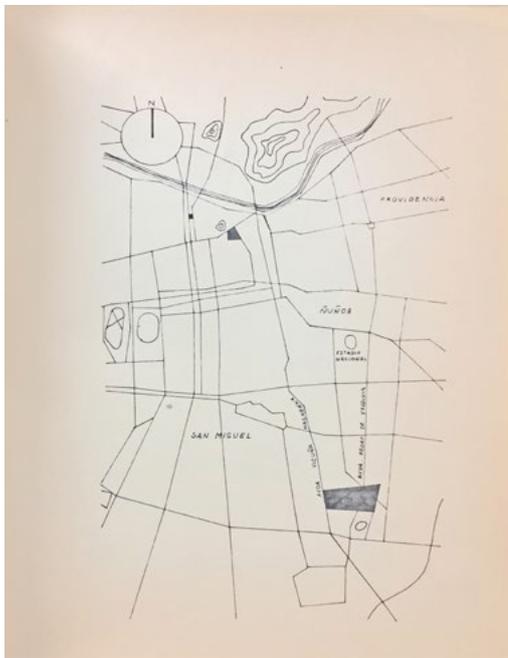


FIG. 122
Extracts from the document
"Informe complementario
del anteproyecto de
plano regulador para el
conjunto universitario de
la Universidad Católica
de Chile" (1965), that
summarizes the brief
requirements and the design
principles of the selected
proposal by architect German
Brandes.
Archivo de Originales.
FADEU. Pontificia
Universidad Católica de
Chile.



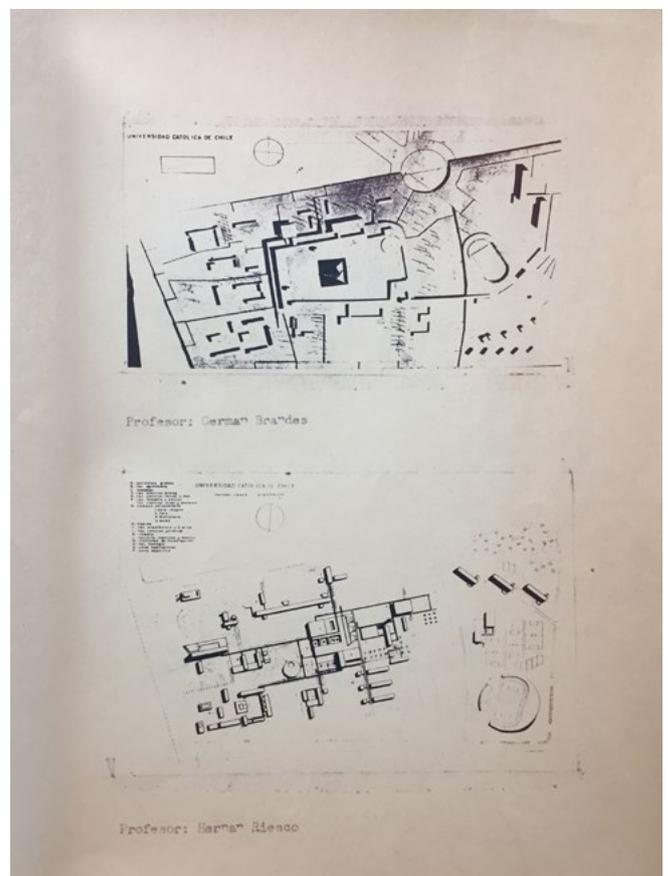
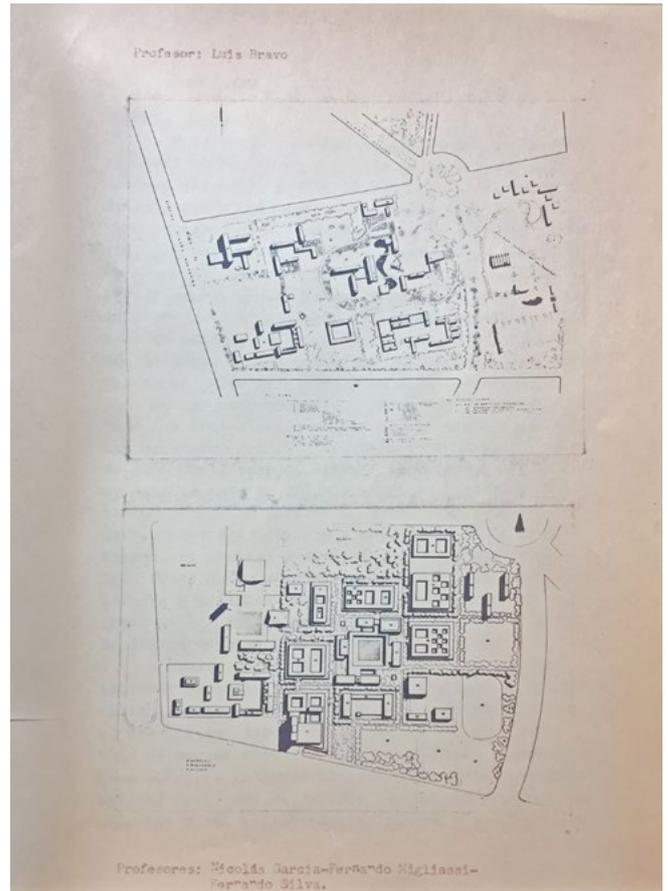


FIG. 123
 Competition entries for campus San Joaquín
 (1963) by teachers from the School of
 Architecture of Universidad Católica: profesor
 Luis Bravo; profesores Nicolás García-Fernando
 Nigliassi-Fernando Silva; profesor German
 Brandes; profesor Herman Riesco.
 Archivo de Originales. FADEU.
 Pontificia Universidad Católica de Chile.

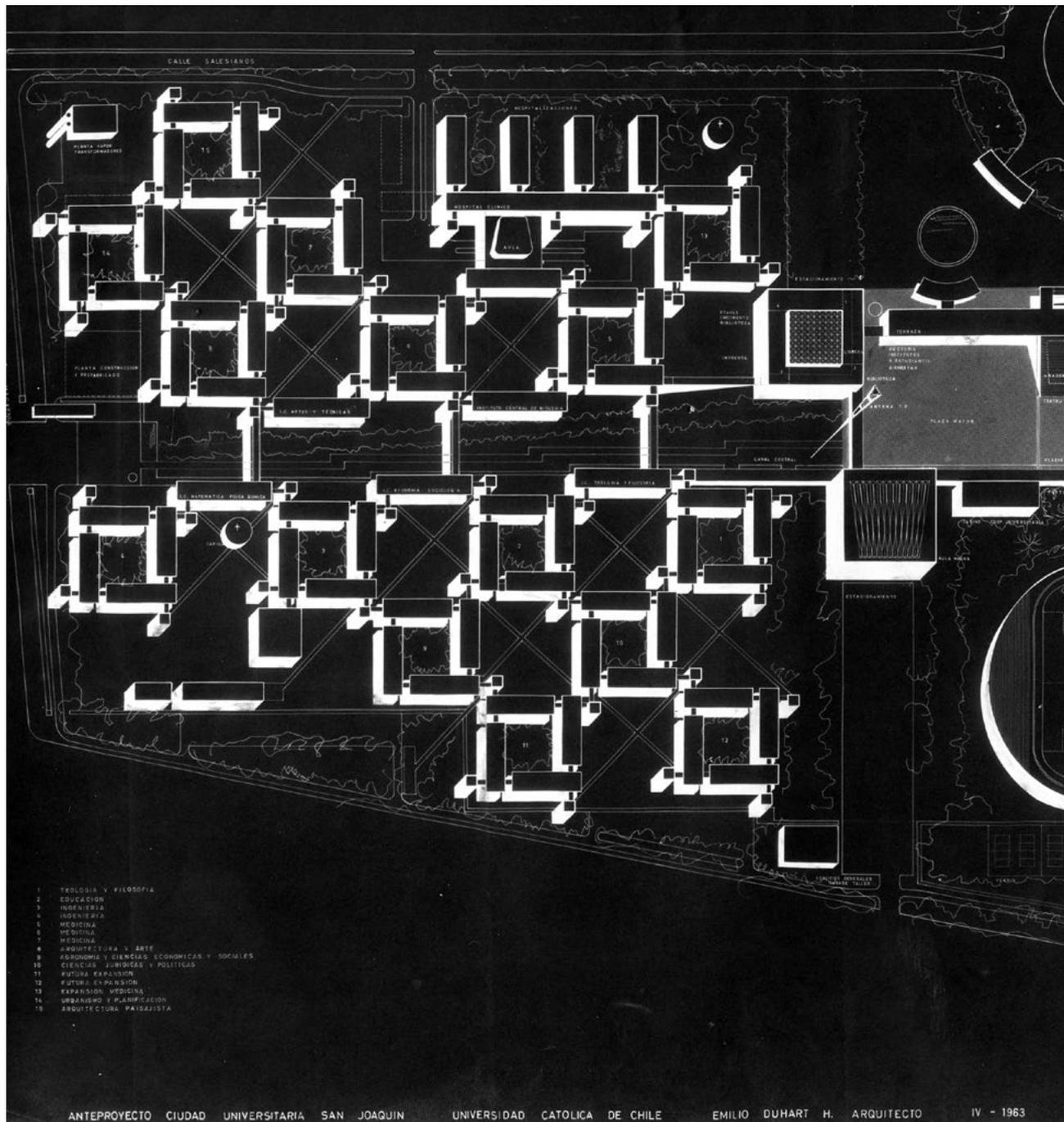


FIG. 124
 Competition entry for campus San Joaquín by the Chilean architect-educator Emilio Duhart (see Chapter 2).
 Fondo Emilio Duhart H.
 Archivo de Originales. FADEU.
 Pontificia Universidad Católica de Chile

duplication and lack of coordination, beside the subordination of science for professional purposes”.¹⁴

To avoid the disintegration of the university bureaucratic apparatus and to counteract the growing professionalization in the field of education, it was decided to launch an internal design competition. Peculiarly, a design competition open to professors who taught in the school of architecture of the same university, and therefore, already introduced within the institutional bureaucratic apparatus reiterating the key message of intending education as a project, in the first instance. Secondly, such a project should have instigated a revolution from within the university institution rather than receiving external contributions, more or less influential, from the lively international debate going on at that time.¹⁵

Therefore, among the submissions for the internal competition certainly could not miss the one by Emilio Duhart, where he furthered his experiment on the repetition and variation of narrow blocks on a larger scale than that of Concepción and without the constraints of a pre-existing plan. Together with Duhart’s proposal, almost all the others entries explored the blurred lines between the unity of the formal structure and its ability to change and evolve. Among these proposal, the one conceived by Germán Brandes (1929-2014), then professor of architectural design studio in the second year, was considered the most convincing for the way it associated ‘la unidad del conjunto universitario’ with a clear ‘ley de crecimiento’.¹⁶

The ‘technological image’ of the previous Chilean campuses and the rhetoric of *transparency* seemed to be widely exceeded by the radically transformed architectural vision of a complex infrastructure at the scale of the city, which not only repositions San Joaquín design episode as an underestimated exemplar of the international debate on mat-building and megastructures, but also enters by right the trajectory described in this research with another experiment on form as unavoidable response to the informal basis of another educational project permeated with flexible, adaptable, interdisciplinary and relational imperatives applied to knowledge production. All concepts that have even entered the common parlance by then, as evidenced in the local press article promoting the project for the new university campus in San Joaquín:

14 Translation by the author from ‘Informe’ (1965).

15 A clear example of this lies in the creation of institutional offices and special commissions belonging to the university bureaucratic apparatus to which this task was assigned, as in the case of Oficina de Coordinadora del Programa de Edificaciones de la Universidad de Chile in 1963 and the Comisión de Planificación Física de la Universidad Católica in 1966. See “ARQ” no. 26, 1994.

16 From ‘Informe’ (1965).

“La Flexibilidad Caracteriza el Anteproyecto para la Nueva Universidad Católica en San Joaquín [...] el proyecto del arquitecto Germán Brandes, ganador del concurso, responde a la organización académica de hoy y también a la imprevisible del mañana”.

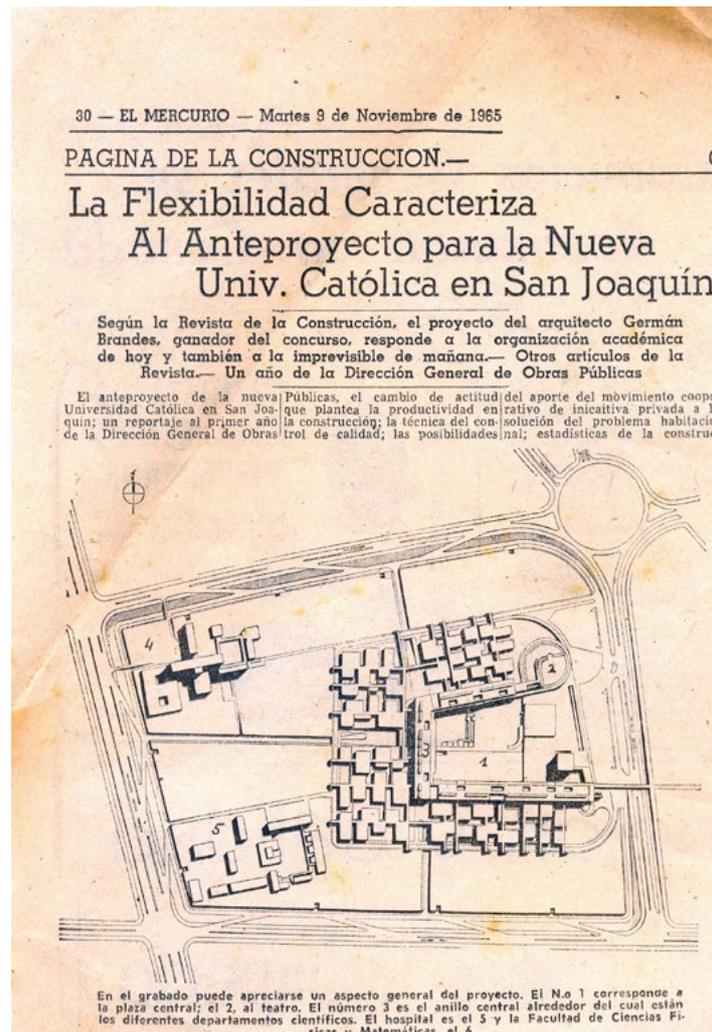


FIG. 125
Extract from the Chilean newspaper
“El Mercurio”,
Tuesday 9 November 1965.
Archivo de Originales. FADEU.
Pontificia Universidad Católica de Chile.

3.2 *On the margins of megastructural colloquium.*
Germán Brandes design proposal for campus San Joaquín in Santiago

Structure, space and organization are among the main categories of analysing and attacking an architectural problem.¹⁷

Alexander Tzonis, 1963

The new organizational structure of Universidad Católica de Chile was the main requirement to be considered from the competition brief, in order to avoid tangible effects, such as the increasingly fragmentation of institutional presence, and intangible effects such as the subordination of knowledge to professional purposes. This last aspect marks a difference with respect to the case of Universidad Técnica del Estado, even though, from the more targeted analysis previously exposed in Chapter 2, it emerged that BVCH architects have critically interpreted the pedagogical mandate embodied in the aesthetic of a 'technical image' by liberating the campus' ground to exercise interpersonal and relational attitudes aimed both inside and outside the academic world. In short, the pragmatic vision of 'saber hacer' (knowing how to do) could not be separated from the social vision of 'saber vivir' (knowing how to live) practiced through openness, interaction, exchange, sharing of ideas and principles: the only way that would have guaranteed possibilities of action to the individual now inserted in the dynamics of mass, or 'grande numero' as Giancarlo De Carlo would have clarified a few years later.¹⁸

All things considered, the project for the new campus San Joaquín refers all questions to the verification of the form. That is, using the pretext of questioning the prevalent educational model to radically advance the experimentation on possible spatial structures. As mentioned in the report (1965), 'condicionalidad

17 Alexander Tzonis, 'Search for a new urbanity: commentary', in "Ekistics", November 1963.

18 In 1968, Giancarlo De Carlo was invited to organise the XIV Triennale in Milan, one of the most important and prestigious cultural events taken as a target by student protests with the architect, at the peak of his career, facing the crowd to start a debate with the students. The Triennale exhibition titled 'Il grande numero' (The great number), which represented the core of the theoretical research of De Carlo during the 1950s and 1960s, was organized around the work of participants such as Arata Isozaki, Aldo van Eyck, Archigram, Alison and Peter Smithson, György Kepes, Roberto Giurgola, Shadrach Woods, UFO, Hans Hollein interpreting the role of individual within a group of individuals. See Luca Molinari, 'Giancarlo De Carlo and the postwar modernist Italian architectural culture: role, originality and networking. In *Team 10 - between Modernity and the Everyday* (pp. 93-105). Proceedings of the conference, Delft University of Technology, 5-6 June 2003.

FIG. 126
Campus San Joaquín (model).
Image from "AUCA" (1967)

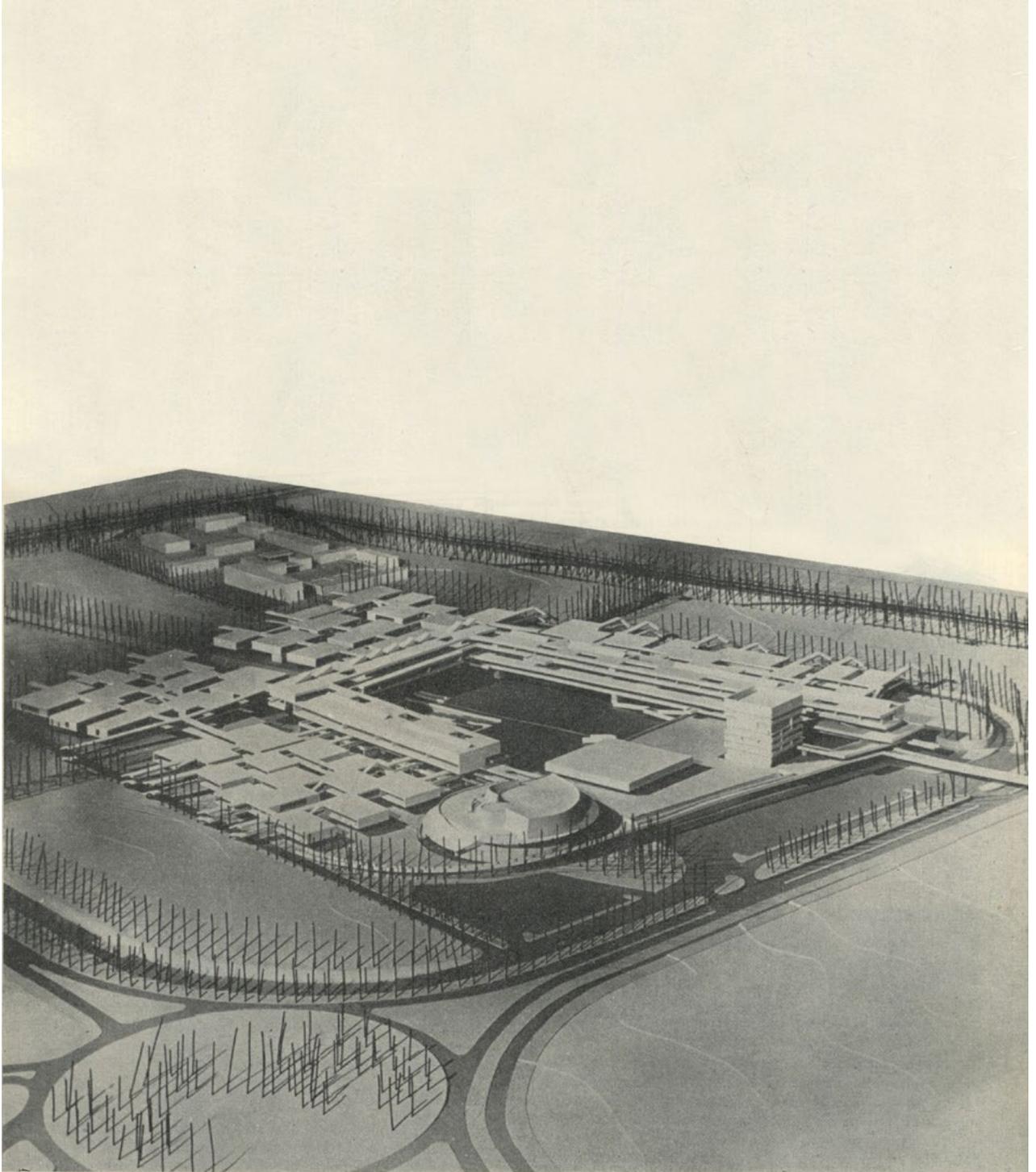


FIG. 127
Campus San Joaquín (model).
Image from "Informe" (1965)

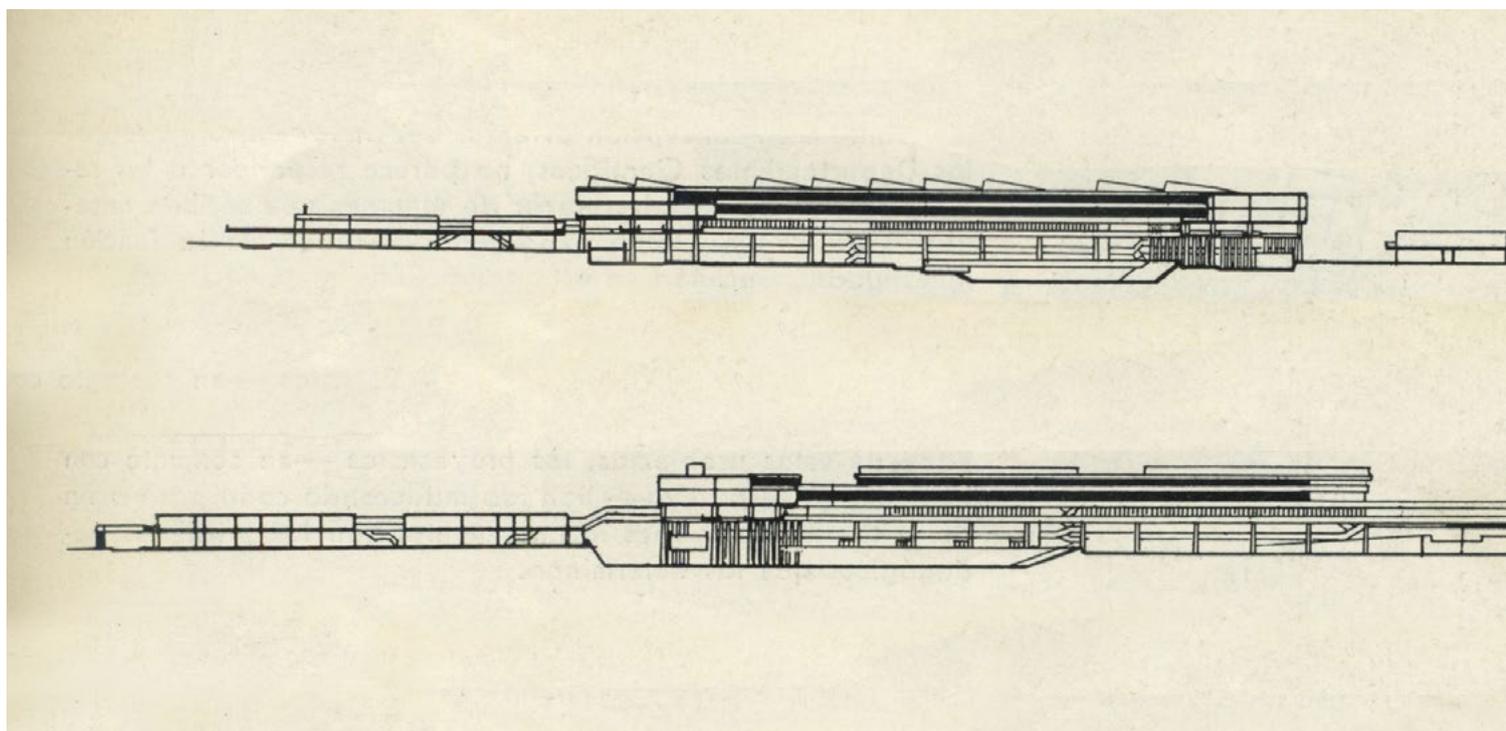
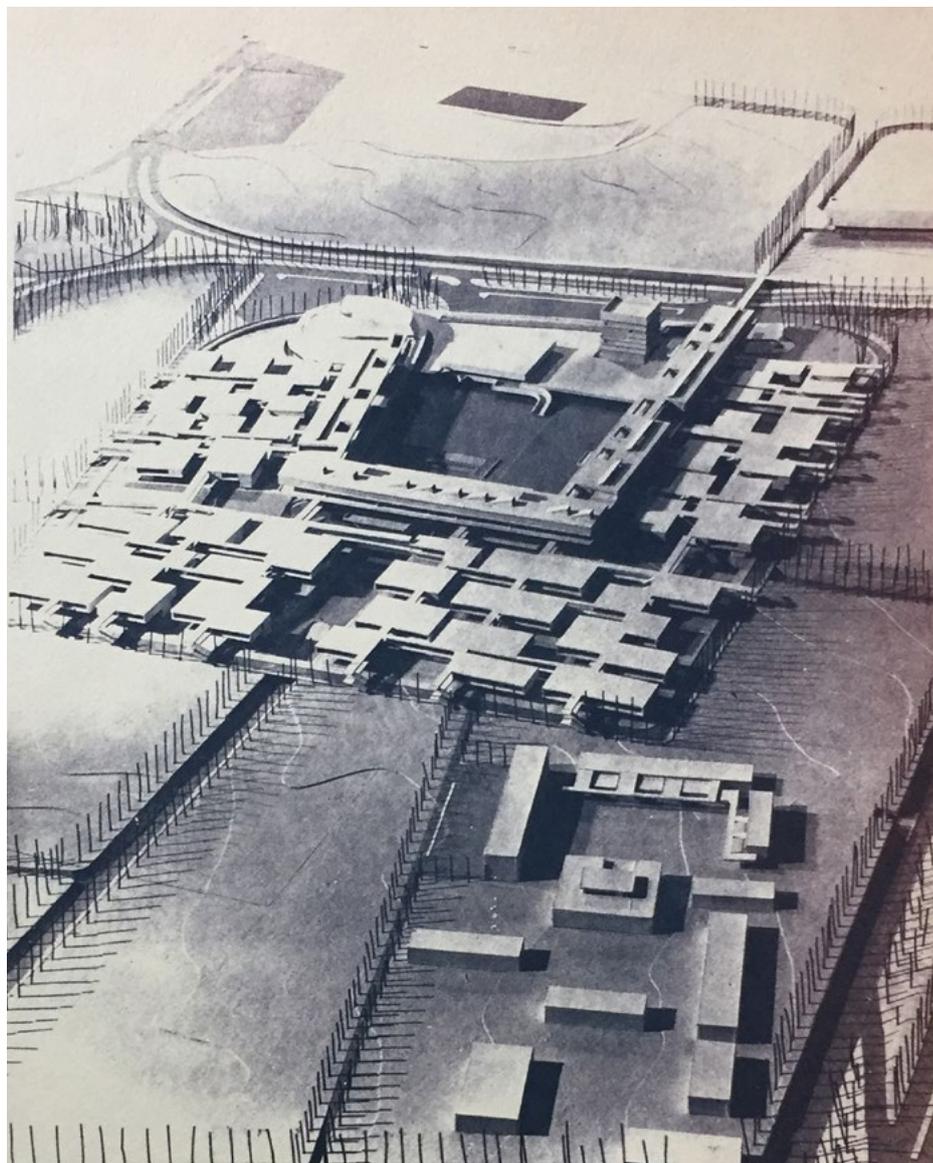


FIG. 128
Campus San Joaquín (site plan and cross-section diagram).
Image from "Informe" (1965)

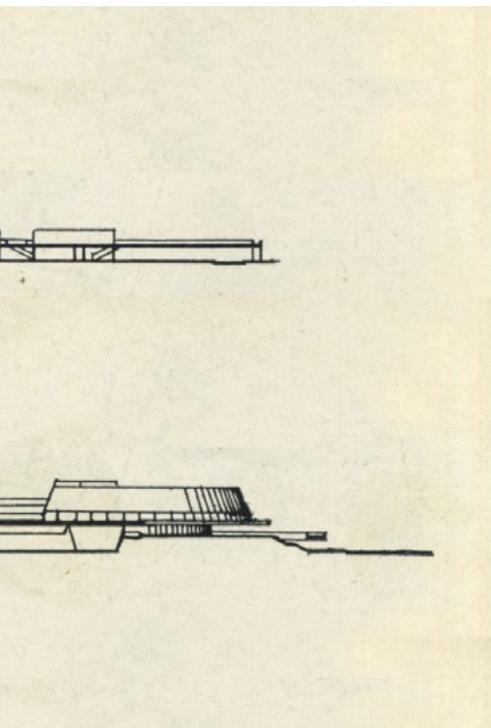
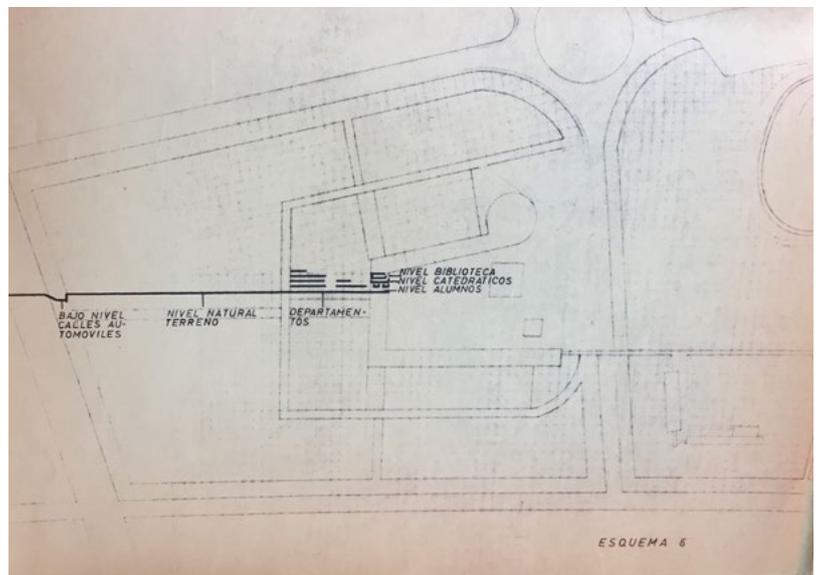
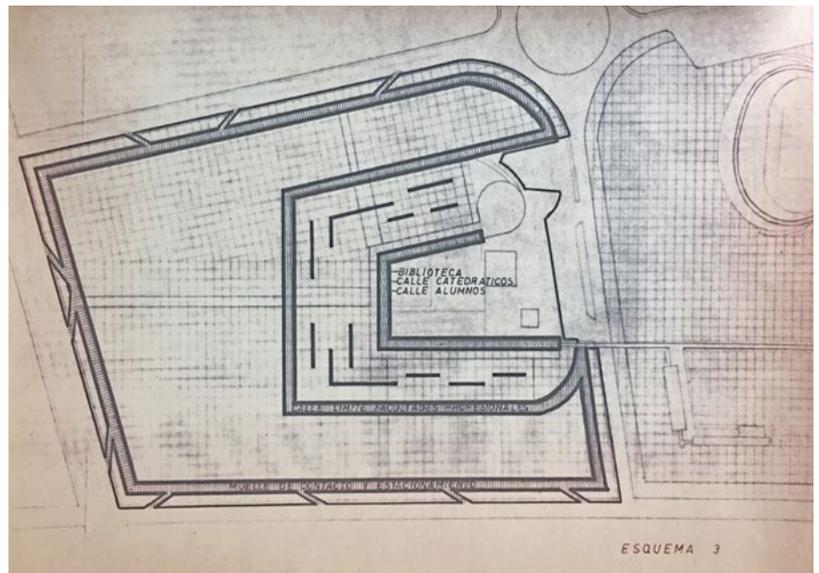


FIG. 129
Campus San Joaquín (sections).
Image from "AUCA" (1967)

arquitectónica' was considered the guideline for interpreting transformations taking place both within the university bureaucratic apparatus and the system of external relationships, expressed in the potential of an open, flexible, adaptable infrastructure:

“Rather than determine an architecture, [the proposal] tends to establish a ‘condicionalidad arquitectónica’ [...] by attributing an appropriate structure both to the relationships [that are generated within the complex] and to the methods of extension. The ‘condicionalidad arquitectónica’ established by this project is informed by some principles that originate in the newly introduced academic system: the principle of *unity* and *variety*, the principle of *differentiation* and the principle of *flexibility*”.¹⁹

Germán Brandes' hypothesis is a large-scale architecture, which best reflects these purposes: architecture city and tend to coincide establishing in this unique relationship a unheard-of urban connotation, even for the most iconic monumental complexes of Latinamerican university cities. The diagram of the new campus San Joaquín, heralded to all effects as the first Ciudad Universitaria in Santiago, consists of a succession and simultaneous overlay of concentric rings, held together by a complex connective network. Its formal structure was defined by the combination of three architectural components:

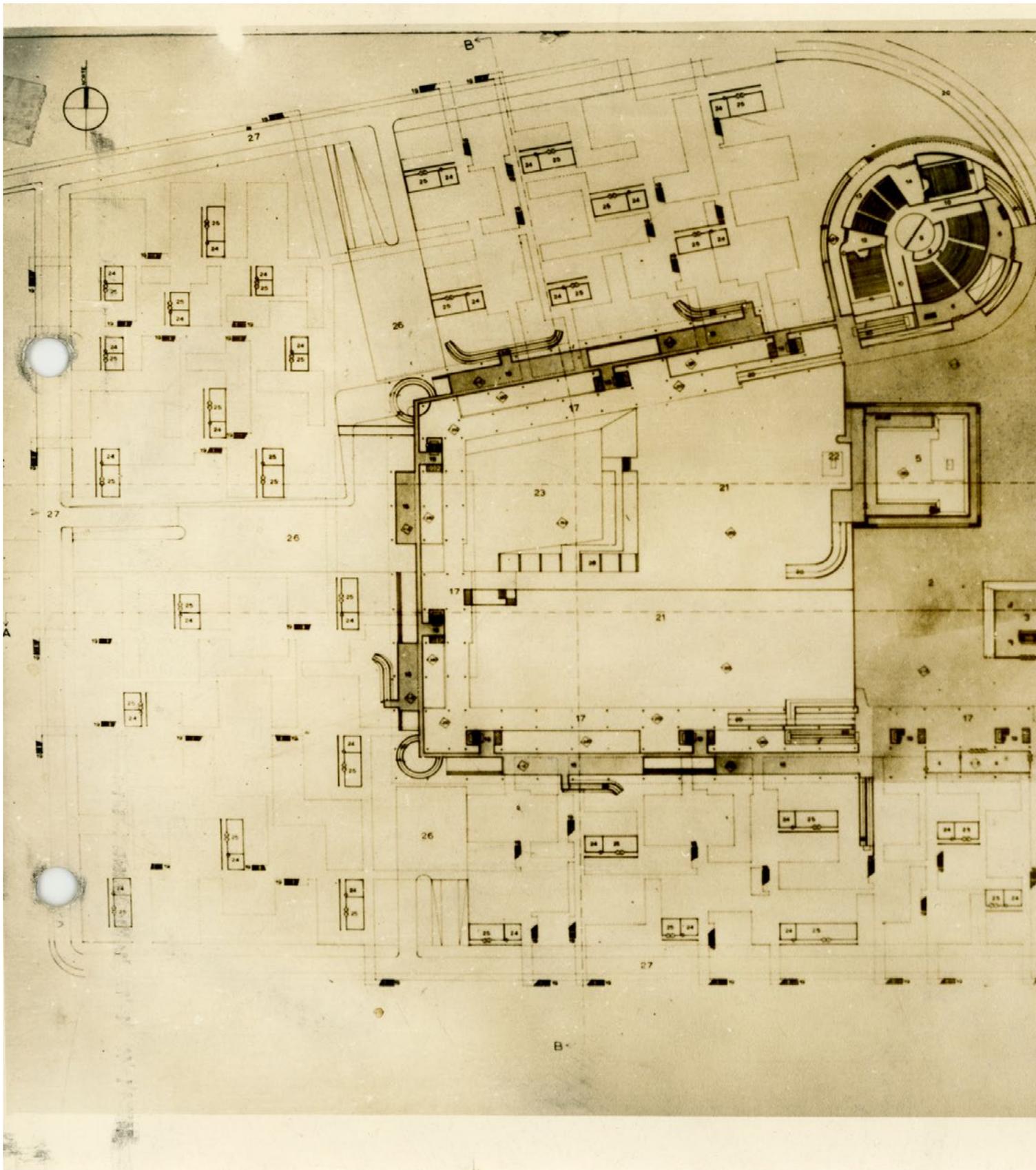
- (1) mat-structure, that is an above-ground branching pattern articulated through bridges, ramps and stairs;
- (2) C-shaped multi-story block, that is a linear, monolithic and terraced building intended as the spinal column of the entire system;
- (3) open courtyard, that is a vast green surface approximately echoing the prototypical campus lawn.

The result is a stratification of different layers characterized by a distinctive three-dimensional appearance, with a networks of relations unfolding, in fact, in three directions: *concentric*, *radial*, *vertical*. The *concentric* sequence of rings progressively separates different areas of the complex system: an external ring that interfaces with the surrounding context and regulate the vehicular circulation; an intermediate ring that distribute the departments over the above-ground branched pattern; an internal ring materialized in the C-shaped block containing

¹⁹ Translation by the author from 'Informe' (1965).



FIG. 130
Campus San Joaquín plan, intermediate level.
Fondo German Brandes
Archivo de Originales. FADEU
Pontificia Universidad Católica de Chile



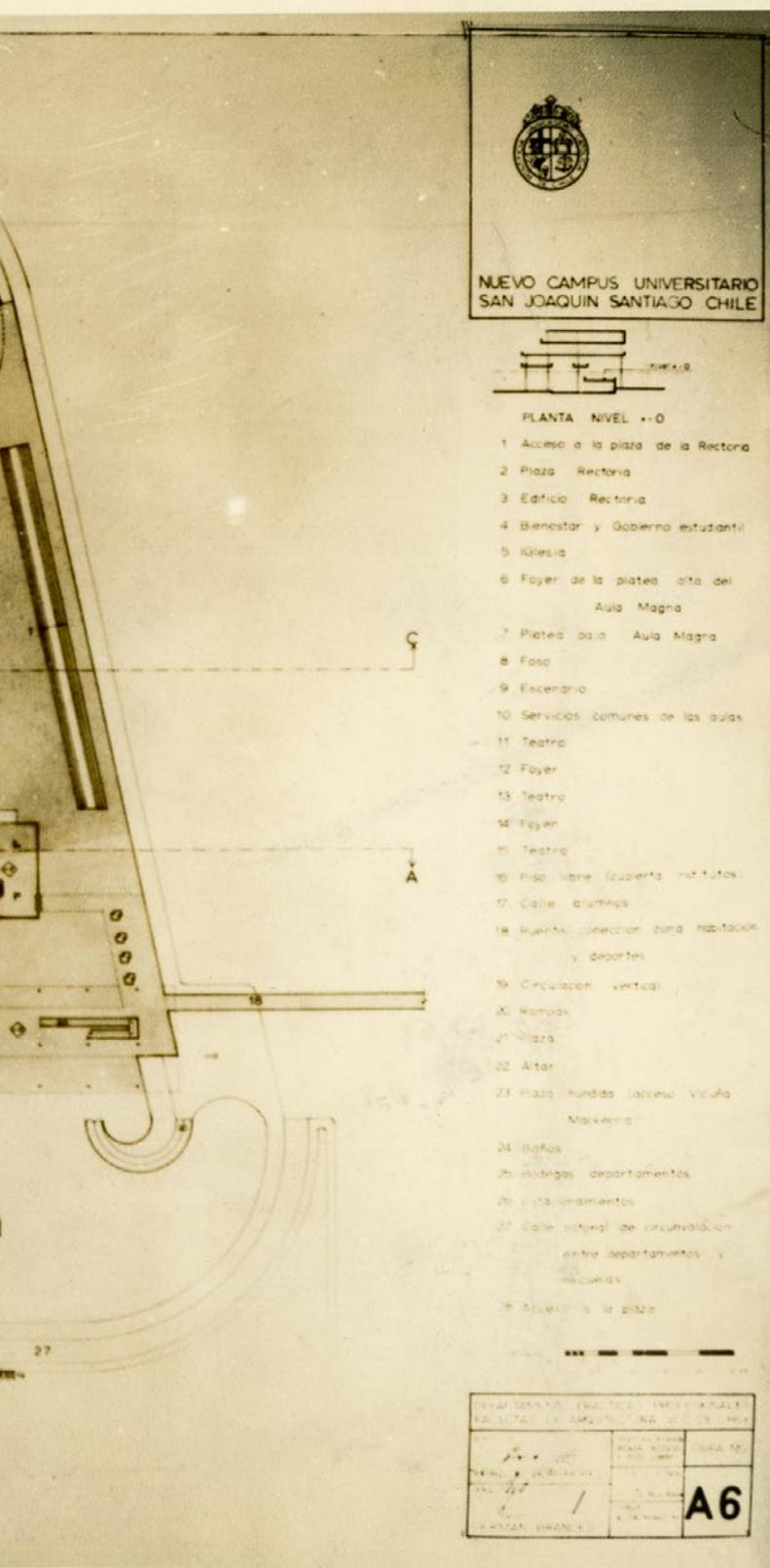


FIG. 131
 Campus San Joaquín groundfloor level.
 Fondo German Brandes
 Archivo de Originales. FADEU
 Pontificia Universidad Católica de Chile

al the collective armature of the campus served by ‘calles abiertas’ (pedestrian streets that excavate the block); the vast central void closed on three sides and partially articulated on a podium that mediates public access. Simultaneously, *radial* circulation allows the transition from one ring to another by regulating the degree of permeability of the entire system, while the *vertical* circulation connects the vast ground-floor, punctuated by columns, stairs and ramps, with the level of the suspended mat-structure, up to the internal streets repeated in the various levels of the C-shaped block ending with an open terrace on top at service of the university library.

Evidently, what should not go unnoticed is the markedly architectural approach associated with the new organizational system based on a flexible, interdisciplinary and collaborative academic environment exalted in the same report drawn up by the university (1965).²⁰ However, this approach announces an even more ambitious and radical impulse in respect to the previous episodes, towards the hypothesis of reproducing a certain urban complexity rather than settle to the creation of a common ground between campus and the city that had made the two Chilean precedents of Universidad de Concepción and Universidad Técnica del Estado so successful.

In particular, if some similarities can be recognized between San Joaquín and Universidad Técnica del Estado in Santiago, this last still under construction when Germán Brandes won the competition in 1963, they cease with the adoption of a grid-like ordering principle. In fact, in the case of UTE the relationship of subordination between the ordering principle of the grid materialized by the network of covered walkways and the narrow blocks designed as independent units is still evident, while in the case of San Joaquín the ordering principle and its formal structure appear as one single thing: architecture materializes in all its parts through a flagrant exaggeration of its scale, also attesting by the use of properly ‘urban’ terms to define architectural spaces such as the internal corridors of the C-shaped block: ‘calle de los alumnos’ and ‘calle de los catedráticos’. A move that was far from irrelevant that of gradually usurping architectural space with movements and circulation, whose trajectories were destined for a specific ‘function’ in the alleged modern city till then.

Against this backdrop, the radical design proposal formulated by Germán Brandes in 1963 for the new campus San Joaquín of Universidad Católica seems to be claiming a position within the great continuous international *megastructural colloquium*. That kind of conversation on a world scale with thousands of participants from which this episode seems to have been completely excluded,

20 Not surprisingly, education experts such as Rudolph P. Atcon (see Chapter 2) are mentioned in the document.

despite the fact that even the local press had acclaimed ‘flexibilidad’ as the distinctive character of a project that not only responded to the ‘organization académica de hoy’ but also to those unpredictable needs of tomorrow.²¹ These are aspects that recalled specific experiences of that ‘megastructural colloquium’ of those years, such as the case of the famous competition for the University of Bochum (late 1962), with planning director Fridolin Hallauer providing computational analyses on the interaction processes within the university, and architects arguing that ‘designing a university building should no longer be a matter of listening to the individual user, since physics professor Y wants tomorrow may be totally different from what physics professor X wants today’.²²

Indeed, some reasons for this exclusion that go beyond the peripheral provenance of the Chilean episode can be found in the trajectory towards the ever growing abstraction denounced by Muthesius (2000). Starting from the modes of representation adopted for campus San Joaquín design proposal, what we do not find in Brandes’ drawings is the obsessive fascination with systematic diagrams, tangles of processes or mathematical models.²³ The call for *connectivity* demanded by educators and academics has led architects to study the nature of the interaction between departments more intensively, by replacing the attention given to everything that was purely static, like single functions, with relationships between functions and their differentiations:

“The proposal by Candilis-Josic -Woods for Bochum competition together with the English urban planners conceptualization in the early 1960s paved the way for space representations in which lines of communication can be discerned, but it is difficult to identify different areas and their respective functions”.²⁴

If it is true that a call for *connectivity* was clearly expressed also in the competition brief prepared by Universidad Católica, it is equally true that Brandes’ proposal took up the challenge of architecturally and spatially conceiving each component of the new university organizational system. In his drawings, people are still represented in their bodily presence instead of being traced with dashed lines of

21 In “El Mercurio”, Tuesday 9 November 1965, p.30: “La Flexibilidad Carateriza el Anteproyecto para la Nueva Universidad Católica en San Joaquín [...] el proyecto del arquitecto Germán Brandes, ganador del concurso, responde a la organización académica de hoy y también a la imprevisible del mañana”. Archivo de Originales. FADEU. Pontificia Universidad Católica de Chile.

22 Quoted in Muthesius (2000), p. 275.

23 The Leeds University plan (1960) was the first to quantitatively investigate contacts and movements between all parts of the campus envisaged in an extraordinarily complex diagram.

24 See Muthesius (2000), p.275.

FIG. 132

Axonometric showing the three components campus San Joaquin architecture: open courtyard (1), branching structure (2) and C-shape block (3). (redrawn by the author)

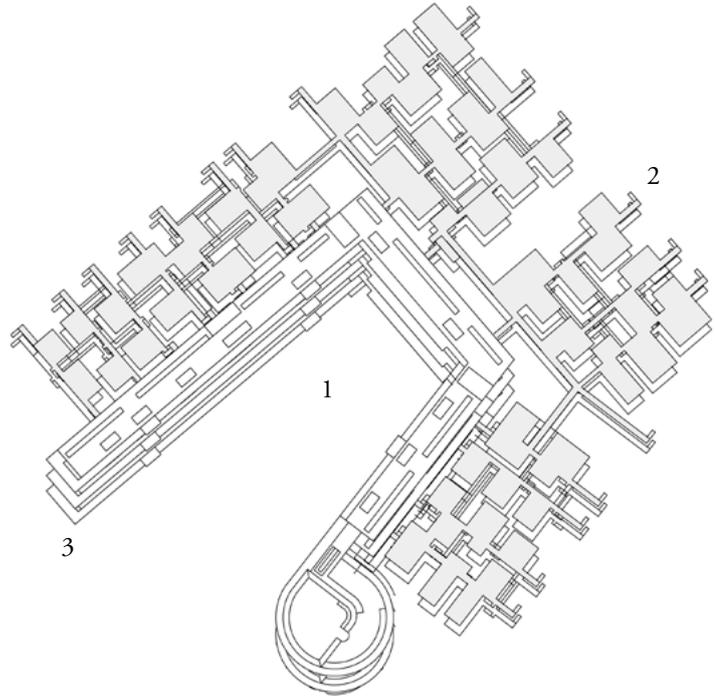
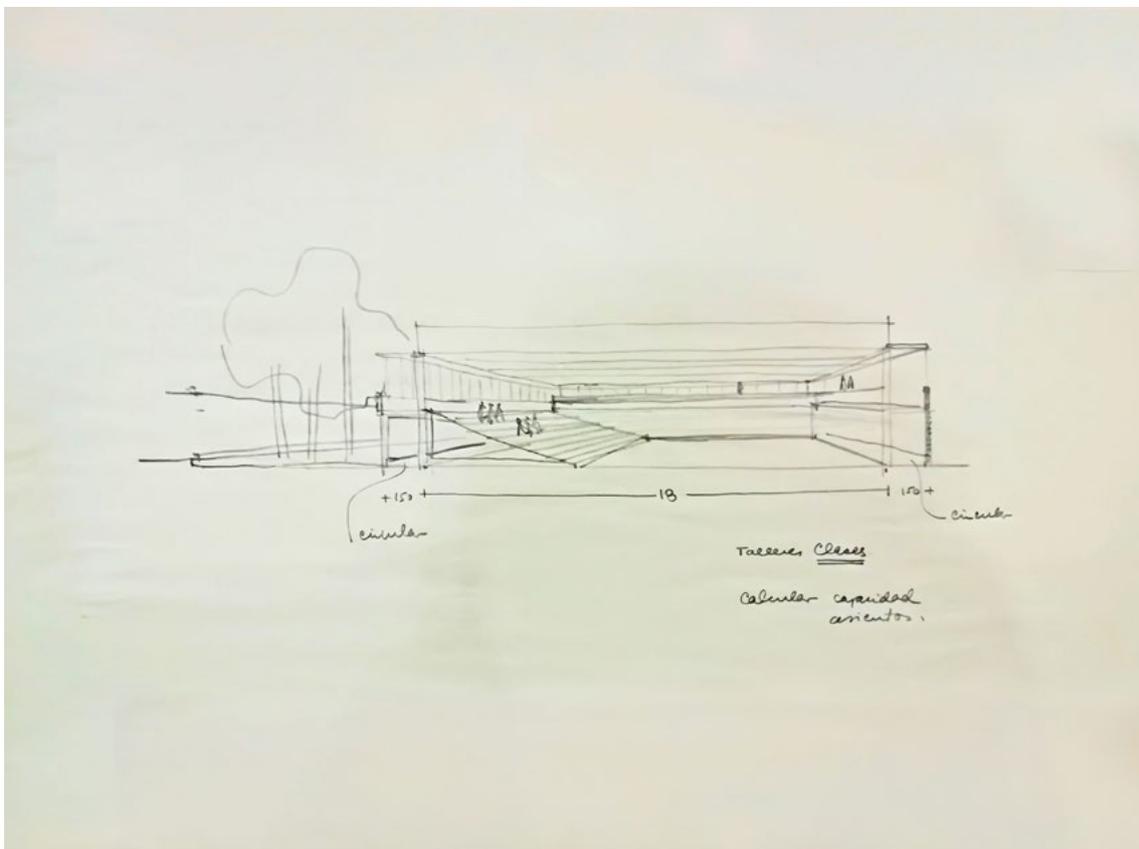


FIG. 133

German Brandes' sketch of the classroom module intersected with elevated walkways. Fondo German Brandes Archivo de Originales. FADEU. Pontificia Universidad Católica de Chile.



gravitational movements. Even more, the human scale is always considered as an invariant to measure its relationship with architectural scale of single units, with urban scale of the spatial infrastructure that contains them, and above all, with the grandiose scale of the Chilean landscape. All this, makes one think of San Joaquín university campus as a surprisingly situated version of a mat-structure, on the margins with respect to those emblematic projects that polarized the international megastructural colloquium.

A second reason can be deduced from another of Muthesius's argumentations, that is the problem of the professional architect increasingly attracted by this new trend. Germán Brandes profile, in fact, is that of a Chilean architect-educator that undoubtedly exemplifies the more conventional version of the prototypical figure outlined in this research. After graduating in 1955 at Universidad Católica de Chile, he essentially dedicated his whole life to academic activities and teachings serving the same institution until reaching the position of full professor. This position of 'employee' leads him to occupy important roles within the bureaucratic apparatus of the university, such as member of Departamento de Prácticas Profesionales de la Escuela de Arquitectura, Comisión de Planificación y Estudios, and founding member of SIPA (Servicios e Investigaciones para la Arquitectura). Almost all of his professional works are related to the public sector, like the participation in the winning project of the Valparaíso Naval School Building, the State Insurance Institute Building, and the Federation of Students of Chile (FECH). However, the commission on which he will put the greatest efforts in his career it is undoubtedly the one for San Joaquín that Germán Brandes obtained in 1963, at the age of 34 as a young professor of second year architectural design studio, and its further developments and adjustments until 1978 always subjected to the verification of the form.

This positioned also the author of this project on the margins of megastructural colloquium, or at least with respect to those planners and architects convinced that started appropriating the terminology both from social and management sciences, such as *system analysis* or *operational research and design* supported by the use of mathematical and computable models to predict informality and randomness logically derived from their calculations. In this, is interesting to note how the new mandate at the basis of many argumentations formulated to counter the hegemony of Modernist discourse, hides accurate analyses with a high scientific approach in search of generally valid criteria that were supposed to predict informality. Alternatively, as pointed out in Muthesius' chronicle on European post-war university, 'social space' became a problematic issue with organizational experts and planners shifting from predetermined social

behaviour compromised with discipline and routine to what should primarily encourage spontaneous and unexpected social behaviour:

“No part of the university is devoted exclusively to social purposes; on the other hand, in the university there is no area that cannot be considered a social space”.²⁵

This because *change* was increasingly felt like a permanent and unavoidable condition, with the design of the educational space notably assumed as a privileged laboratory of ideas by considering the diversity of student activities to derive the maximized and optimized use while avoiding fragmentation and dispersion, as for San Joaquín competition brief requirements. Even though some substantial differences can be found, however, from the text announcing the winning proposal:

“In the proposed infrastructure, an attempt is made to create the conditions for the two basic impulses of the University: *unity* referred to the act of knowledge, and the *variety* of its applications. To formalize these two seemingly opposed impulses, it is necessary to establish a hierarchical order that goes from variety to unity in an organic and progressive way. This progression represents the dynamic relationship in which the two components of knowledge can be found.

Translating these considerations into architectural terms, it would be a matter of ordering the university’s activities in spaces that host ‘Science’ as pure knowledge, and ‘Technique’ as applied knowledge. In this range, of which the two extremes have been indicated, the mission of the University is fulfilled. This is why we propose a system of spaces according to a ordering rule that allows the forms of knowledge to be performed from the unity of the center to the variety of the edge.”

Making explicit reference, a few lines later, to the need to associate the

25 See Muthesius (2000), p.276-77. The propositions expressed from time to time under modernist ‘functionalism’, for example under Hannes Meyer at the Bauhaus in 1928-1930, began to be repeated, with phrases such as “architecture free from the constraints of aesthetics” (John Weeks, 1969). The new state of mind eventually extended to a negation of the quality of buildings only judged through architectural criteria, arguing that concern for the plan, as such, has nothing to do with ‘form’ or with architecture as an artistic element. There were still more extreme positions towards the entire university institution, now seen not as a building but as a teaching and learning system supported by the fascination around learning machines, TV and other media, as in the case of the Open University founded in 1970.

aforementioned new attitude with this ordering principle:

“Into the progressive order of this infrastructure is generated the differentiation of spaces, that is typical of the variety of academic activities. This differentiation gives expression to the varied nature of the different university bodies. These conditions show the need for a *flexible* configuration that does respond to different situations of today’s academic organization, without losing the character of unity”.²⁶

Hence, the continuous border-to-center transition and viceversa was clearly instigated by San Joaquín formal structure, by exploring the combined effect of two architectural devices: the concentration of collective uses in a compact system of overlaid public streets (C-shaped block) and the branching of academic activities extended in the fragmented system of a three-dimensional grid (matrix-structure). This spatialization of a new hierarchical order clearly positioned San Joaquín proposal on the margins of the megastructural colloquium on the one hand. On the other, one gets the impression of Germán Brandes trying to understand the concept of university campus as a much more complex entity than the different labels that could be readily found for it. A university campus is not simply a mini-city or anti-city, because the university campus has a clear purpose, that of ‘unidad’ and coherence to reflect the institutional apparatus at work inside it.

Finally, what formally determined a higher level of complexity with respect to the *superficial* idea of a liberated ground to connect campus and the city (Chapter 2), is the shift from the plan to the section as the privileged instrument variously articulated to provide the very urban ambition to the campus. Evolving towards a three-dimensional, intricate and stratified complex that radically interprets the verticalization and densification of modern city, San Joaquín proposal not only represented a radical response to the new requirements for university planners. While the university went into crisis in 1967 with a series of adjustments that would have totally changed the initial strategy and programmatic basis of the project, those same principles would have exceeded the university borders in the case of international urban competition for Santiago city center (1972) with Argentine and Chilean architects equally involved.

26 Translation by the author from ‘Informe’ (1965).

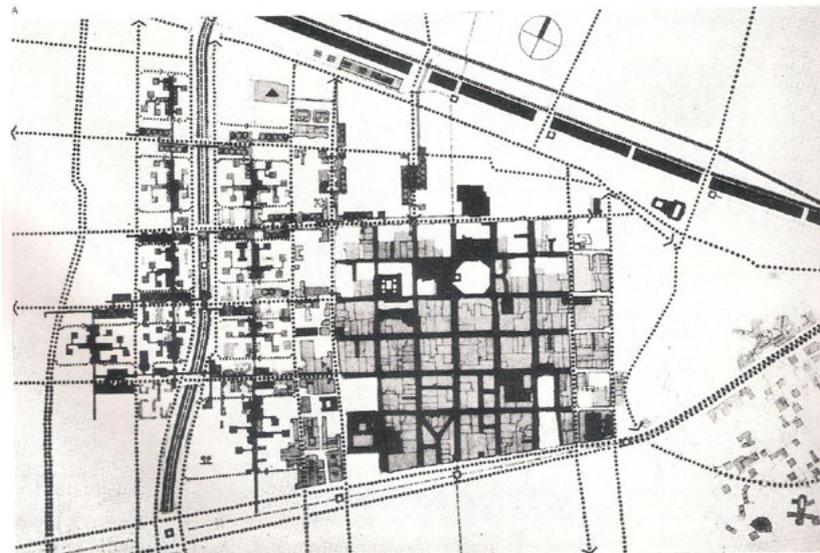
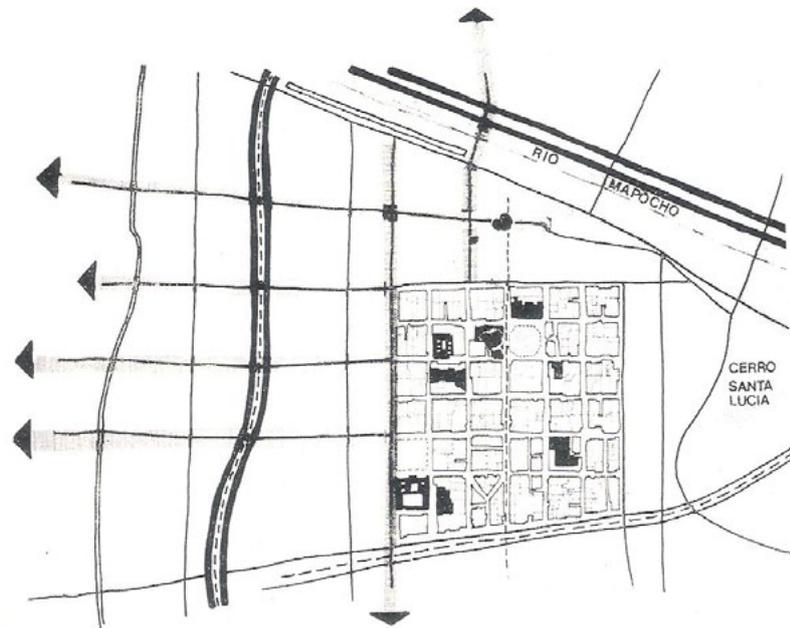


FIG. 134
Urban competition for 'Remodelación del Centro de Santiago' (1973).
Image from "Summa" (no.67, 1973)

3.3 *Approximations to collective forms.* *Competitions for Santiago de Chile City Center*

Quando alcuni anni fa si era cominciato a parlare a Pavia di un piano per l'espansione universitaria, alcuni avevano sostenuto che si sarebbe dovuto dar luogo finalmente a un campus.

Ma la stessa Commissione dell'università che stava preparando i programmi aveva smentito affermando che il Campus dell'Università di Pavia sarebbe stato l'intera Città di Pavia.²⁷

Giancarlo De Carlo, 1972

The markedly architectural approach associated with the new organizational system of Universidad Católica based on flexible, interdisciplinary and collaborative practices exalted in Germán Brandes' design proposal for campus San Joaquín (1963), had silently inaugurated, as mentioned, an ever more ambitious and radical impulse towards the hypothesis of interpreting a certain urban complexity at the scale of the city, going beyond the liberation of a common ground explored in the previous episodes. And in fact, despite its peripheral location, Latin America would have welcomed a substantial number of experiments on the 'mega' structures during the 1960s, also taken as a rather profitable category to reinterpret the region's iconic examples conceived in the previous decades. It is no coincidence, in fact, that Reyner Banham himself positioned the unfinished project for the new Ciudad Universitaria de Tucumán (1947-1955) right there where the history of megastructures begins (see Chapter 1).²⁸

The set of design experiences selected by the British historian constituted a global strategy to multiply the opportunities of collective life and to promote, at the same time, an alternative notion of order into disintegrated and highly fragmented urban environments. Claiming the sense of the city as a physical artefact, it was believed to have found the answer by replacing streets and squares within large-scale buildings by producing densification of multiple and

27 Giancarlo De Carlo and Franco Bunčuga, *Conversazioni su Architettura e Libertà*, Milano: Elèuthera, 2000.

28 In his vast chronicle on the history of megastructures (1976), Reyner Banham placed the ambitious design experience of Ciudad Universitaria de Tucumán in the third chapter titled 'Beginners and Begetters', p. 36.

differentiated activities, gradients of aggregation and participation. As a well-known fact, Banham opted for an inclusive strategy to describe this category: from the Plan Obus (1931) to the Pompidou Center by Piano and Rogers (1970), passing through Louis Kahn City Hall by (1952-58), Victor Gruen's shopping centers, the Metabolists' proposals, mat-buildings, Archigram and Yona Friedman spatial urbanism. In fact, Banham initiated his chronicle echoing the investigative tone with which some of these experiments were examined by Fumihiko Maki in 1964 essay:

“A vast framework in which all the functions of a city or part of a city are contained. It was made possible by today's technology. In a sense, the artificial component of the landscape [...] is a massive form on a human scale that includes a mega-form and discrete and rapidly changing functional units that adapt to the larger structure”.²⁹

This tendency mentioned by Maki generically include different approaches towards the multiplication of the ground and three-dimensional conceptions: (1) platforms that allow to separate pedestrian areas from vehicular traffic (Brasilia, Chandigarh); (2) large-scale buildings combining permanent structural framework and discrete functional units (Kenzo Tange in Boston, Tokyo); (3) assembled clusters, driven by the growth of modular components on open matrices (Habitat 67, mat-building).

As argued by Ana Maria Rigotti (2012), various circumstances have contributed to a certain fascination with this tendencies in Latin America region: the figure of Le Corbusier who was the first to conceive the large scale in correspondence with the vast South American geography; the 'gift' of Latin American monumentality associated with its public connotation observed by Hitchcock; the long experience with reinforced concrete combined with sculptural connotations, and finally, optimism and faith in technological progress associated with the paradigm of economic emancipation known as 'desarrollismo'.³⁰ Thus, the Southern Cone that specifically includes Chile and Argentina, was particularly seduced by the possibilities of these large architectural infrastructures to produce a different notion of urbanity against the fragmentation of their city capitals facing a dizzying population increase. In this context, with the patronage of the Unión Internacional de Arquitectos (UIA)

29 Fumihiko Maki, *Investigations in Collective Form*. St. Louis: University of Washington, 1964.

30 See Ana Maria Rigotti, 'Fósiles de futuro: megaestructuras', in "BLOCK" no.9, 2012, pp.18-31.

and the Corporación de Mejoramiento Urbano (CORMU), the government of Chile held an international competition in March 1972 for the renovation of sixteen blocks near the historic center of Santiago Poniente, as a continuation of the densification policies of underdeveloped areas which began with the 'Remodelación San Borja'.

This large-scale project for Santiago San Borja (1965-1970) coordinated by CORMU, a state planning agency, involved the Chilean office BVCH which had just finished the completion work for Universidad Técnica del Estado (see Chapter 2). What we see at work in San Borja is a radical implementation of BVCH previous experiments with the principle of liberation and multiplication of the ground brought to the scale of the city in proximity with a transportation hub. Typological experiments were on the basis of this urban project, with a system of twenty towers interconnected at an intermediate level as the most interesting solution. In fact, the network of elevated and crossed paths that penetrates the towers to obtain space for collective and recreation purposes, made it possible to preserve some pre-existing portions of the urban fabric of San Borja district on the one hand. From the point of view of construction, on the other hand, this ambitious project stimulated experimentation on reinforced concrete methods incorporating prefabricated corner elements, pre-tensioned slabs for the floors and exposed inverted beams also responsible for the final aesthetic image.³¹

Hence, taking the moves from this first experience, the 1972 competition for Santiago Poniente received 87 proposals from 25 countries submitted to a jury composed by relevant figures from Latin America scene, such as Antonio Quintana from Cuba, Villanova Artigas from Brazil, Héctor Valdés (V component of BVCH) from Chile just to name a few, and chaired by Team X exponent Aldo van Eyck. The competition offered a unique opportunity to investigate Santiago's colonial grid on the basis of three factors: (1) scale: 25 hectares with the opportunity of expand as a prototypical strategy for other areas of renovation; (2) program: housing for 20,000 people to be connected with community and metropolitan facilities; (3) political context: president Salvador Allende call for the foundation of a future socialist society in a developing country in alliance with physical planning. More specifically, the object of intervention was a deteriorated district located along the Norte-Sur motorway of Santiago, even if the main

31 The powerful state body of Corporación de Mejoramiento Urbano (CORMU) entered the scene in 1965 entrusted to urban improvement of the country's cities in its broadest sense showing an exceptional feature, that is CORMU's architectural vision of urban planning. For this reason, CORMU differed from all public institutions dedicated to specific problems of the city like housing and infrastructures. For a deeper examination on this project see Rodrigo Pérez de Arce, 'The Garden of Intersecting Paths. The Remodelación San Borja and the schools of architecture', in "ARQ" no.92, 2016. The BVCH project coordinated by CORMU has been published in "AUCA" no.16, 1969.

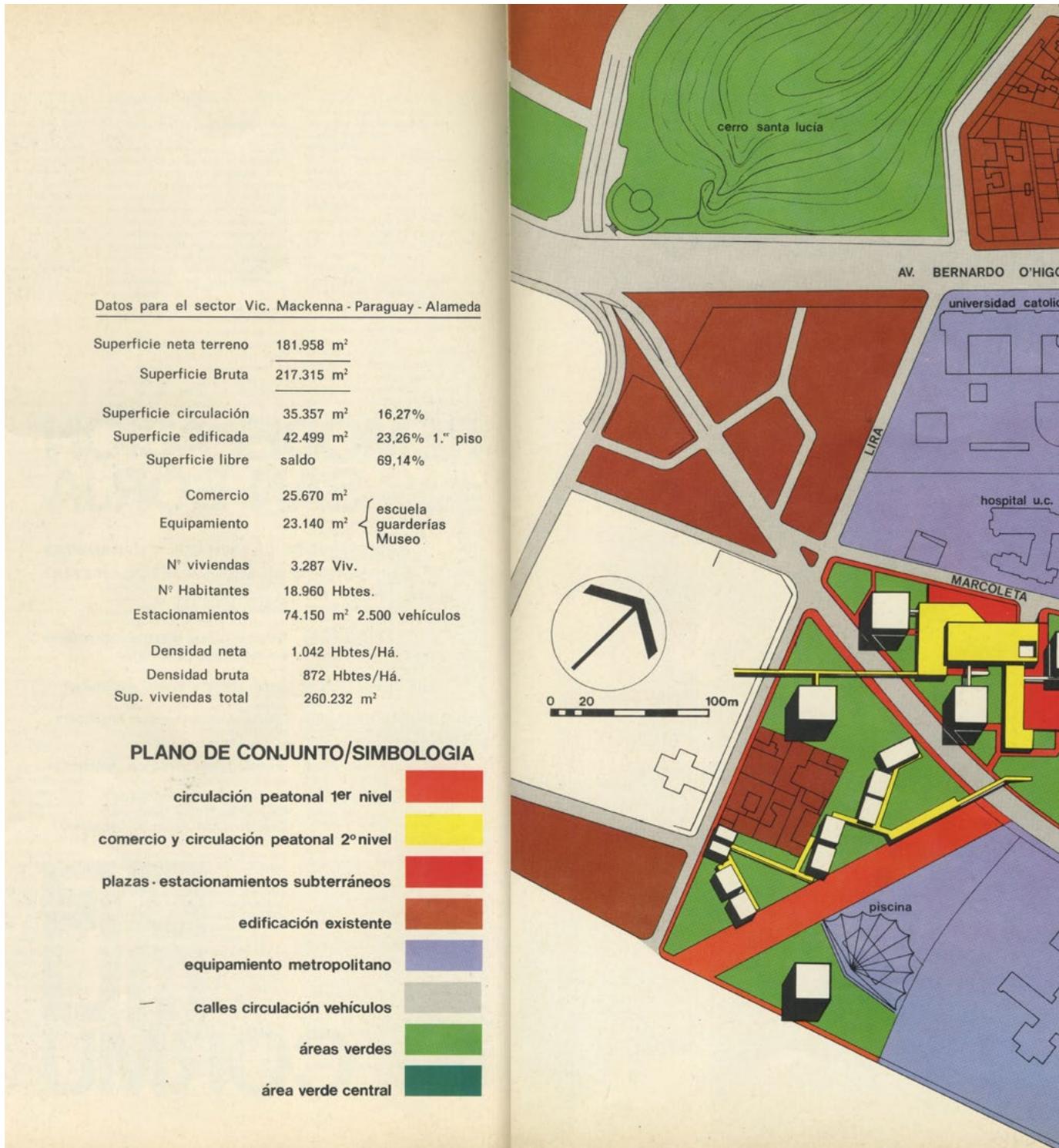


FIG. 135
 The urban project for Santiago's Remodelación San Borja,
 showing a system of elevated walkways intersecting the city built environment.
 Image from "AUCA" (no.16, 1969)



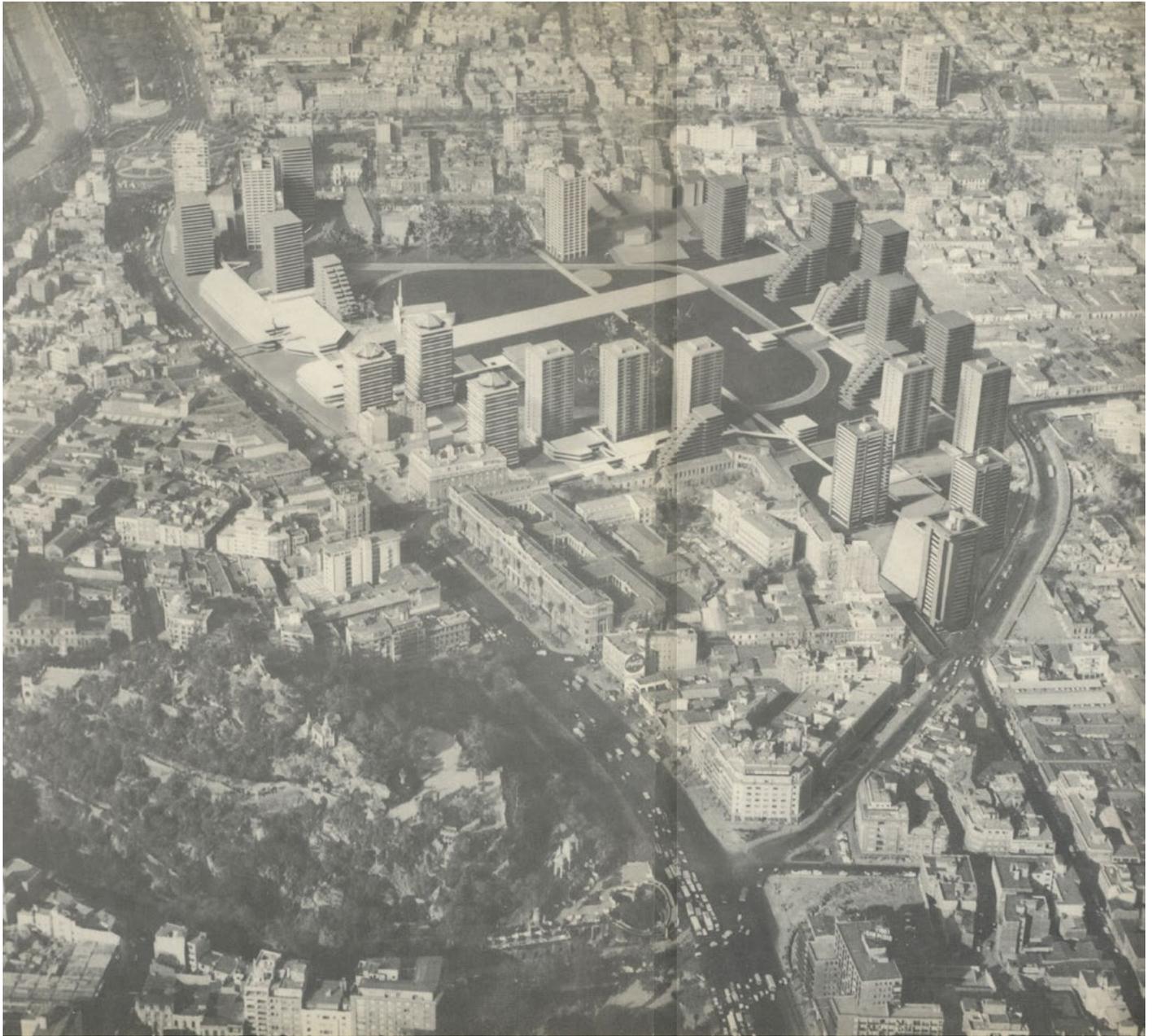


FIG. 136
The urban project for Santiago's Remodelación San Borja,
showing a great level of experimentation around vertical typologies with the Chilean office
BVCH directly involved in this experimentation.
Image from "AUCA" (no.16, 1969)

objective was not simply that of obtaining a solution, but an urban strategy to be adopted as part of Santiago's polycentric system with the aim of articulate high-density and mixed-use alternatives to promote social integration.³²

What should not go unnoticed with respect to the previous San Joaquín experience, is the reception context within which Santiago city-center competition was organized. In fact, this last benefited from unprecedented relationships with some prominent personalities who by then, early-1970s, represented the full-blown antithesis to the early post-war architectural discourse: Aldo Van Eyck invited to visit Chile and chair the competition jury, and Reyner Banham invited in Argentina only a few years earlier. This latter in the part of *uncomfortable* guest for his disruptive interpretations around the concept of *environment* exposed during the seminars organized by the Instituto Universitario de Historia y Arquitectura (IIDEHA) coordinated by Enrico Tedeschi (see later in Chapter 4). Even though, Banham's lectures in Cordoba and Rosario appear to have been extremely influential in the development of design proposals elaborated by Argentinian architects for 1972 Santiago competition. In fact, the theoretical framework that gave consistency to their urban proposals will be paradoxically declared by the jury far more satisfactory than the Chilean proposals, excessively conditioned by the knowledge of the real contingencies of the context:

“The proposal is not a limited ‘adjustment’ of what already exists within a supposed realism that begins by considering any modification of the present impossible. Such an approach would actually be a ‘resolution’ or a *horizontal* rearrangement of the space that ranges between a normative zoning to a conventional project”.³³

Hence, three Argentine proposals took the stage against a conventional *horizontality*. The winning project comes from a group of young graduates from Universidad Nacional de La Plata giving consistency to their theoretical framework with references to the *right to the city* derived from the recent Spanish translation of Henri Lefebvre's seminal book.³⁴ The authors defined their proposal 'Arquitectura-Ciudad', trying to distribute everyday life of a typical tertiary tissue along supermanzanas which keep the sense of democracy and equity given by the original grid on the one hand, while on the other hand operate as high-density

32 This experience has been examined and deeply reconstructed in Ana Maria Rigotti, 'Lecciones de la vivienda para construir ciudad: megaformas para la remodelación del centro de Santiago de Chile', in "Urbana" Vol. 6, no.8, 2014, pp. 424-452.

33 Translation by the author from original text in "Summa" no.64-65, 1973, p.128.

34 Group members included Enrique Bares, Santiago Bó, Tomás García, Roberto Germani and Emiliano Sessa. See Ana Maria Rigotti, 'El otro cruce de los Andes. Megaformas proyectadas en Argentina para Santiago', in Hugo Mondragón and Catalina Mejía (Eds.), *Sudamerica Moderna. Objetos, edificios, territorios*. Santiago: ARQ Ediciones, 2015.

self-sufficient neighborhood units combining a four-level housing platform with 21-storey towers. In the words of the jury, this combination attenuated mass homogeneity and repetition, while the incorporation of the same construction methods already experimented in the previous intervention of San Borja district added a high degree of feasibility. However, it is architectural connotation that generated the greatest interest with a three-dimensional system of pedestrian elevated bridges crossing the slabs of metropolitan services and the typical tower going beyond the mere repetition of identical floors but equally integrated into the three-dimensional interrelation of common uses every five levels. Alternatively, the proposal resulting from the collaboration of the two architectural offices Staff and MSASSV, which both operate in Argentina in the blurred lines between professional practice and research, demonstrates megastructural influences in the overlapping of two main layers, that is the underground level and the neighborhoods level at a height of 17,50 meters with squares, shops, and schools clustered around a modular system.

Finally, it is interesting to mention the proposal submitted by Corea, Monzón and Caballero, despite deliberately opposed to the competition brief requirements and consequently rejected by the jury. This radical position is explained in a context of quasi-normalization of 1970s utopian projects, and in relation to the personal trajectory of the group's ideologue Mario Corea. As happened to many other participants in the post-war architectural discourse, after his studies at Escuela de Arquitectura de Rosario he went to Harvard and attended Luis Sert's urban design studio. During his foreign experiences, Corea was also involved in the Harvard publication edited by Fumihiko Maki *Movements System in the City* (1965), that is one of the first essays that explored the concept of 'group form' at the scale of the city.³⁵ But again, as usually happened in the context of circulation of ideas favoured by the increasing mobility started in the aftermath of WWII, it will be his following experience at the Architectural Association of London where he graduates in Urban Studies with a dissertation on class struggle in the city (1969/70), that Corea's ideas shifted towards a critical hypotheses against any form of pragmatism: 'estructuras posibilitantes', 'diseno transfuncional' and 'diseno colectivo' were among the fundamental concepts that shaped informality as a strategy of resistance to the mechanisms of domination and hegemony of pre-organized space, that could only be practiced through users' decisions. This generated a polemic interpretation of Santiago's competition brief which showed only a timid attempts to reform the *status quo*, while their ambition was to change the rules of the game in the distribution and appropriation of land

35 This was later translated in 'Sistemas de movimiento en la ciudad', in "A&P" no. 8 (1968), pp.5-23, by Mario Corea, Eduardo Lozano, Gustavo Munizaga and Ian Wampler.

with inhabitants allowed to reconfigure their space according to their own *values*. In opposition to the slogan of limiting Santiago's urban growth to achieve social integration, they considered far more strategic to linearly extend the urban city center to moderate speculative pressures by renouncing the attractiveness of utopian experiments of the time replaced with standardized and prefabricated forms to generate a new artificial public land.³⁶

Certainly, what the results of the competition for Santiago city-center signalled was the ambition of expanding the possibilities of architecture in the direction of the urban scale by incorporating streets and squares in its spatial reconfiguration with the aim of reproducing, revitalizing and even replacing the city. On the other hand, however, this competition represents the culmination of a controversial discourse that aspired to match flexibility and adaptability with a maximum degree of efficiency. At a certain point, indeed, the mere action of prefiguring intricate structures to reproduce a not better defined urban condition without the ability to really subvert those rules that rather favoured speculation on the basis of the same densification principle, generated reactions which clearly demanded a political stance as in the case of Mario Corea proposal for Santiago competition. Even though, similar reactions had already emerged from another Chilean experience with Peter Smithson noticing the possibilities created by the pedagogical approach of Ciudad Abierta, Valparaíso:

“There is a conscious attempt to build an alternative architecture – not that what the alternative architecture offers is always useful. For example, there is a school of architecture in Chile that builds things on the beach. These things are perfectly useless day-to-day. They represent a counter-form. That doesn't seem to me to be terribly useful. I think at worst the space of the building, of the room, has to be usable, particularly if you take the position that the space you make has to offer itself for the inventions of those who occupy it”.³⁷

The same experiment that, at a certain point, would have drawn the attention of Italian architect and educator Giancarlo De Carlo as one of the protagonists of the same season where campus San Joquin is trying to claim its place.

36 See Ana Maria Rigotti (2015). From a three-dimensional schematic diagram on which the extension of the infrastructure and circulation would have been organized, it was intended to transmute the notions of flexibility and change with those of indeterminacy, whose flirtation with the design of systems and the cybernetics that flourished on the pages “Architectural Design” materialized in the commitment to transfer the mechanisms of development and control into the hands of social organizations.

37 In Catherine Spellman, Karl Unglaub and Peter Smithson. *Peter Smithson: Conversations With Students; A Space for Our Generation*. New York: Princeton Architectural Press, 2005, p.81.

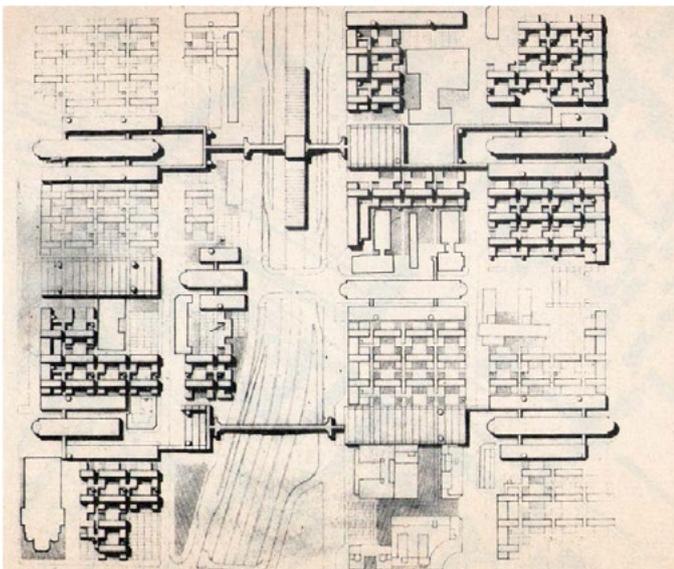
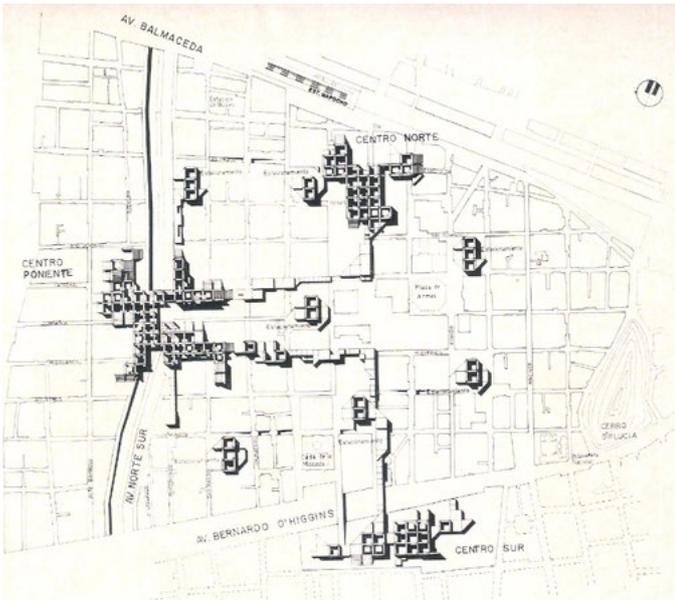
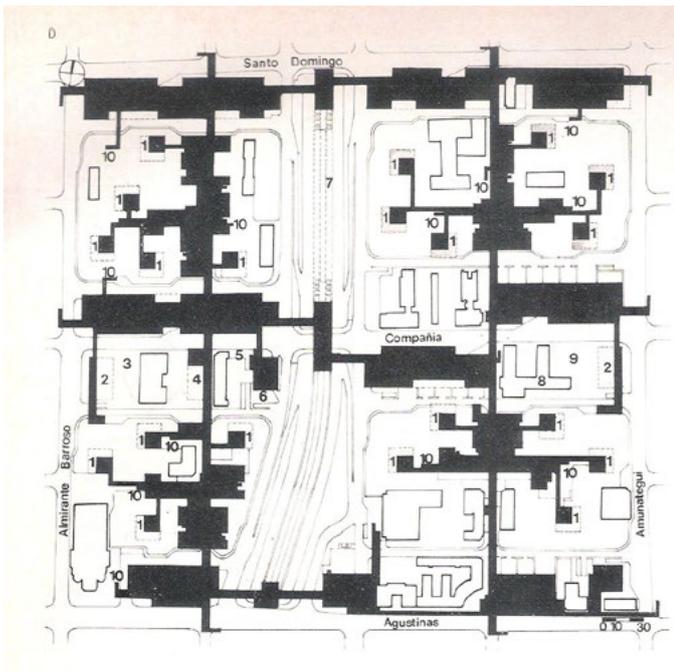


FIG. 137
 Alternative proposals for the urban competition
 'Remodelación del Centro de Santiago' (1973).
 Image from "Summa" (no.67, 1973) and Corea,
 Caballero and Monzon (1973)

3.4 *Structures, education and experience.*
Giancarlo De Carlo meets Ciudad Abierta de Ritoque in Valparaíso

“Do you consider yourselves a community?”
I asked toward the end of the visit.
They answered very calmly that they did.
“A utopian community?” I asked.
“Yes, we think we are a utopian community”.³⁸

Giancarlo De Carlo, 1993

The polemical proposal for Santiago city-center urban competition by Mario Coreá's group (1972) reveals a detail of some significance, that is the lexical shift made by the architects around the process of appropriation of space allowed by their project to inhabitants – or users in general. In fact, the rhetoric of informality in that case did not instigate users to modify their habitat according to ever-changing and temporary *needs*. On the contrary, their incentive was against highly pragmatic connotations in the direction of modifying the habitat according to one's own *values*. A lexical shift that is anything but random or irrelevant also in the field of education, since the creation of value by means of knowledge production it was starting to be a controversial topic, with an increasing lack of political awareness and a system of values to counteract both the pragmatic exercise of flexibility, change and temporariness on the one side, and the prevalent principle of authoritarianism on the other. These are also the premises of a new system of values claimed Giancarlo De Carlo (1919-2005) for the true emancipation of the mass-university, formulated from his observation of the Italian educational system which certainly could not hope for the over-dimensioning of its bureaucratic apparatus to face new challenges. On the contrary, this would only have reinforced the alienation from the everyday reality on which the students are anxious to operate as active forces by experimenting open and accessible forms of education, and instead still confined to an authoritarian pyramid system:

“If the University is on struggle, the whole structure of the nation vacillates [...] The reasons of architecture are much more complex

38 Giancarlo De Carlo, 'L'utopia di Ritoque' in "Spazio e Società", no. 66, 1994, pp.24-25.

and stimulating than the proposed academic hibernation.”³⁹

These words from Giancarlo De Carlo pamphlet *La Piramide Rovesciata* (1968), opened a large political, cultural and also architectural debate concerning what possible forms of university institutions should have considered to coherently combine the students’ pressures for higher education and the national economic agendas. Not occasionally, he emerged very young as one of Rogers’ protégé particularly interested in educational issues, and especially, those continuous oscillations between growth, institutionalization and segregation from the rest of the city.⁴⁰ In 1947, a “Domus” monographic issue called for a radical renewal of the architecture of schools as a departure point for the construction of an explicitly ‘modern and liberal Italy’ as pointed out in Ernesto Nathan Rogers’ editorial ‘Architettura educatrice’, methodically and expertly structured around dialectical associations between discipline and freedom, individual and community, harmony and equilibrium, rights and duties, economy and quality. Among the contributors, the illustrious and combative educator Ernesto Codignola wrote the essay ‘Scuola, palestra di vita’ permeated with a distinguished revolutionary impetus:

“We need to commence the revolution with an external tidying up. We must erase all traces of passiveness, abolish the desks for pupils and teachers, the didactical furnishings, the text-books – all evidence of pretentious mediocrity”.⁴¹

The term ‘freedom’ and its derivatives are used with great frequency in the text, associated with ‘responsibility’ and even ‘self-governance’ as fundamental concepts to be incorporated into any educational environment in order to transform them ‘from prison into a community’. In the same issue, a very young Giancarlo De Carlo at the age 28 exposed some initial considerations in the text ‘La Scuola e l’urbanistica’. While flexibility, lighting, cross-ventilation and

39 Giancarlo De Carlo, *La Piramide Rovesciata*. Bari: De Donato, 1968, p.5.

40 Born in 1919 in Genova, Giancarlo De Carlo spent his childhood in Tunis where he lived until 1937. His life is notably marked by anti-fascist militancy, with De Carlo actively participating from 1943 to 1945 in the Milanese ‘Movimento di Unità Proletaria’ together with Franco Albini and Giuseppe Pagano. Then in 1948 he moved from Milan to Venice together with Ignazio Gardella, where he finally graduated in architecture in 1949 and opened his own office in 1951.

41 Translation by the author from Ernesto Codignola, ‘Scuola, palestra di vita’, in “Domus” no. 220, 1947, p. 2-3. Codignola (1885-1965) was initially a supporter of the Fascist regime working with Giovanni Gentile on the school reform. Then he became militantly active against the regime, maturing the intention to give a social and political value to education making the school a place to cultivate freedom and civil spirit. Among his most incisive works to disseminate this idea in the aftermath of the Second World War, see Ernesto Codignola, *Educazione liberatrice*. Firenze: La nuova Italia, 1946.

the possibility to conduct at least some of the teaching activities outdoors were frequently commented as indispensable environmental standards for *tomorrow's school* with reference models coming from Switzerland, Netherlands, England and especially the United States – issue 99 of “Architectural Record” had just been devoted to the subject of the ‘First Post-war School’ in 1946 – much more focus should be placed on the fact that ‘the urbanistic problem of schools is the urbanistic problem of the city’:

“The primary interest of public education is to achieve, through collective means and systems, a better political society. The city, seat of this political society, is the most important educational instrument. From these simple premises a totally new concept of the city is generated”.⁴²

De Carlo’s surprising lucidity in dissecting the problem identifies two concomitant and complementary causes, that is firstly the inability to perceive new forms of life within the social body in light of the changing ethical and economic conditions; secondly, the persistent impossibility for the stratified city to accommodate these new forms of life in an organic system. In addition, as the problem of education has been the main concern of society in every age, De Carlo continues his reasoning by arguing that after the experiment of professional education strictly dependent on economic systems in the way of decline, contemporary society aspires to those forms of education where knowledge and experience coincide, much more similar to a work of civilization and for this reason not limited to young people, but extended to everyone life experience:

“The school today is no longer a place where a certain period of human life accidentally takes place, but it is the nucleus around which the social life of the whole community does orbit [...] extended in time and space to the entire existence of citizens and the city environment.”⁴³

42 Translation by the author from Giancarlo De Carlo, ‘La Scuola e l’Urbanistica’ in “Domus” no. 220, 1947, p. 15. From the original text: “L’interesse primo dell’educazione pubblica è quello di realizzare, attraverso mezzi e sistemi collettivi, una migliore società politica. La città, sede di questa società politica, è lo strumento educativo più importante. Da queste semplici premesse si genera un concetto assolutamente nuovo della città”.

43 Translation by the author from De Carlo (1947) original text: “La scuola oggi non è più un luogo nel quale accidentalmente si svolge un periodo della vita dell’uomo, ma è un nucleo intorno al quale orbita la vita di tutta la collettività [...] estendendosi nello spazio e nel tempo a all’intera esistenza dei cittadini e tutto l’ambiente urbano”, p. 17.

FIG. 138
 Settlement schemes of De Carlo's proposal for
 Dublin University College (1964) published in
 "L'Architecture d'aujourd'hui" (no.137, 1968)

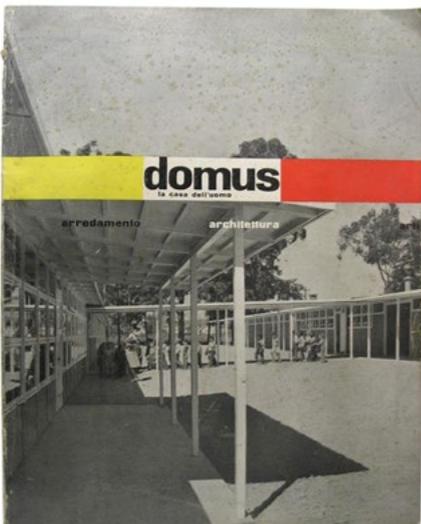
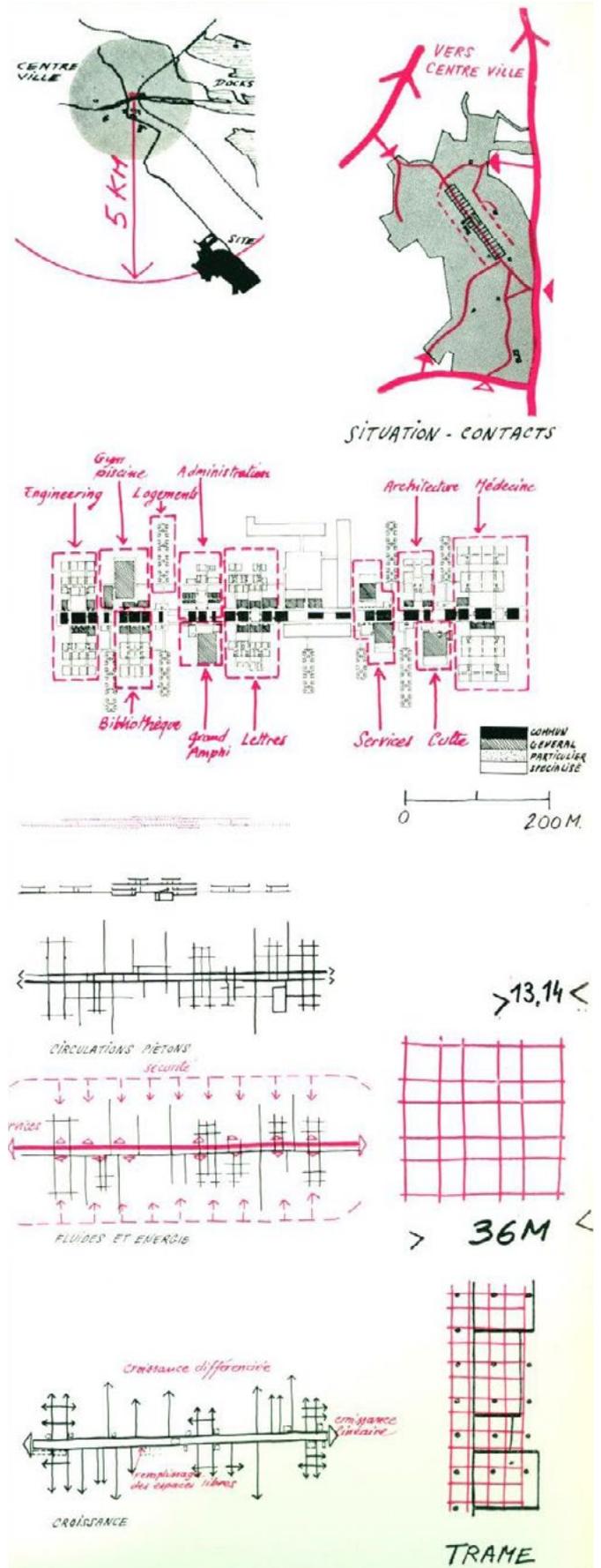


FIG. 139
 Front cover of "Domus" (no.220, 1947)

Not coincidentally, this tone of discussion emerged from the pages of “Domus” under the directorship of Ernesto Nathan Rogers between 1946 and 1948, that is also the most intense period of circulation of ideas reaching Latin America for the first time after the WWII with Rogers and a group of other Italian architects personally involved in the ambitious educational project of the new Ciudad Universitaria de Tucumán (see Chapter 1).⁴⁴

On his side, Giancarlo De Carlo would have assumed a role of absolute importance in further exploring the dialectic method exposed by his mentor in 1947 “Domus” issue, participating with his projects and thoughts in the line of research between education and urban dynamics that distinguished post-war Italian architectural discourse in the following decades.⁴⁵ A deep concern in education and its alternative forms literally permeate De Carlo’s work, despite ten years later, notoriously, he would publicly distance himself from Rogers’ “Casabella-Continuità” editorial project by contesting in the article ‘Una precisazione’ (March 1957) the weakness and ambiguity of a critical approach to modern discourse that, instead, needed to be challenged and overly confronted.⁴⁶ His famous intervention at Harvard University ‘Why/How to build School Buildings’ (1969) questioned the very principles of education wondering whether (1) it is really necessary for contemporary educational activity to be organized in a stable and codified institution, (2) educational activity must take place in buildings designed especially for that purpose, (3) there is a direct and reciprocal relationship between educational activity and the quality of the buildings in which it goes on, (4) the planning and construction of buildings for educational activity must be entrusted to specialists.⁴⁷

De Carlo’s argument built on the contrast between education and

44 As detailed in Chapter 1, Rogers receives an invitation on the occasion of the CIAM in Bridgewater (1947) to participate in the ambitious project of Tucumán from Argentinean delegates Jorge Vivanco and Jorge Ferrari-Hardoy, where he moves at the suggestion of Giedion and the other CIAM leaders interested in extending CIAM relationships in Argentina and in the South American continent.

45 Rogers will publish another monographic issue on the school during Casabella’s directorship (1953-1965) in conjunction with ‘Congresso Internazionale di edilizia scolastica’ organized as the closing event of XII Triennale di Milano (13-16 October). See “Casabella-Continuità” no. 245 (November, 1960), where the accent is still placed on activism to be developed in pedagogical practices to increase civil and democratic awareness, as claimed in Silvano Tentori ‘Pianificazione e Burocrazia’, p. 2-7. The investigations on the topic of the school will also be the basis of the research project that would take the form of “libro-esperienza” with the aim of “attivizzare il concetto di utopia” entitled *L’Utopia della Realtà* (1965), which also collects students’ works from the course ‘Elementi di Composizione’ coordinated by Rogers and his assistants Politecnico di Milano including Guido Canella and Vittorio Gregotti (see also Chapter 1 and Chapter 5).

46 See Giancarlo De Carlo, ‘Una precisazione’ in “Casabella-Continuità” no. 214, 1957.

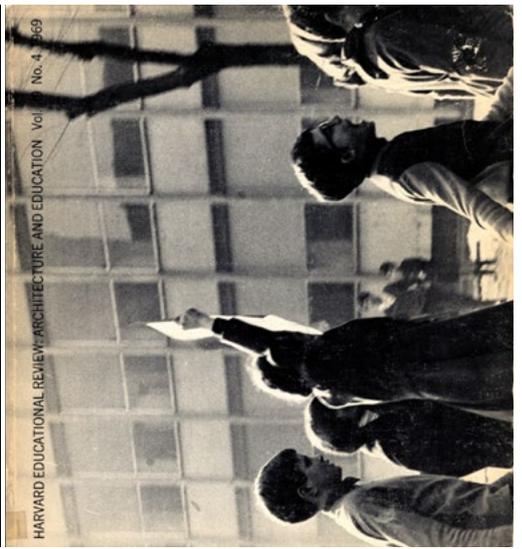
47 Giancarlo De Carlo, ‘Why/How to build School Buildings’, in “Harvard Educational Review” no. 4, 1969. This contribution will be re-published under the title ‘Ordine Istituzione Educazione Disordine’, in “Casabella” no. 368-69 (1972), pp. 12-35. See also ‘Università di massa e scuole di architettura’, in “Casabella” no. 357 (1971); ‘Disordine distruttivo e disordine creativo’, in “Rinascita” no. 17 (1974); ‘Il Territorio senza Università’, in “Parametro” no. 21-22 (1973).



FIG. 140
 Front cover of De Carlo's investigation
 on forms of university campus "Pianificazione e
 disegno delle Università"(1968)

FIG. 141
 Front and back of the special issue of "Harvard
 Educational Magazine" (no.4, 1969) and
 Giancarlo De Carlo in open confrontation with
 students outside the 1968 Triennale di Milano
 dedicated to "il Grande Numero"

You all know what happens after a heavy snow-
 storm? The Child takes over – he is temporarily
 Lord of the City. You see him darting in every direction
 collecting snow off frozen automobiles. A
 great trick of the skies, this, a temporary correc-
 tion for the benefit of the neglected child. It is up
 to you now to conceive of something for the child
 more permanent than snow – if less abundant,
 something quite unlike snow – if it provokes
 child movement without impeding other essential
 kinds of urban movement.
 It must be conceived furthermore not as an iso-
 lated thing or isolated set of things, but as some-
 thing which can be repeated on suitable places in
 the city. The city must be able to absorb it both
 aesthetically and physically; it must become part
 of the city's everyday fabric.
 It must be elementary in that it must respond to
 the child's elementary inclinations and move-
 ments (the latter does not completely cover the
 former) and activate his imagination. Aldo van Eyck



institution. The first intended as the result of total experience in relation to the frequency, variety and complexity of contacts, while the second, institutions, intended as 'organizational structures constituted for the attainment of pre-established goals for their consolidation and their defense'. This is the reason why the override of institutional perimeter must be encouraged, with the city and its territory appropriated as the field of action for educational systems, where the word 'disorder' best exemplified the 'complex interplay of all the variables involved in a spatial event', and finally, where the conception of ubiquitous knowledge and dispersed education can be retrieved. Even if, it must be admitted that De Carlo himself matured this assumptions in conjunction with a sequence of spatialization tests offered by the early 1960s effervescent climate mentioned above, with the university organizational structure taken as a privileged territory for experimentation on the ways to control, to accommodate or even to predict indeterminism. With the 'job of the architect' clarified in conclusion of the same article, that is to cultivate the 'seeds' of the formal configuration already contained within every organizational structure which should realize educational activities in space, De Carlo will take on this job in very different contexts animated by the conviction that 'structure and form should leave the greatest possible space for future evolution'.⁴⁸

In the Renaissance city of Urbino, with the commission received by university rector Carlo Bo started in 1952, De Carlo adopted a strategy of a constellation of places where streets, squares and historical buildings could have been assumed as parts of a whole, combining restorations and punctual additions within the historical city fabric with a series of student housing above the hills surrounding the city ('collegi') showing a clearly distinct formal structure. Thus, the task of designing a mass-university in this particular context has been translated into the coexistence of two interrelated layers: the more

48 Following the experience of CIAM Summer Schools which migrated from London Architectural Association first edition (1949) to IUAV Venice (1952-1956) as described in Chapter 1, the idea of ILA&UD (International Laboratory of Architecture and Urban Design) was conceived by Giancarlo De Carlo with Carlo Bo, rector of the University of Urbino from 1947, involving a wide range of architecture schools from Europe and the United States with their representatives meeting in Urbino in 1974 to set up topics, objectives and methodological approach of international collaborative workshops consisting of two programmes (Residential Course and Permanent Activities) in search for a 'multiple language' where 'everyone would have a role as a protagonist'. ILA&UD rooted its investigations in the practice of 'reading', that is 'identifying the signs of physical space, extracting them from its stratifications, interpreting them, ordering them and recomposing them in systems that will be significant for us today', particularly, in those historical places whose patrimony and relevance are complicated to be understood in process of globalized modernity that deserved different modes of architectural questioning. In this, ILA&UD appeared as De Carlo's version of Team X, open to universities and students, with other members such as Candilis, Smithsons', Van Eyck, Bakema, Hertzberger participating in various ways. For a deeper examination on this experience see Mirko Zardini, 'From Team X to Team x', in "Lotus International" no.95, pp. 76-97, and Connie E. Occhialini, *Peter Smithson at ILA&UD*. Milan: ILAUD, 2016.

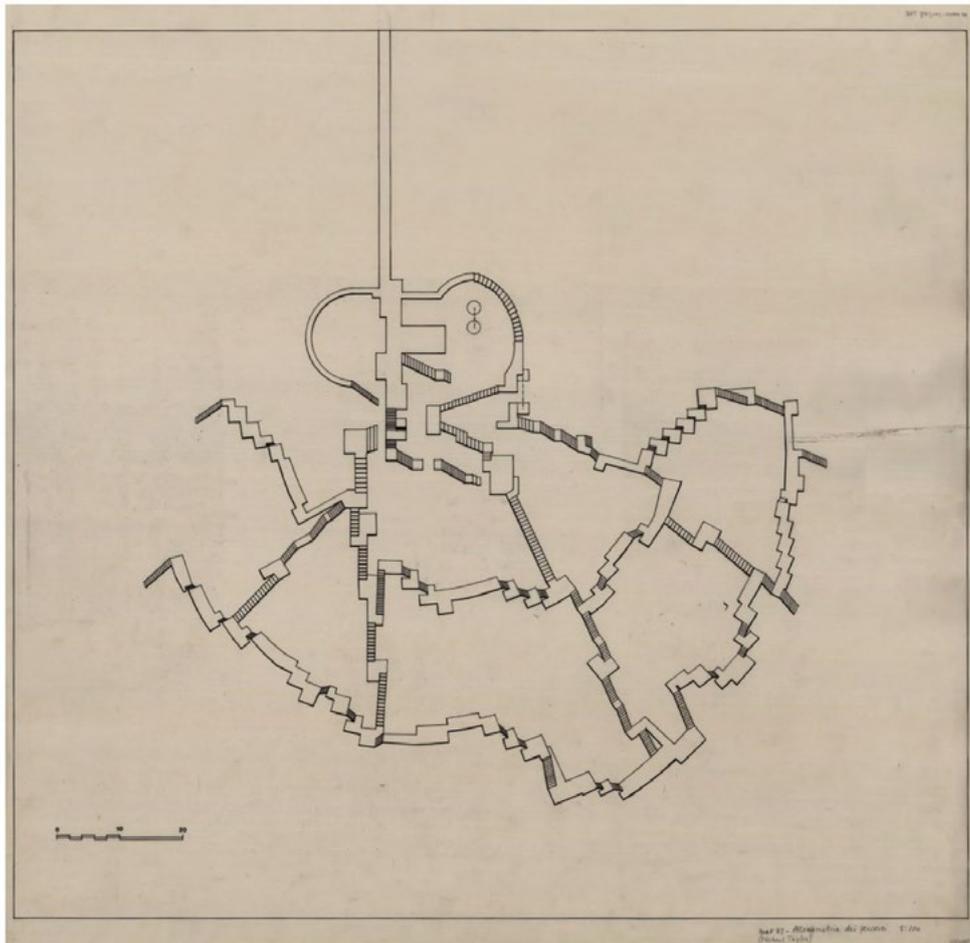


FIG. 142

Giancarlo De Carlo (with Francesco Borella, Astolfo Sartori, Lucio Seraghiti and Vittorio Korach)
axonometric of the University College in Urbino (1960-87).

Fondo Giancarlo De Carlo
IUAV Archivio Progetti

permanent activities embedded within the existing urban fabric, while those extended towards the hills providing for alternative ways of living and sharing knowledge.⁴⁹ Contextually, De Carlo's proposal for one of the most awaited design competitions of the aforementioned international season, that for the University College of Dublin (1963), appeared more in line with the modern architectural discourse vindicated by Team X with De Carlo adhering as the only Italian voice.

Indeed, the project located in a southern countryside area of Dublin was structured on a central spine containing all the main circulation, common and administration facilities, from which a series of perpendicular secondary branches departed to organize the different faculties with their specialized programs and laboratories as independent units. The 'struttura universitaria' was designed for future expansions which allowed the university to grow in successive phases and to internally modify its flexible configuration according both to the amount of students and the modes in which research could develop. In a narrow sense, the University of Dublin was conceived as a logistic platform based on a modular grid, following De Carlo's organizational systematization:

“The task of the architect has to arrest at the simple definition of structural frames – not neutral but charged of tensions – on which the most disparate ways of organization might develop and the richest and most disordered stimulating formal configurations might take place”.⁵⁰

Of course, this proposal has been extremely influenced by theories on circulation, flexibility, agglomeration and social interaction progressively incorporated in the Team X discourse on architecture, but the literal dispersion of the university presence is best exemplified in the urban strategy for the University of Pavia developed in the early-1970s.⁵¹ What we see at work in this case is Giancarlo

49 This project entered the debate of the time in Aldo van Eyck, 'University College, Urbino', in "Zodiac" no. 16, 1966, and Pierluigi Nicolini, 'Conversazione su Urbino', in "Lotus International" no. 18, 1978.

50 See De Carlo (1969), p.32. The faculties units, the student housing and sport facilities were all based on the same layout, which permitted their total independent expansion while keeping common compositional principles. For a deeper examination on this project see Francesco Zuddas, *The University as a Settlement Principle. Territorialising Knowledge in Late 1960s Italy*, London: Routledge, 2020.

51 What emerges from De Carlo's strategic plan signed in agreement between the University and the Municipality, is the positive impact that a distributed educational poles can produce in the entire territory, as activators of relationships ('spaziali e aspatiali') concerning both the historic city center and its existent buildings associated with public functions, and the periphery taken as a real case for observing the current process of transformations. This was described by Giancarlo De Carlo, 'Un Caso di Studio: l'Università Di Pavia', in "Parametro" no. 44 (Marzo 1976), pp. 20–22, and 'Un ruolo diverso dell'Università: il modello multipolare per l'Università di Pavia', in Giuseppe Rebecchini, *Progettare l'università*. Roma: Edizioni

De Carlo reaching the final configuration of the ubiquitous university, simply equipped with generic services open to both academic and non-academic population over the wider regional territory. The large-scale dimension explored in the previous experiences is made explicit in his ‘Piano di Sviluppo e Ristrutturazione dell’Università di Pavia’ (1972-1975) not only through the distribution of university ‘poles’ for both public and specialized use and hierarchically differentiated by position – central, intermediate and peripheral. But also implementing the territorial university system with mobile elements, conceived as temporary observers ‘in continuous pilgrimage over the vast regional territory’.⁵²

Adding a sense of impermanence and temporariness to a literally exploded university system, De Carlo set the conditions for a greater degree of institution’s dissolving on a wide territorial scale with respect to those design experiences based on the new Western canon propagated by Team X – most of them meticulously collected in his book *Pianificazione e Disegno delle Università* (1968). This brought him to champion subversive ideas of the *status quo*, like in the case his visit to Chile where the Ciudad Abierta of Valparaíso was experiencing its own way to *dissolve* university institution in Latin America continent. This encounter will be reported in the pages of the magazine directed by De Carlo, “Spazio e Società” (issue 66, 1994):

“Ritoque’s utopia, like every serious utopia, does not admit uncertain hypotheses – for example, that it is probably intrinsic to architecture to have to resolve apparently insoluble contradictions – and so aims at an absolute alternative, making use of all the hazards and certainties that its deliberate estrangement can offer”.⁵³

As already mentioned, the Ciudad Abierta benefited from the Chilean agrarian reform promulgated by Eduardo Frei government (1964-1970) to buy 275

Kappa, 1981, pp. 144-51.

52 See Francesco Zuddas, ‘Pretese di equivalenza. De Carlo, Woods e il Mat-building’, in “FAMagazine” no. 34, 2015, pp. 45-65.

53 See Giancarlo De Carlo, ‘L’utopia di Ritoque’ in “Spazio e Società”, no. 66, 1994, pp.24-25. This encounter is also reported on Ann M. Pendleton-Jullian, *The Road That Is Not a Road and the Open City, Ritoque, Chile*. Cambridge Mass.:MIT Press, 1996. The literature on the Valparaíso school is now very extensive and translated in multiple languages. The main summary text consists of a book published simultaneously in several languages by different publishers edited by Raúl Rispa, with essays by Rodrigo Pérez de Arce and Fernando Pérez Oyarzún: *School of Valparaíso. Open City*. Santiago de Chile: Contrapunto, 2003. See also Horacio Torrent, Alejandro Crispiani and Rafael Moya, ‘La Escuela de Valparaíso y sus Inicios: Una Mirada a Través de Testimonios Orales’. Santiago de Chile: DIPUC, 2002, and Patricio Del Real, ‘Wandering Around. Architecture as Threshold between Territory and Poetry’ in “OASE”no. 80, 2009, pp. 61-70.

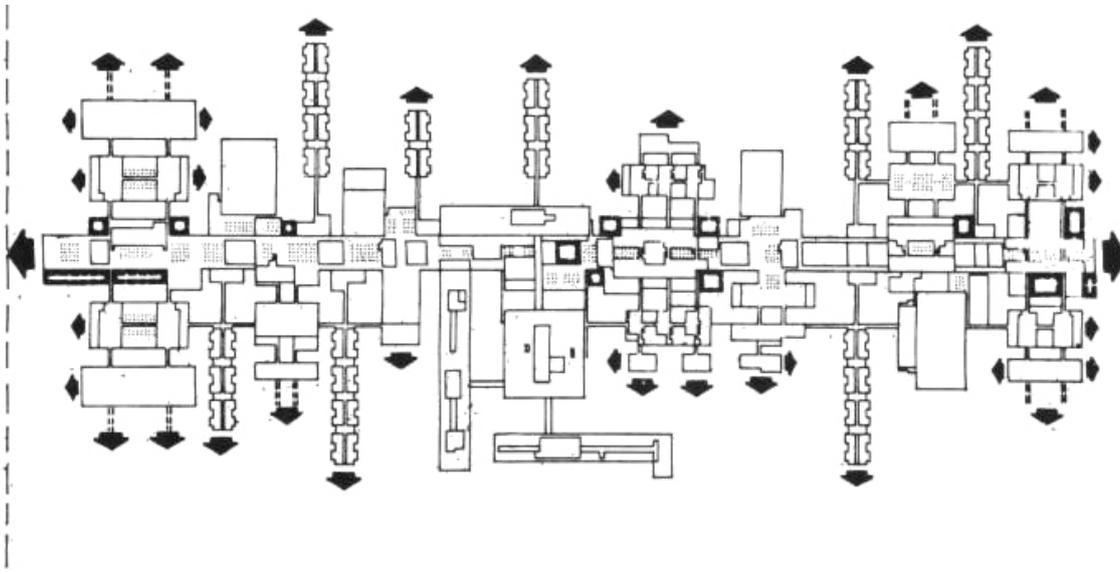


FIG. 143
 Giancarlo De Carlo 'struttura universitaria' conceived for Dublin University College (1963-64).
 Image from Rebecchini (1981)

FIG. 144
 Giancarlo De Carlo university plan for Pavia (1972-75).
 Image from Rebecchini (1981)



hectares in the far South of Ritoque beach, Valparaíso, giving life to what would become one of the most acclaimed *radical pedagogies* associated with Latin America context (see Chapter 2).⁵⁴ The Ciudad Abierta, initiated in 1971, is the first settlement experience of the nomadic education conceived by its founders Alberto Cruz (1917-2013) and Godofredo Iommi (1917-2001), which consisted of long journeys called ‘travesías’ throughout the South America continent characterized by improvisation of poetic acts that guided the construction of temporary artefacts designed and built along the way.⁵⁵

Equally detached from both university institution and reform movements, they still believed on educational purposes influenced by poetry and spontaneous acts, now to be practiced in a designated place for a community that integrates life, work and study. And this belief was literally applied with ‘unrelenting consistency’, in De Carlo’s words, while during his conversation with Alberto Cruz he suddenly saw students and teachers among the dunes of Ritoque beach erecting complex structures made in timber, metal and plywood within the blurred lines of their Ciudad Abierta. These apparently fragile structures that never reach a clear and definitive completion, whose constant maintenance was integral part of the design process, do not need a make-believe client, nor to invent programs, nor to refer to specific places because even the site has to be evoked by the poetic potential of the verse itself on the sole condition of taking care of their repair. They were built collectively, in a slow additive process that makes it difficult to attribute authorship: a project director coordinated the work, and several designers collaborate on smaller projects that contribute to the gradual construction of a university campus conceived as a ‘permanent co-participation in the construction of the open city’.⁵⁶

Despite nomadism was still considered a fundamental component of Valparaíso educational project, however, their turn towards a self-imposed isolation and deliberate suppression of political participation produced those contradictions that were at the basis of De Carlo’s concerns about ineffectiveness of action embedded in their elusive approach, also extended to architecture:

54 In Chapter 2, reference is already made to the fact that even the radical experience of Valparaíso was closely connected to the movements that were progressively transforming the Chilean universities from within their bureaucratic apparatus, following the early contestations dating back to late-1930s and culminated in the Reform (1946). In fact, the former student and teacher from Universidad Católica de Chile Alberto Cruz accepted a position at the school of architecture of Valparaíso after the university governed by Carlos Bresciani (B member of BVCH Chilean firm) agreed to appoint a multidisciplinary group including the Argentine poet Godofredo Iommi who quickly became the ideological leader.

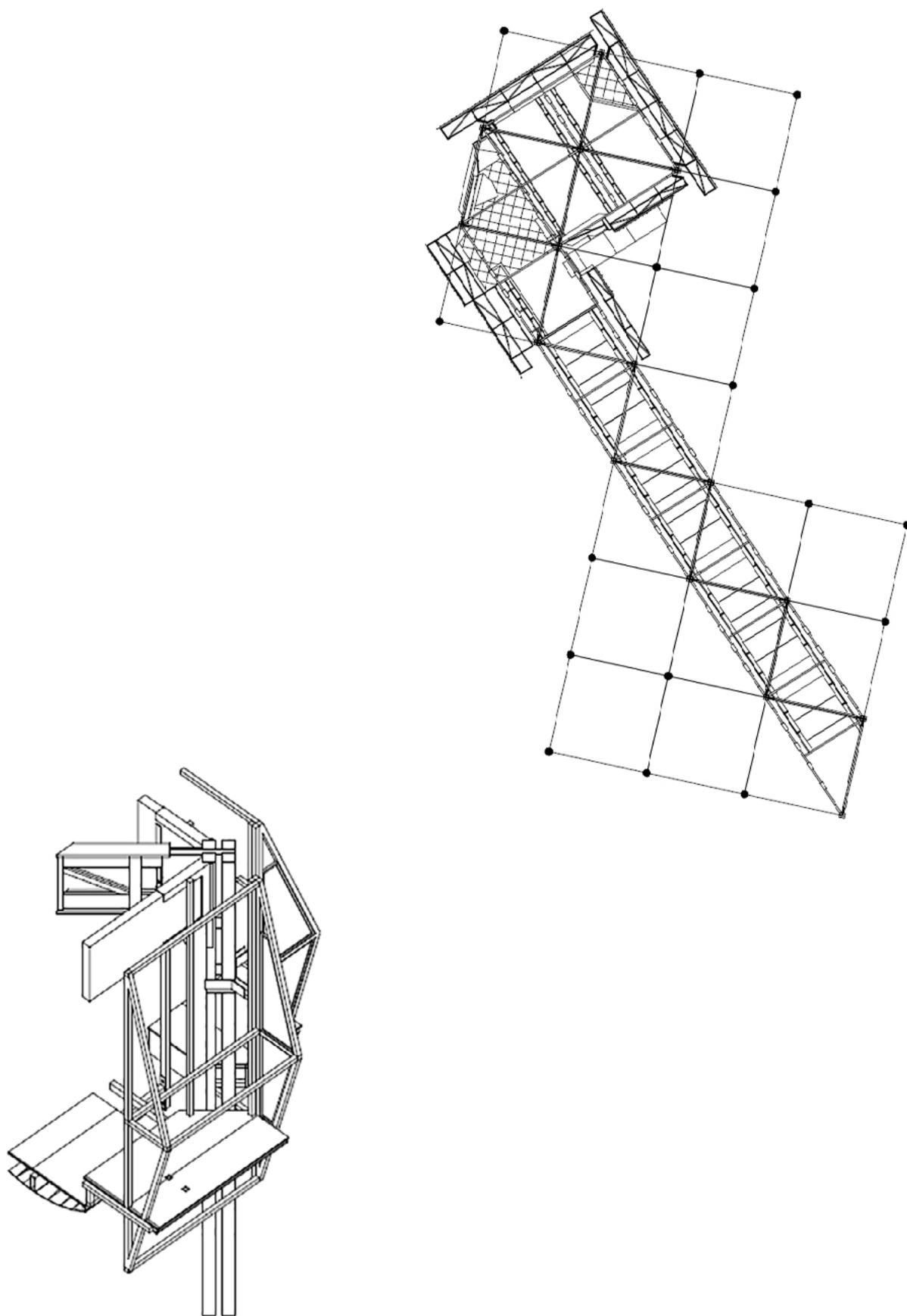
55 The first of these pan-American journeys was *Amereida* (1965), aimed to provide a symbolic re-origination of the continent appealing to a mythical chronology rather than to any historical project.

56 De Carlo (1994), pp 24-25.



FIG. 145
Ciudad Abierta de Ritoque, Valparaiso.
Photos Anthony Hamboussi

FIG. 146
Ciudad Abierta de Ritoque, Valparaiso.
Hospederia Taller de Obras plan and details



“So, what is the Ritoque utopia about? Well, it opens a series of questions that may be worth reflection and discussion – for example, that the primary concern of current building activity is financial, and so its products are mostly marketable commodities. Those who design and build as a profession engage in operations that must yield profits to their promoters, so they cannot evade the requirements of economic power and become inherently a party to making architecture a commodity. This complicity is consummated at a level of unawareness or hypocrisy, as in fact architects are always talking about philosophy or poetry, but most of their products are simply marketable. The extremes of this distortion are to be found in architectural education that, instead of preparing young architects to be disinterested inventors of spaces responding to the multiplicity of human needs, trains them to produce spaces as standardized as possible and thus more easily marketable”.⁵⁷

Finally, what De Carlo saw at work in Ritoque was the dissolution of university institution whose resistance to professionalization was also instrumental to the implicit purpose of realizing a project of education that transcends social and political implications, detached from any friction with the tumultuous events of those years. In fact, their experiential approach explicitly missing any formal reference was mostly concentrated on the place: changing sand dunes, rough vegetation and constant wind were the only source of inspiration for students’ works; structures’ locations were decided only after they reached the site with those roofing membranes De Carlo’s appreciated from afar during his visit empirically drawn once the structure has been erected; many structures followed the shape of introspective enclosure, sometimes dug out of the dunes or vertically detached from the horizontal landscape; the *campus* layout appears as a collection of objects disconnected from each other and arranged by intuition or improvisation.⁵⁸ Thus, in parallel with the dissolution of any form of institution here accentuated by self-confinement from political implications, they decided to deliberately renounce the architectural form as an instrument of verification,

57 De Carlo (1994), pp 24-25.

58 See Ana Maria Leon, ‘Prisoners of Ritoque. The Open City and the concentration camp’, in “Journal of Architectural Education” no. 66:1, 2012, pp. 84-97. This in-depth historical and critical reconstruction placed the Ciudad Abierta radical experience in the framework of the political repression in Chile at the beginning of the 1970s, when the school of architecture and a detention center were settled as the two spaces of exception in Ritoque. While the teachers formed a utopian enclave liberated from normative structures but limited in their political action, the prisoners transformed their forced isolation into an active political resistance with its occupants using games, events and performances as a similar repertoires of imaginary space.

rather replaced by the more extreme counterpart for indeterminism where contradictions, problems as well solutions could hardly be elaborated:

“Why choose, I asked, such an elusive approach with respect to the circumstances and the means proper to architecture?”⁵⁹



59 In De Carlo (1994), p.24.

FIG. 147
The reversal of the map of America and 1965 journey's itinerary.
Image from "Amereida" (Vol. 1, 1967)

3.5 *Hierarchy and its spatial discontents*

It is not possible to review the future of anything, since it has not yet occurred. It is, however, not only possible, but even essential to view the present with an eye to immediate and continuing change.

Change, in all things, is one of the only constants with which we deal, whether we are architects, planners, or educators.⁶⁰

Shadrach Woods, 1969

In their efforts to revolutionize university, the founders and promoters of Ciudad Abierta de Ritoque, Valparaíso, aimed to destabilize all instances of power both outside and inside their organization. As for the inside, the emphasis on collaboration between students and professors which attempted to erase the distinction between work, study and life eradicating the concepts of authority and disciplinary hierarchy represent one of the most effective practices. As said, this paradigm resonated with Paulo Freire's pedagogy – who lived in Chile between 1964 and 1969 exiled from the Brazilian military dictatorship – where knowledge was mostly intended as a collective experience with educators in the part of simple guides. However, these practices supported by Freire's ambitions to create a critical consciousness appeared distant from the political dismissal of Ciudad Abierta, with its leaders hoping for an a-critical conscience deliberately disconnected from external forces and replaced by a freedom of thought which can only be stimulated within a designated community. In this framework, architect Alberto Cruz and poet Godofredo Iommi were undoubtedly leaders within the school, more than simple guides, in this process of 'liberation'.

Alternatively, concurrent proposals such as that of Germán Brandes' project for the new campus San Joaquín in Santiago (1963), aimed to shape an experimental community from within the institution and its bureaucratic apparatus without renouncing the possibility of formalizing a spatial structure to accommodate new needs and values. In the part of a peripheral exponent within the 1960s 'megastructural colloquium', San Joaquín proposal has been anchored in this episode to the much commented design experiences of the time, such as the university projects – and written contributions – conceived by the Italian architect-educator Giancarlo De Carlo, thus thickening the

⁶⁰ Shadrach Woods, 'The Education Bazaar', in "Harvard Educational Review" no. 4, 1969, pp. 116-125.

plots of the circulation of ideas placed at the intersection between a project of informal education and design possibilities of its spaces. If it is true that De Carlo was on the side of a university animated by the continuous exercise of a critical approach, in this avowedly inspired by the experience of interrupted institutions during student protests culminated in 1968,⁶¹ it is equally true that De Carlo imagined the university as a laboratory for experimenting collective form of living, ubiquitous knowledge and dispersed education on the basis of a clear organizational structure declined, on each occasion, in a different territorial dimension.

In the case of De Carlo's proposal for the University of Dublin, the concept of mat-building was appropriated by the Italian voice of Team X showing each component of that 'struttura universitaria' classified by gradients of privacy – communal, general, particular and specialized use – that is, from those that may serve the whole community and external visitors to those delegated to a specific, private and individual use.⁶² In the end, Dublin's organizational structure governed by this hierarchical system of space-use offers more than one hint on the attempt to reposition the Chilean design episode of San Joaquín in the middle of the concurrent experimentations of the time. Even if, as happens for all the other design episodes selected in this research, it is precisely in its 'peripheral' condition with respect of post-war architectural discourse that we can see a critical approach at work in San Joaquín, resulting from the compromise between large-scale circulation of radical ideas and real contingencies of the local context that, in the case of Chile, included two decades of questioning the university educational project. Which is way campus San Joaquín leaves open a question. A question that arises when comparing the Chilean episode with perhaps the most prominent and complete experiment of that season, the coeval Free University of Berlin (1963), not so much with respect to their initial premises rooted in 1960s optimism but to their most recent outcomes of their existence. The Free University of Berlin was unique in reflecting the ideal of horizontal connectivity between academic subjects to encourage interdisciplinary collaboration, with Candilis-Josic-Woods mat-structure decentralized and distributed within an organizational grid whose different layers were distinguished by specific usage:

61 The iconographic apparatus of De Carlo's article for "Harvard Educational Review" (1969), is composed exclusively of images portraying the protesting student mass and captions reading: "With the student revolt, education has returned to the city and to the streets and has, thus, found a field of rich and diversified experience which is much more formative than that offered by the old school system. Perhaps we are headed toward an era in which education and total experience will again coincide, in which the school as an established and codified institution no longer has any reason for existence", p. 16.

62 The design competition proposal for University of Dublin is described in Giancarlo De Carlo, *Proposta per una Struttura Universitaria*. Venezia: Cluva, 1965.

FIG. 148
 FU Berlin modular panels original typologies
 (redrawn by the author)

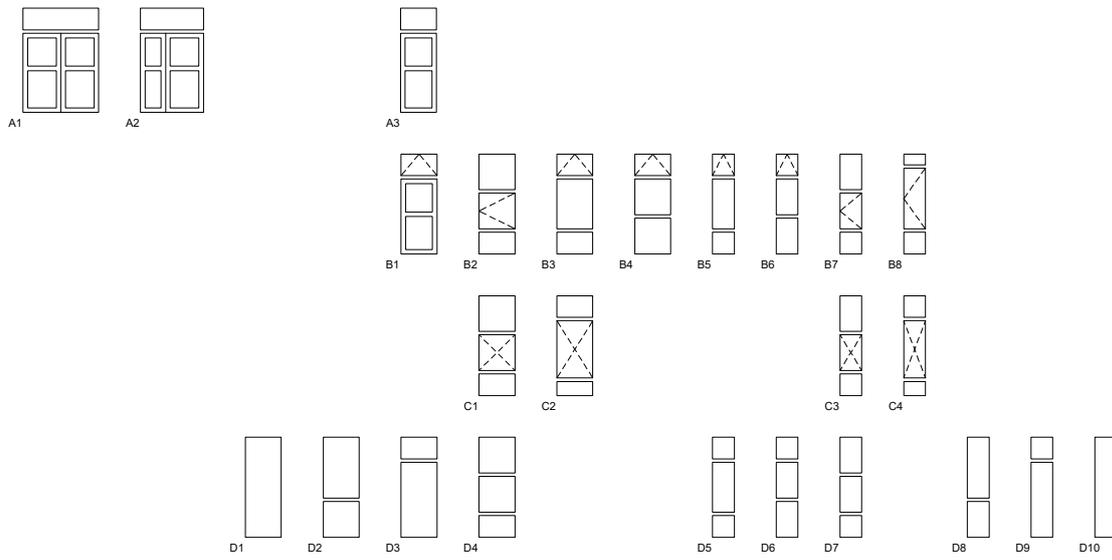


FIG. 149
 FU Berlin modular panels gradual adjustments 1960s, 1990s, 2000s.
 (redrawn by the author)



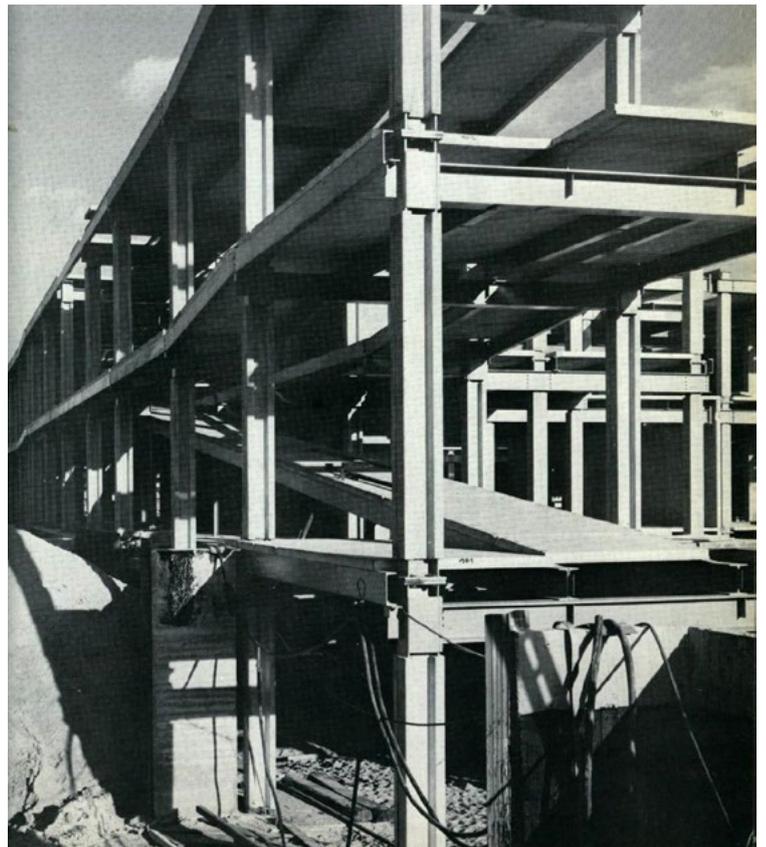


FIG. 150
FU Berlin construction phases.
Images from "Plus" (Jan-Feb 1974)

pedestrian circulation, internal courtyards, classrooms. The architects intended the building to be a house with *thousand open doors*, and the system of inner streets and courtyards were meant to increase the communication within the university providing an incredible variety of ambiances within a controlled modular system. Though these conversations were mostly about how not to get lost, especially when after the first phase of construction (1967-1973) they moved on to the second (1973-1979) with Manfred Schiedhelm in charge of the project, and the new adjacent expansion forming a continuous structure organized by the same intricate system of internal pathways and courtyards 'where individuals and groups may determine desirable relationships'.⁶³

Emphasis placed on flexibility was guaranteed by a meticulous study on the modular system, which had to be easily replicated, disassembled and adapted for unpredictable changes besides being externally exposed. The façade modules based on Le Corbusier's Modulor and developed by Jean Prouvé, in fact, were made in Cor-ten steel to make them so lightweight to be easily disassembled and replaced by two people. Only one difference in the choice of cladding material can be found when the second phase was built, with Cor-ten replaced by aluminium to prevent rust while continuing the modular partition providing five panel variation: solid wall, fixed glazing, operable windows, door, and closet. The best-known additions come in the mid-1990s with Foster's library conceived as out-of-the-grid exceptional episode, even if the same office was also commissioned to modernize the university complex into a technologically updated version while keeping the rounded corners, the well-accentuated window profiles, the coloured sunscreen elements, and obviously 'the thousand doors'. The entire Cor-ten cladding has been replaced with bronze panels by carefully retracing the original façade's partitioning. However, they just imitate their appearance as the office abandoned any idea of easily replaceable modules.

Finally, when a design international competition was launched in 2005 to expand the university complex, the intricate organizational system was again meticulously replicated to the point that it is difficult to distinguish between the old and new parts just by looking at the floor plans. The new extension, however, goes beyond previous Foster's choice in favour of a wooden façade which does not consist of modules anymore, punctuated by largest windows possible to transform the disorienting networks of pathways and courtyards into a more

63 From "Architecture Plus" (Jan-Feb 1974), p.46. A five colours scheme (red, yellow, green, blue and purple) was used for orientation purposes. The German collaborator Manfred Schiedhelm was the one who carried out the project when Candilis-Josic-Woods partnership broke up in 1968. For critical analysis on this projects, see Gabriel Feld and Peter Smithson (eds), *Free University, Berlin: Candilis, Josic, Woods, Schiedhelm. Exemplary Projects*, 3. London: Architectural Association, 1999; George Baird, 'Free University, Berlin: AA Publication/Exhibition in the Members' Room', in "AA Files" no. 40, 1999, pp. 65-71.

ransparent, sunlit and eye-contact environment.⁶⁴ Moreover, something got lost in this negotiation, with a smoothing design operation elegantly dismantling that modular system which originally performed Candilis-Josic-Woods interpretation of university as an ‘instrument’, instead of a monument. A metaphor which among others of the time expressed by the same architects, gave the sense of concreteness at least in the passage from conceptualization to construction.⁶⁵ This was also the building’s feature that most captured De Carlo’s attention during his visit to FU Berlin in 1973:

“By walking around and looking at the weaving of architectural ingredients, one becomes aware of a serious and passionate commitment: the strong belief that architecture is not to be flirted with. Every detail is thought out, controlled, unfrilled”.

Although he promptly evidenced his major concerns on the materialization of the grid, since ‘as soon as it becomes a closed system that compels activities and forms to adhere to its over-simplified geometry, the designing process freezes and authoritarianism manifests itself again’.⁶⁶ On the other hand, in those contemporary *pragmatic* choices that significantly oversize windows for diffuse illumination at the expense of the modular system, we can recognize a process of neutralization at work, that is the mitigation of the original project’s formal structure relying on a closer look at the detailed language which makes Alison Smithson’s words resonate from her famous 1974 article:

64 The firm Florian Nagler Architekten won the international competition to add another 12,000 sqm to the previous complex which opened in 2015. This intervention has been commented by critic Florian Heilmeyer in the framework of the exhibition ‘Radically Modern. Urban Planning and Architecture in 1960s Berlin’ (2015) to which a series of essays published by architectural magazine “uncube” has been associated.

65 See Alexander Tzonis and Liane Lefaivre, ‘Beyond Monuments, Beyond Zip-a-Tone, Into Space/Time’, in *Free University Berlin: Candilis, Josic, Woods, Schiedhelm*, London: AA Publications, 1999. Among the successful metaphors of the time that expanded the vocabulary on mat-structures like that of Arabic Medinas, the ‘groundscraper’ and the ‘web’, Shadrach Woods introduced the notion of ‘Education Bazaar’ in the same issue of “Harvard Education Review” (no.4, 1969) which also included De Carlo’s contribution. In addition to those already mentioned, other contributions were published by James Ackerman, ‘Listening to Architecture; Aldo van Eyck, ‘The Enigma of Vast Multiplicity’; Robert Goodman, ‘Liberated Zone: An Evolving Learning Space’ among others.

66 De Carlo’s critical considerations based upon the fact that, while indebted with Woods for the rediscovery of the grid ‘as a powerful tool for reunifying varied architectural events’, this should not be considered ‘more than a frame’. From his on-site observations it also emerged that “the building looks lonely and isolated: a university-fortress disregarding its context [...] whose perimeter is impermeable, with none of the porousness and unevenness the grid would have suggested [...] The internal space is mainly organized in linear sequences, whose effect is slightly boring. The intentional avoidance of any kind of hierarchy leads to a monotonous repetition that hampers the legibility of places”. From “Architecture Plus” (no.4, 1974), p. 50-51.

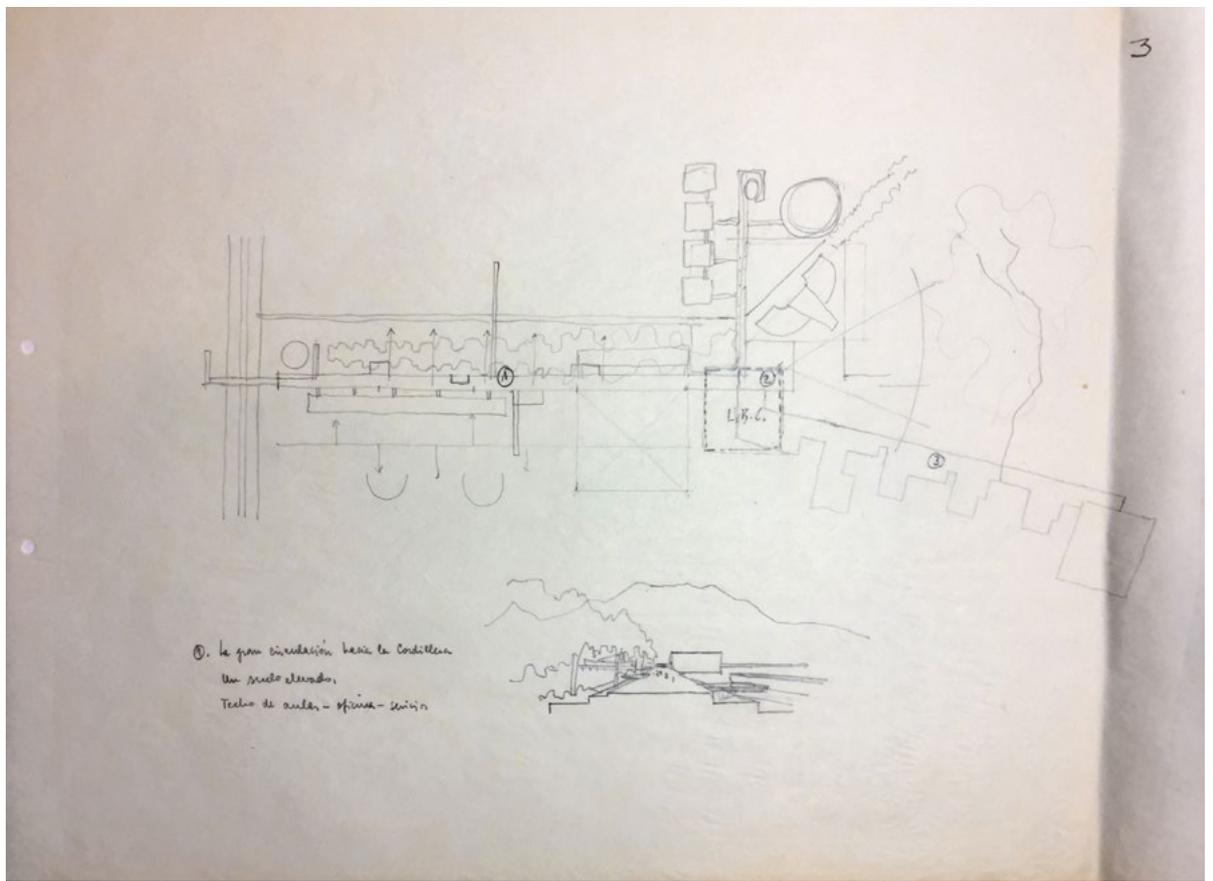
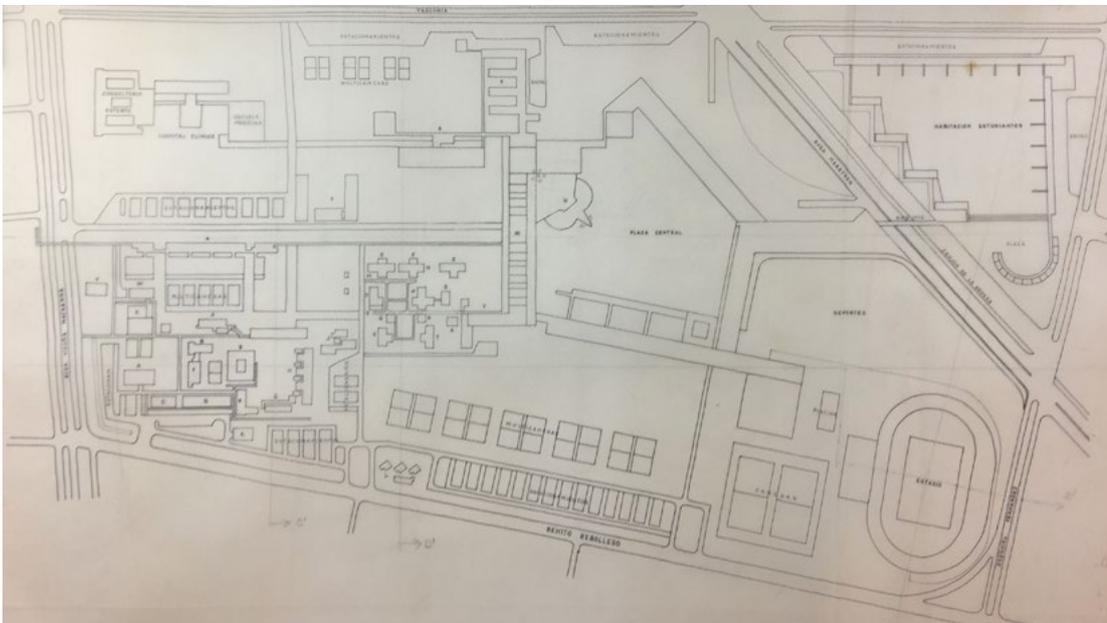


FIG. 151
 German Brandes' late sketch showing adjustments of the original campus proposal applied to the C-shaped block, in defense of three principles:
 "La la gran circulación hacia la Cordillera,
 Un suelo elevado
 Techo de aulas-oficinas-servicios"
 Fondo German Brandes
 Archivo de Originales. FADEU
 Pontificia Universidad Católica de Chile

FIG. 152
 German Brandes' latest version of campus San Joaquin (mid-1979s).
 Fondo German Brandes
 Archivo de Originales. FADEU
 Pontificia Universidad Católica de Chile



“To be able to recognise the phenomenon [of the mat-building] calls for a specially prepared frame of mind...to deliberately *not look too closely* at the detailed language, for this is still developing. And some practitioners, to achieve something through the bureaucratic machine of their country, have chosen to normalise their language (you might say so that the client did not become frightened by the appearance of the mat proper)”.⁶⁷

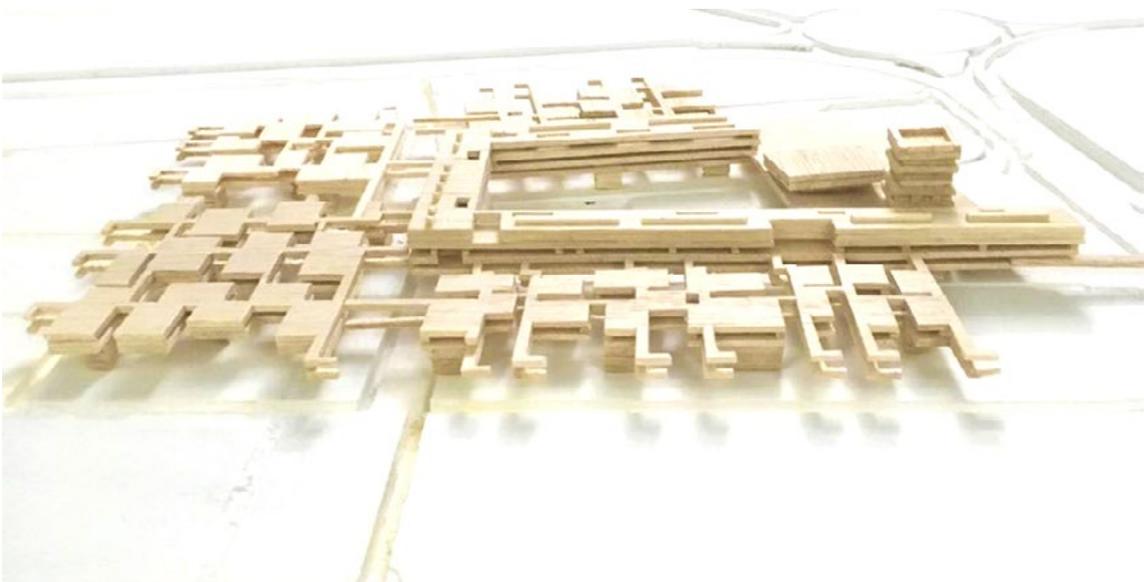
Net of the evident architectural and material quality of FU Berlin contemporary expansion, what really comes to the fore here is negotiation from which mat-structures cannot escape, since a similar process can be observed for the Chilean episode of campus San Joaquín in Santiago at the scale of the whole university complex. Indeed, political and economic instability in Chile undermined the feasibility of the program established by Universidad Católica, causing substantial changes to Germán Brandes’ ambitious project that remains largely unrealized after subsequent attempts to make it survive entrusted to the same architect, in close cooperation with the university technical office until 1978.

In San Joaquín, the process of neutralization is best exemplified by the repetitive adjustments that progressively reduced the complexity of the 1963 original formal structure, up to the current configuration which has completely dismantled the initial proposal and converted the university campus into a collection of built artefacts arranged in an almost indistinct ground. On the side of the projects revisions undertaken by the architect-educator Germán Brandes working from within the university bureaucratic apparatus represented by the Comisión de Planificación Física instituted in 1966, the first decision was that of interrupting the continuity of the C-shaped block, as also appreciated in the local press as ‘a logical and consistent choice since it is impossible to build it in a single stage due to the limitations of economic resources in countries like Chile’.⁶⁸ For the rest, the branching structure is destined for a progressive atomization, with a final configuration of the university complex governed by a center-periphery relationship due to the absence of any connection networks originally planned. In fact, Germán Brandes’ proposal of informality best expressed in a concept which appeared to reduce design ambitions to ‘condicionalidad arquitectónica, mas que una arquitectura’ – a concept inspired by and knowledgeably incorporated within the institutional propaganda of Universidad Católica – promised instead

⁶⁷ Smithson (1974), p. 573.

⁶⁸ In May 1966, the Rector created the Comisión de Planificación Física in order to approve the campus plan and coordinate the permanent updating and correction of the project both in accordance with new academic requirements or other contingences. See AUCA no. 8, 1967, p. 50.

FIG. 153
Model made in 2018 at the Pontificia Universidad Católica de Chile.
Courtesy of Camilo Meneses Ferrada



a radical spatialization into a three-dimensional infrastructure at the scale of the city. Paradoxically, the scale of the city and its logics take possession of campus San Joaquín in the years in which its original project is tentatively adapted to something more feasible. And what remains of the large multi-storey and terraced C-shaped block does not have enough strength to counter the disordered dissemination of single and autonomous architectural objects that, net of their quality, have completely overturned the original principle which aimed to identify an alternative, radical and progressive relationship between university and the city.

Therefore, the question opened by the comparison between an exemplary episode such as FU Berlin and the peripheral episode of San Joaquín does not arise from the respective initial premises which are, as mentioned, even opposite one another if we consider that Germán Brandes' project explored mat-structure by maintaining a hierarchical ordering system, while Candilis-Josic-Woods bet on mat-building to eliminate any form of hierarchy.⁶⁹ When compared to the more recent stages of their existence, instead, it can be observed that both projects have been respectively adapted, softened and normalized precisely operating on their respective strengths. In the first case, with a set of micro-interventions that mitigate the sense of modularity in order to loosen up the visual reception of the Berlin university non-hierarchical system. In the second, the Chilean case that still accepted a hierarchical system which progressively led from the external branching border to the internal monolithic C-shaped block, it is overtaken by what appears to be a typical logic of allotment followed by uncontrolled urban expansion, partially justified by spectacular and autonomous architectural objects offering every possible pedagogical experience as in the case of the see-through Siamese Towers (2003), or the impenetrable sculpture-like block of Angelini Innovation Center (2014), or even the more recent Aulas Building (2016) showing bewildering similarities with those ephemeral and fleeting structures erected in the dunes of Ciudad Abierta in Valparaíso.⁷⁰ In reality, this collection of contemporary buildings comes after a design competition (1993) calling for a recovering of campus San Joaquín unitary structure even though, however,

69 As previously mentioned, the Free University Berlin was established in West Berlin in 1948 by a group of teachers and students who had left East Berlin Humboldt University in protest against Communist interference. See "Architecture Plus" (no. 4, 1974), p.32.

70 Among the many buildings designed for campus San Joaquín based on innovative pedagogical experiences, the last mentioned is by OMN Arquitectos while the first two are by Alejandro Aravena (Elemental), with the following description provided by the architects for the project of Siamese Towers: "In a way, formal education is taken care by building codes: light, acoustics, ventilation, etc. but nobody takes care of informal education and there we saw a design opportunity. So, instead of moving forward thinking about the next step in education, we thought we had to move back as much as possible, to more archaic and primitive ways of being".

the brief did not go beyond the reorganization of green spaces.⁷¹ Against this backdrop, what remains under-the-radar from this season of *new utopias* applied to the field of higher education is De Carlo's strategy described by his projects parable, with the Pavia experiment representing the definitive affirmation of the architectural project as an instrument to put into crisis the very idea of the university on the one hand. While on the other hand, compared with the common fate of progressive neutralization shared by the two cases of San Joaquín and FU Berlin, it seems to emerge as an offensive strategy where it is the campus in its exploded and discrete version that abandons any idea of fortified complex – including the most radical experiments of those years – to literally invade the domain of the city to disperse education and alternative forms of learning:

“Quando alcuni anni fa si era cominciato a parlare a Pavia di un piano per l'espansione universitaria, alcuni avevano sostenuto che si sarebbe dovuto dar luogo finalmente a un campus. Ma la stessa Commissione dell'università che stava preparando i programmi aveva smentito affermando che il Campus dell'Università di Pavia sarebbe stato l'intera Città di Pavia”.⁷²

A strategy that will have crucial consequences in the next chapter. By considering the whole territory as the real scale of knowledge production will correspond, paradoxically, not only to a progressive reduction and simplification of the formal structure associated with the educational project of Universidad de Mendoza. But this will be closely dependent on the managerial skills required of the architect-educator interpreted in the next episode by the Italian-born architectural historian and critic Enrico Tedeschi, emigrated in Argentina in 1948 and firstly involved in Tucuman ambitious experience together with Rogers and other IAU's members (see Chapter 1), now exploring another version of the project of informal education examined in this research: the university incorporated into the city.

71 See '25 años después: 5 anteproyectos para una Revisión del Campus San Joaquín' in "ARQ" no.26, 1994.

72 Giancarlo De Carlo and Franco Bunčuga, *Conversazioni su Architettura e Libertà*, Milano: Elèuthera, 2000. It is also worth mentioning here Frampton's critical analysis of the FU Berlin project: "That the Frankfurt scheme as built out in the Free University of Berlin in 1973 lost much of its conviction stems largely from the absence of an urban context. In Berlin Dahlem it was deprived of that urban culture for which it had been conceived and to which it would have responded had it been built in Frankfurt. However much a university may function like a city in microcosm, it cannot generate the animated diversity of the city proper", in Kenneth Frampton, *Modern Architecture: A Critical History*. London: Thames and Hudson, 1980, p. 277.



FIG. 154

*The urban infrastructure conceived by German Brandes for campus San Joaquin has only partially survived, replaced by a variegated collection of individual buildings which, net of their intrinsic qualities, lose the challenge of instilling a clear sense of urbanity rather recalling, paradoxically, those ephemeral and fleeting structures erected in the dunes of Ciudad Abierta in Valparaiso.
(photo by the author)*



Chapter 4

The inhabited envelope.

Enrico Tedeschi's urban campus for Universidad (libre) de Mendoza

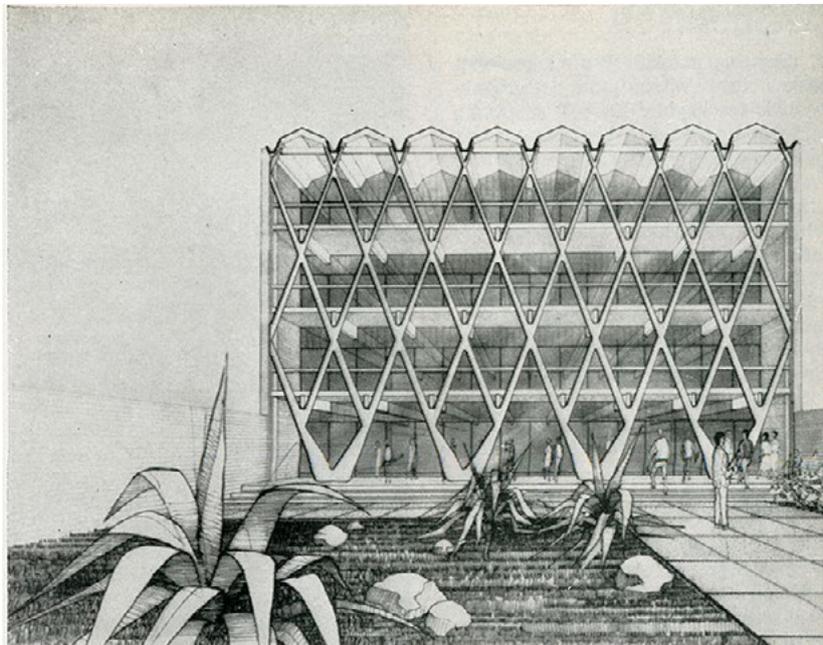


FIG. 155
*Facultad de Arquitectura de
Mendoza (FAUM), 1960.*
*Image from "Architectural
Review" (no.794, 1963).*

ABSTRACT (ITA)

Se il progetto di Germán Brandes del 1963 sarà destinato a una circolazione estremamente limitata che precluderà qualsiasi menzione dentro il colloquio internazionale sulle molteplici declinazioni di megastruttura, un piccolo edificio universitario realizzato nella regione periferica di Mendoza, sul lato argentino della Cordillera della Ande, compare quello stesso anno nelle pagine di "Architectural Review", fugacemente ripreso anche in quelle della rivista italiana "L'Architettura Cronache e Storia". Per la verità, si tratta di poche immagini riferite al reticolo strutturale a V che definisce il carattere della sua facciata completamente permeabile, di cui si commentano brevemente le qualità espressive dell'accattivante geometria non-orthogonal (1963) e l'anti-conformismo della soluzione tecnica quake-proof (1966) adottata in un contesto sismico.¹ Nel 2019, considerazioni simili hanno accompagnato l'investitura di quel piccolo edificio a Monumento Storico Nazionale, con l'immagine ormai iconica della FAUM (Facultad Arquitectura y Urbanismo de la Universidad de Mendoza) associata a tematiche ancor più affini al discorso architettonico contemporaneo come quelle sulla sostenibilità ambientale.

Certamente non si può ignorare l'interesse del suo autore, l'architetto italiano Enrico Tedeschi (1910-1978), per le questioni che emersero agli inizi degli anni '70 sull'utilizzo dell'energia alternativa nelle zone aride. In parte anticipate del suo testo più influente, *Teoría de la Arquitectura*, che non solo consolidò la posizione di Tedeschi come precursore in America Latina degli studi teorici e critici sull'architettura che ebbero inizio come membro dello IAU nell'esperienza di Tucumán, ma introduceva la costruzione di un sistema di relazioni tra l'architettura e il suo ambiente. L'apparato teorico proposto da Tedeschi era perfino distillato, nelle ultime pagine del libro, in una sequenza di diagrammi ad albero che scomponavano il sistema ecologico della regione, a cui si aggiungeva in dotazione un dispositivo tecnico chiamato helioindicador per misurare l'incidenza della radiazione solare.²

Nonostante i successi in questo campo, il contributo di Tedeschi che risulta per la maggior parte ancora poco esplorato,³ rappresenta una voce piuttosto influente nella critica interna al discorso architettonico moderno dell'immediato dopoguerra che trova nel progetto per il nuovo campus della Universidad de Mendoza un'occasione privilegiata per avanzare il pensiero sullo spazio educativo universitario, immerso in un ambiente urbano e risolto in una proposta inedita che oscilla tra ambizione civica e pragmatismo economico.

In primo luogo, il capitolo traccia una breve ricognizione storica sulla complessa biografia di Tedeschi. Tra i fondatori dell'A.P.A.O. (Associazione per l'Architettura Organica) e della rivista "Metron", prima di emigrare in Argentina nel 1948, Tedeschi avrà contestualmente più di un'occasione per frequentare l'ambiente intellettuale londinese che ruota intorno alla Architectural Association e alla redazione di "Architectural Review", con Nikolaus Pevsner che recensisce positivamente il suo primo libro intitolato *L'Architettura in Inghilterra* (1947) a cui si unisce la partecipazione al concorso per la ricostruzione del Crystal Palace nell'area di Sydenham (1945). Questi aspetti risulteranno importanti per comprendere il ruolo di Tedeschi oltre quello di emissario dei principi dell'architettura organica in America Latina, a cui

spesso è relegato il suo contributo teorico. La difesa delle specificità dell'architettura era per Tedeschi, come per Zevi, da ricercarsi nel concetto di spazio che entrambi elaborano sia in dialogo con alcuni riferimenti teorici, tra cui *The Architecture of Humanism* di Geoffrey Scott, sia con espliciti riferimenti alla produzione architettonica di Frank Lloyd Wright.⁴ A seguito di una lettura più ravvicinata degli scritti di Tedeschi, tuttavia, si riscontra l'assenza di ogni tentativo di politicizzazione dell'architettura moderna nella sua variante organica. Ma soprattutto, si riconosce l'intenzione di Tedeschi di estendere il concetto di spazio a un'interpretazione più ampia, poiché dal suo punto di vista – evidentemente mediato dalla sua esperienza in America Latina – un'architettura “non può essere liquidata a mera costruzione per il semplice fatto di non contenere uno spazio interno nettamente distinto”.⁵ Questa sua affermazione, in contrapposizione con le argomentazioni di Zevi, non solo rimetteva in gioco i postulati teorici sulla spazialità ricercata dal mentore di Geoffrey Scott, ossia lo storico dell'arte Bernard Berenson (1865-1959) che aveva riposizionato il metodo di analisi dei dipinti rinascimentali su valori tattili, movimento e composizione dello spazio come unica fonte di vitalità ('life-enhancement').⁶ Ma soprattutto, apriva alla sperimentazione architettonica sullo spazio vuoto, definito dal solo movimento, introducendo un rapporto di ambiguità tra interno ed esterno.

In secondo luogo, il progetto universitario di Mendoza iniziato nel 1960 quindi simultaneamente all'elaborazione di questi pensieri, verrà analizzato criticamente come risultato del progetto educativo di Tedeschi, fondamento radicato nella componente relazionale dei processi di apprendimento riadattata a una dimensione urbana. L'analisi progettuale non può prescindere da Tedeschi nel ruolo di architetto-educatore che, in questo episodio, agisce dall'interno di un apparato burocratico locale più ampio e articolato, che comprende: (1) la sua nomina di *arquitecto-urbanista* ottenuta dalla municipalità per la redazione del Piano della Gran Mendoza; (2) i suoi compiti gestionali all'interno dell'istituzione universitaria che dirigeva tra cui la capacità di assicurare risorse; (3) la sua complicità con l'industria edile locale che stava introducendo alcuni peculiari metodi di prefabbricazione del cemento nella regione.⁷

La combinazione di questi tre aspetti – visione urbana, gestione e costruzione – che modella la figura dell'architetto-educatore intorno al sempre più pervasivo concetto di imprenditorialità, produce una sperimentazione radicale nella tipologia dello spazio educativo: un volume arretrato rispetto alla strada che concede alla città lo spazio aperto antistante, sviluppato verticalmente su una sequenza di piani completamente liberi, sostenuti unicamente dal reticolo strutturale a V del suo involucro permeabile che esibisce in primo piano la circolazione e il movimento continuo degli abitanti di un'unica e indistinta comunità urbana. Il concetto di spazio flessibile e adattabile della FAUM, che guiderà l'espansione successiva del piccolo campus urbano di Mendoza anche dopo la morte di Tedeschi, sopravvive paradossalmente all'impianto teorico del suo autore smantellato dalle accattivanti argomentazioni sul *well-tempered environment* offerte da Reyner Banham in occasione dei seminari di Córdoba e Rosario (1968), su invito dello stesso istituto fondato da Tedeschi nel 1957.⁸

Tedeschi realizza così il progetto di un'università autenticamente partecipe dell'ecologia del territorio e visibilmente liberata nell'ambiente in cui opera, perseguendo uno degli obiettivi più ricorrenti del progetto educativo contemporaneo. Collocato come quarto episodio nella traiettoria progettuale tracciata in questa tesi, il caso di Mendoza mostra un evidente processo di semplificazione in atto rispetto all'infrastruttura urbana intricata e complessa del campus San Joaquín, dove il sistema di relazioni interne e contaminazione con l'esterno è piuttosto affidato a un insieme di scelte apparentemente pragmatiche che vanno dal *set-back* di un volume compatto, verticale e liberamente colonizzabile fino alla cura del singolo dettaglio costruttivo. Tra questi dettagli, l'inestricabile vincolo tra l'indeterminatezza della pianta tipica e la forma scrupolosamente controllata della sua facciata, dimostra un atto di resistenza nei confronti del principio di assoluta neutralità – ormai propagandato con insistenza non solo da Banham – esplicitando le frizioni materiali che sopravvivono nell'ambiente invisibile concepito da Tedeschi, riposizionato come contributo originale e critico nel discorso contemporaneo che si interroga sul contenuto politico dell'involucro.⁹

NOTE

1. L'articolo intitolato 'Non-Orthogonal: Deviationist Elevations' compare su "Architectural Review" (no.794, 1963), mentre "L'Architettura Cronache e Storia" (no.92, 1963) pubblica 'Reticolo anti-sismico di Enrico Tedeschi'.
2. Il libro di Tedeschi *Teoría de la Arquitectura* (Buenos Aires: Nueva Vision, 1962) consoliderà la sua posizione nel discorso architettonico sudamericano, propiziata dallo stretto legame con alcune delle università più importanti della regione tra cui la Universidad Católica de Chile che gli aveva già riconosciuto il ruolo di membro accademico della scuola di architettura nel 1959.
3. La maggior parte delle questioni affrontate nel capitolo derivano dalla consultazione di materiali d'archivio, visite sul posto e conversazioni con alcuni studiosi sudamericani interessati all'opera di Enrico Tedeschi, tra cui Alejandra Sella (Direttrice del Dottorato della Facultad de Arquitectura Urbanismo y Diseño della Universidad de Mendoza) che insieme alla professoressa Noemi Adagio ha organizzato nel 2012 il simposio intitolato "Enrico Tedeschi. Work in Progress". Altri studi sono stati condotti da Leonardo Codina (2013) e Maria Claudina Blanc, mentre un importante contributo sul fronte italiano è stato recentemente curato da Olimpia Niglio, *Enrico Tedeschi in Argentina* (Rimini: Aracne Editrice, 2020).
4. Il testo di Geoffrey Scott *The Architecture of Humanism: A Study in the History of Taste* (New York: Mifflin Company, 1914) sarà tradotto in italiano da Elena Croce nel 1939.
5. Questa considerazione è già presente nel precedente libro di Tedeschi, *Una Introduccion a la Historia de la Arquitectura* (Universidad de Tucuman, 1951).
6. In Bernard Berenson. *Aesthetics, ethics and history in the arts of visual representation* (New York: Pantheon Books, 1948).
7. Il primo punto rivela una reinterpretazione sul progetto urbano di Hilberseimer ricostruita a partire da alcune considerazioni offerte da Tedeschi in un piccolo testo intitolato *La arquitectura en la sociedad de masas* (Buenos Aires, 1962) combinate agli schemi grafici del 'Informe Tedeschi' (posto alla base del Piano per la Gran Mendoza); il secondo punto fa riferimento alla gestione in termini di comunicazione del progetto nel contesto locale per il reclutamento degli studenti, trattativa immobiliare per assicurarsi un terreno in area baricentrica, ricerca di finanziamenti in forma di sponsor per la costruzione del campus; infine il terzo punto rivela le scelte sul metodo costruttivo legato ai processi di centrifugazioni adottati dall'industria italiana S.C.A.C. (da una conversazione tra l'autore di questa tesi e Roberto Franciosi, figlio dell'ingegnere Diego Franciosi, che installò i primi stabilimenti a Mendoza per la produzione di elementi in calcestruzzo armato precompresso nella regione e collaborò con Tedeschi al progetto della FAUM).
8. Mentre si trovava ancora a Tucumàn, Tedeschi sarà tra i promotori del primo Congreso de Docentes de Historia de la Arquitectura che riunisce professori di storia dell'architettura argentini, uruguaiani e cileni, a seguito del quale sarà fondato l'Instituto Interuniversitario de Historia de la Arquitectura (IIDEHA) diretto da Tedeschi dal 1961 al 1964.
9. Se il concetto di ambiente invisibile era stato introdotto da Marshall McLuhan negli stessi anni in cui veniva concluso il campus di Mendoza, nel suo articolo 'The Invisible Environment: The Future of an Erosion (in "Perspecta" no.11, 1967), il tentativo di Alejandro Zaera-Polo di teorizzare *The Politics of the Envelope* è molto più recente ("Log" no.13/14, 2008), rinnovato nell'ancor più recente *The Ecologies of the Building Envelope* (2021).

4.1 *'Un italiano sulle Ande'.*
The organic re-foundation of historical and theoretical studies

La modernidad es un momento que se caracteriza por la dispersión de los núcleos de elaboración cultural que en las sociedades tradicionales estaban ligados de manera directa a la centralidad política y económica. La existencia de procesos de disputa por la hegemonía cultural produce equilibrios momentáneos y constantes desplazamientos de núcleos de irradiación.¹

Jorge Francisco Liernur, 2008

A few years before the Open University decided to adopt a complex media infrastructure as the main instrument for disseminating knowledge across the U.K. and the rest of the world,² Enrico Tedeschi is invited guest during a television show to present the first completed building for the new campus of Universidad de Mendoza (1964) which literally materialized his educational project with clear ambitions towards the entire peripheral region of Norte Argentino, on the border and in dialogue with neighboring Chile. The Italian-born architect Enrico Tedeschi (Rome 1910 - Buenos Aires 1978) had gained visibility as a re-founder of historical studies in Latin America since his first experience in Tucumán, captured by a peripheral context that showed a marked interest of university institutions in rethinking higher education system. However, even if the figure of Tedeschi apparently embodies the very essence of the migration of ideas from the center to the periphery of post-war architectural debate, his work must be reconsidered instead by virtue of a sophisticated process of adaptation of an architectural thought stimulated by the local contexts Tedeschi intercepted within his complex biography between Italy, U.K. and Latin America. Or even reconsidered according to

1 Jorge Francisco Liernur and Pablo Pschepiurca, *La red austral. Obras y proyectos de Le Corbusier y sus discípulos en la Argentina (1924-1965)*. Buenos Aires: Univ. Nacional de Quilmes, Prometeo, 2008, p.19.

2 The Open University extended higher education beyond the typical classroom by using a complex system of media to disseminate knowledge. Despite its physical presence in Milton Keynes, Lord Crowther described the university in his inaugural speech as “disembodied and airborne,” one capable of flowing “all over the United Kingdom.” The university would go “on air” starting in 1971, finding its place inside BBC’s regular radio and television broadcasting schedule with course units scripted, presented, recorded, and edited at BBC’s studios at Alexandra Palace. A wide network of study centers made the territorial system local in those areas of the country out of broadcasting range, where physical copies of the film and audio were distributed. On this case see the in-depth study by Joaquín Moreno, *The University is Now On Air: Broadcasting Modern Architecture*. CCA and Jap Sam, 2018.

the unexpected 'camino de regreso' from the margins towards the center.³

While Italy was preparing its season of material and moral reconstruction after the devastation of the war, Tedeschi participated together with a group of other Italian architects in the foundation of the architectural magazine "Metron" in 1945 which would have added an influential voice in the role of *cultural institution* that Italian magazines would play in this complicated time:

"The avant-garde work carried out by Pagano in "Casabella" found its post-fascist continuation in the APAO (Associazione per l'Architettura Organica), in the MSA (Movimento di Studi per l'Architettura), in "Metron". We must continue on this path not only because it is the right one, but also because it is the path that – despite the obstacles, the oppositions, the contradictions of Piacentini's transformism and Ponti's smoothings – is on the ascendant".⁴

It is in this spirit that the APAO promoted and established by Bruno Zevi as an independent association which supports collaborative work and the project of democratization gathering the large part of the magazine's contributors including Enrico Tedeschi, combined with the constant stimuli offered by the School of Organic Architecture as an intellectual and moral core for educational and professional reconstruction with the aim to reposition the social role of the architect.⁵ This also represents the first opportunity for Tedeschi's engagement in the role of educator, with his writings on the subject of how to teach architecture and the urgency of a reform in the field of architecture education not only published in the pages of "Metron", but openly discussed on the occasion of the first meeting of architecture teachers held in Florence in October 1947 to which Tedeschi participated as delegate of the APAO. The most important issues

3 See Anahi Ballent. *El diálogo de las antípodas: Los CIAM y América Latina*. Buenos Aires: Secretaría de Investigaciones en Ciencia y Técnica FADU, 1995.

4 Translation by the author from "Metron" no. 25, 1948: "L'opera di avanguardia svolta da Pagano in «Casabella» ha trovato il proseguimento post-fascista nella APAO (Associazione per l'Architettura Organica), nel MSA (Movimento di Studi per l'Architettura), in «Metron». Per questa strada dobbiamo continuare non solo perché è quella giusta, ma anche perché è la strada che - malgrado gli ostacoli, le contraddizioni, gli equivoci del trasformismo piacentiniano e delle edulcorazioni pontiane - sta sull'ascendente". See also Maristella Casciato, 'Gli esordi della rivista *Metron*: eventi e protagonisti', in "Rassegna di Architettura e Urbanistica", no. 117 (2005), pp. 45-55. The definition of "istituzioni della cultura architettonica" came instead from Ezio Bonfanti at the end of the 1960s: "La cultura architettonica a Milano: strumenti e istituzioni", in Luca Scacchetti (ed.), *Ezio Bonfanti: Scritti di architettura*, Milan: Clup, 1981.

5 See "Metron" no.22 (1947), pp.53-57 on the 1st Congress of the Association for Organic Architecture where State involvement was called into question in their discussion on the democratic reconstruction of the country. See also 'La costituzione dell'associazione per l'architettura organica a Roma', in "Metron" no. 2 (1945), pp. 75-76.



FIG. 156
Enrico Tedeshi (second from right)
explaining his educational project
during a television program
in Mendoza.



FIG. 157
Covers of the Italian architectural magazine "Metron", based in Rome and founded in 1945.

FIG. 158
The first published work by Enrico Tedeschi "L'Architettura in Inghilterra", 1947 (left). Cover of the first Italian translation of Geoffrey Scott's "The Architecture of Humanism" curated by Elena Croce (1939).



there concerned the definition of a common plan through method and a clear orientation in order to shape the new figure of an ‘intellectual professional’ able to work both at the local scale and at that of the national project of reconstruction.⁶

What should not go unnoticed is that 1947 is the same year in which Tedeschi travels outside Italy, as the Italian delegate invited to the Architectural Association centenary celebrations propitiated by Tedeschi’s publication *L’Architettura in Inghilterra*, positively reviewed by Nikolaus Pevsner in the pages of “Architectural Review” and still one of the few Italian-speaking language insights into British architecture.⁷ These connections with the British intellectual circle are by no means insignificant, especially with regard to Tedeschi’s future speculations on Geoffrey Scott’s argument around the concept of *space* intended as a ‘void’ offered in the British author’s book *The Architecture of Humanism: A Study in the History of Taste* (1914), considered by Colin Rowe as the most important contribution in this sense and also the subject of study by a young Zevi while he was in London enrolled at the Architectural Association in 1939.⁸ In fact, far from the presumed role of emissary of organic architecture in Latin America, Tedeschi will specify the concept of *space* in his autonomous theoretical framework which, while admitting that architecture finds its specificity in the spatial dimension, argues that this cannot be limited to the dimension of internal space protected by solid artefacts. In contrast, architecture can instead explore the dimension of emptiness, movement and external while maintaining its spatial connotation:

“No se puede rechazar de la arquitectura una construcción, sólo porque no esta dotada de espacio interno [...] El espacio estético es algo menos rígido, menos categórico, menos tangible. Puede expresarse con un volumen de aire, limitado por superficies solidas, o tambien por medio de relaciones espaciales, capaces de crear espacio sin delimitarlo materialmente: un espacio que podemos llamar externo en contraposición al otro interno.

El espacio externo se origina por medio de relaciones entre edificios,

6 See Renato Bonelli, “Libera professione in provincia”, in “Metron” no.7 (1946), pp.22-26. Trying to advance on the professional role of the post-war architect the theme of the house come to the fore, reconsidered within a plan of social justice and national collaboration to be solved not only as technicians but as humans with a particular ‘social mission’.

7 Enrico Tedeschi. *L’Architettura in Inghilterra* (Firenze, 1947).

8 The book edited by British historian Geoffrey Scott, *The Architecture of Humanism: a Case in the History of Taste* (New York, 1914) was a constant reference for Zevi who frequented the English intellectual circles and revisited Scott’s work thanks to the later translation into Italian edited by Elena Croce, *L’architettura dell’Umanesimo*. Bari: Giuseppe Laterza e Figli Editori, 1939.

y entre edificio y naturaleza”.⁹

Simultaneously, still in 1947, the first post-war CIAM reunion was also organized in England with Ernesto Nathan Rogers appointed member of the CIAM Education Commission focused on the reformulation of existing pedagogical methods, and invited on the same occasion by the Argentine delegate Jorge Vivanco – director of the newly born Instituto de Arquitectura y Urbanismo (IAU) – to participate in the ambitious project of Tucuman and to recruit eminent personalities particularly active in the field of education to be involved in that experience.¹⁰ Thus, Italian architects Ernesto Rogers, Cino Calcaprina, Guido Oberti, Luigi Piccinato and Enrico Tedeschi will be incorporated into the IAU with this last appointed extraordinary professor of Historia de la Arquitectura in 1948. The new study plans and programs developed by the IAU were based on intensive and collaborative working methods aimed at obtaining the maximum degree of integration and real-world impact with the immediate context through the direct involvement of the Institute’s members – and students – in major initiatives and public works in the city of Tucuman and its region.

The combined effect of Seminars and Talleres (design studios) would have guaranteed the development of an ambitious educational project which found the first field test in the design and construction of the new Ciudad Universitaria on top of the Andes conceived by the IAU’s architects-educators and their students. However, students at Tucuman had to demonstrate they had acquired relational attitudes for collaboration and interdisciplinarity even in theoretical courses. And thus, the course of history of architecture entrusted to Tedeschi is constructed by the Italian architect around a brief that explores the relationships between the monument and its urban and regional context.¹¹ In particular:

“El período de vida arquitectónica con el ambiente físico, social y cultural, ilustrando las grandes corrientes de pensamiento artístico

9 In Enrico Tedeschi, *Una Introducción a la Historia de la Arquitectura* (1951), pp. 99-100.

10 For a deeper understanding on this episode see Chapter 1.

11 This from a conversation between the author and Alejandra Sella (July 2018), the then director of Doctoral School of architecture and urban studies in Mendoza. Alejandra Sella together with Noemi Adagio (Universidad de Rosario) coordinate a research group on the work of Enrico Tedeschi in Latin America. See Alejandra Sella and Noemi Adagio (eds), *Enrico Tedeschi. Work in progress* (Mendoza, 2012), while Tedeschi’s pedagogical contribution was also discussed by María Claudina Blanc in “La renovación de la enseñanza de la arquitectura a la luz de la crisis de posguerra. Enrico Tedeschi entre Roma y Tucumán, 1945-1952”, *XVI Jornadas Interescuelas/Departamentos de Historia*. Mar del Plata: Universidad Nacional de Mar del Plata, 2017.

[...] más que describiendo edificios que los estudiantes nunca han visto o nunca verán”.¹²

Tedeschi's pedagogical contribution lay in the fabrication of a subject with a critical attitude towards reality, providing a method rooted in various references in the field of aesthetics such as Lionello Venturi and Benedetto Croce whose arguments populated the thematic seminars preceding the journey into the reality. Pedagogically speaking, this journey was literally intended by Tedeschi as a trip with students called to critically investigate little explored areas of the region with empirical methods such as monument surveying and photography. In particular, the results of the study trips to Cuzco (1949 and 1953) in collaboration with Eduardo Sacriste would find space in the university publication *La Plaza de Armas del Cuzco* (1961).¹³ If it is true that the focus on the monuments makes explicit a programmatic action against the lack of scientific material in the area of historical heritage in Latin America – especially needed after devastating earthquakes that fed the debate on restoration – it is equally true that Tedeschi's was broader than that of a simple archaeological dissection:

“Plaza de Armas is not, as it is generally considered, a collection of monuments. It is a monument as a whole, as in the case of Piazza San Marco, or Piazza del Campo in Pisa. If Piazza San Marco finds its urban continuity in the lagoon, Plaza de Armas clearly appears as the center of gravity of the entire city of Cuzco and the natural landscape that contains it”.¹⁴

With these words, Tedeschi identified in the monumental complex of the Plaza de Armas the need for a *urban* vision, arguing that ‘this continuity landscape-city-plaza is, in my opinion, the basis of all the critical approach towards the space’. Photography becomes the privileged tool for exploring this complex vision, understood by Tedeschi as instrumental to develop critical thinking on space rather than a technical means for mere reproduction. This can be appreciated, for example, when he focuses on the scale of the buildings which create continuity with the natural landscape. The monument is never portrayed isolated standing in the middle of the picture, but its view is always

12 Programa y Plan de Trabajo del curso de Historia de la Arquitectura, July 1948. Quoted in Blanc (2017), p.8.

13 Enrico Tedeschi. *La Plaza de Armas del Cuzco*. Tucumán: Universidad Nacional de Tucumán, Facultad de Arquitectura y Urbanismo, 1961.

14 Translation by the author from Tedeschi (1961), p.4.

FIG. 159

Tedeschi's students work produced on the occasion of the study trip to Cuzco (1954). The series of drawings will be published in "La Plaza de Armas del Cuzco" (1961) by Universidad Nacional de Tucumán.

Apart from the meticulousness of the surveys, the sequence follows a multi-scale study of the 'monument'.

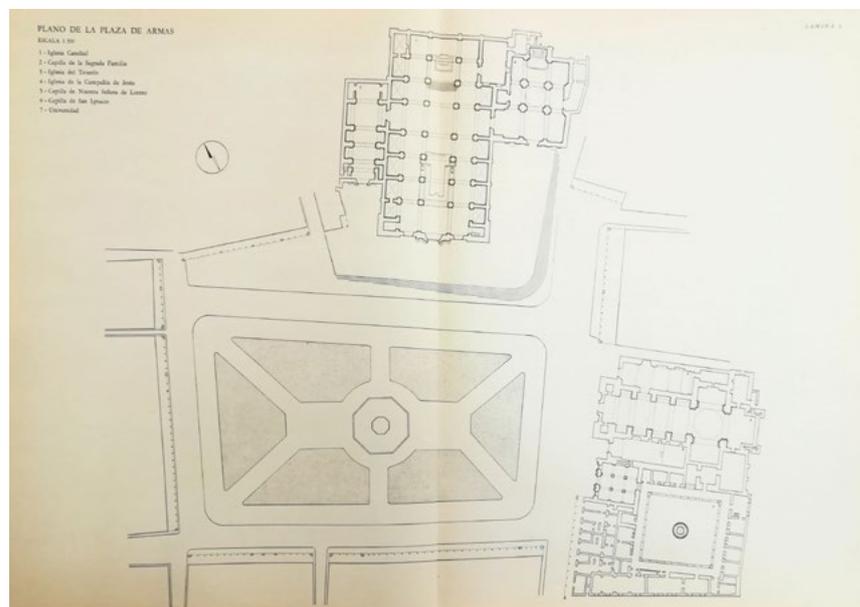
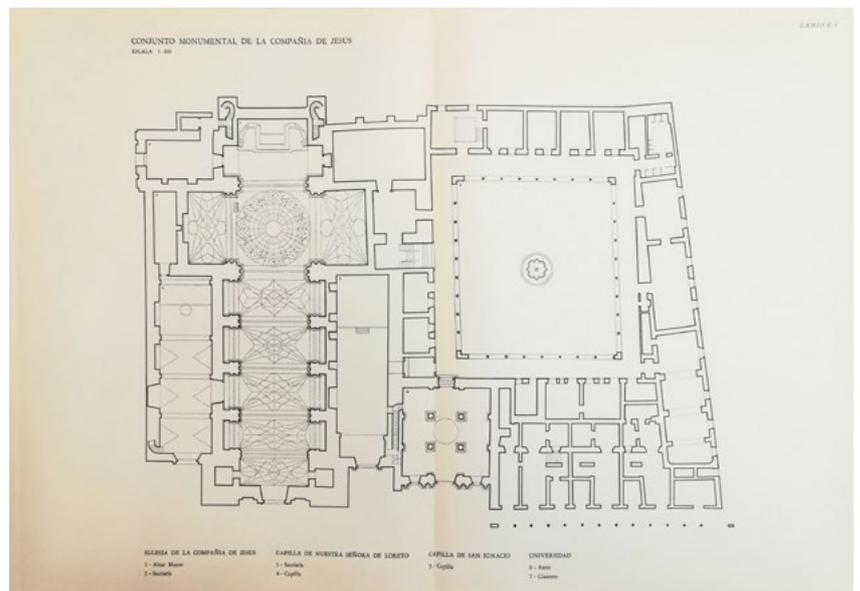
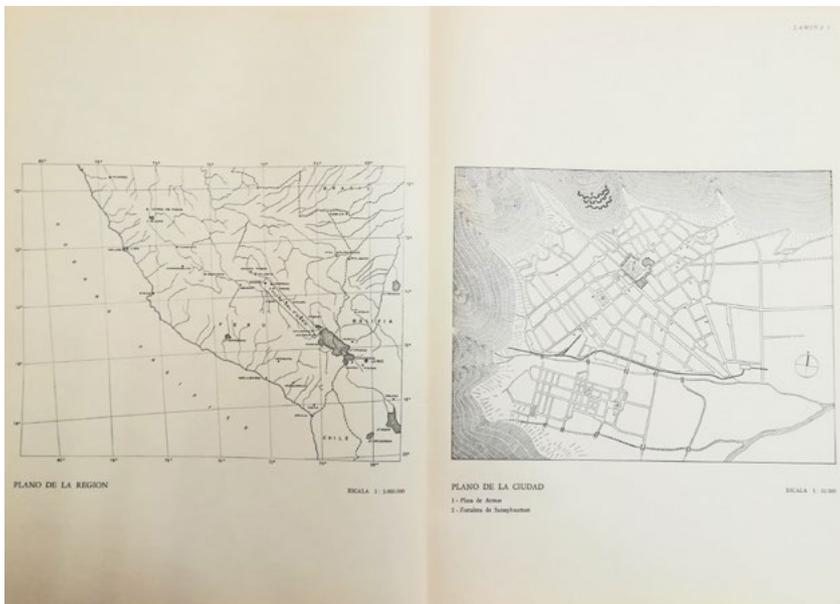




FIG. 160
Top view of the
Plaza de Armas de Cuzco.



mediated by the relationship with the other elements belonging to the natural or built environment: porticos provide information on the human scale while the vaults or stairs seek resonance with the omnipresent Cuzco's topography.¹⁵ As said, these *organic* interpretations have often been explained as mere derivations from Zevi's architectural thoughts based on the relationships between the two before the former emigrated to Argentina. However, the photo-essay accompanying the survey of Plaza de Armas represents Tedeschi's first experiment in a different local context. More than anything else, it shows his urban approach on architecture which is also demonstrated in the precise layout that distributes students' works in the following publication, with the surveys of the monuments always placed in relation to their context instead of floating as autonomous and static objects, and above all, crossing every scale of the project: from the regional to that of building's façade details.

In this sense, what have often been underestimated in the few studies about Tedeschi's work are his early experiences before the WWII, with the young promising architect rather integrated into the Italian rationalism circle.¹⁶ In fact, after his graduation in 1934, Tedeschi worked as collaborator in the office of Alberto Calza Bini based in Rome during the time of national competitions launched by the regime.¹⁷ Even if there was no lack of frequentation with the Milanese area of the Italian architectural debate, as on the occasion of the VI Triennial of Milan in 1936, in which the new masterplan of the city of Aprilia designed by Muratori, Quaroni, Fariello and Tedeschi was presented in the *planning* section. Concurrently, the new director of "Casabella" Giuseppe Pagano was exhibiting the well-known 'Mostra sull'Architettura Rurale nel Bacino del Mediterraneo': a survey on the Italian rural house presented in the form of a photographic project.¹⁸

The exhibition was curated by Pagano himself in collaboration with Guarniero Daniel: the vertical panel at the entrance introduces the message 'Funzionalità della casa rurale' to a sequence of large-format photographs

15 See Silvia Alvite. "Enrico Tedeschi y la crítica fotográfica en el paisaje arquitectónico latinoamericano", in *Anales del IAA*, no. 45(1), 2015, pp.73-86.

16 A historical study on the figure of Enrico Tedeschi in the Italian context was recently edited by Olimpia Niglio, *Enrico Tedeschi in Argentina* (2020) with contributions from Fausto Giovannardi, Adriana Guisasola and Fabio Marino among others.

17 Among the participations in national competitions, Enrico Tedeschi together with Franco Petrucci were invited to submit a design proposal for Palazzo dell'Acqua e della Luce (Expo 1942) competing against Pier Luigi Nervi, Adalberto Libera, Pietro Bottoni, Giovanni Michelucci, Gio Ponti.

18 Giuseppe Pagano defined himself as an 'image hunter' admitting he had approached a new way of discover architecture through photography during this study. In fact, the purposes and contents of the exhibition are inseparable from the photographic medium experimented by Pagano: 'little by little, almost brought by the generous honesty of photography, I approached a still undiscovered Italy'. From Giuseppe Pagano, 'Un cacciatore d'immagini', in "Cinema" (December 1938).

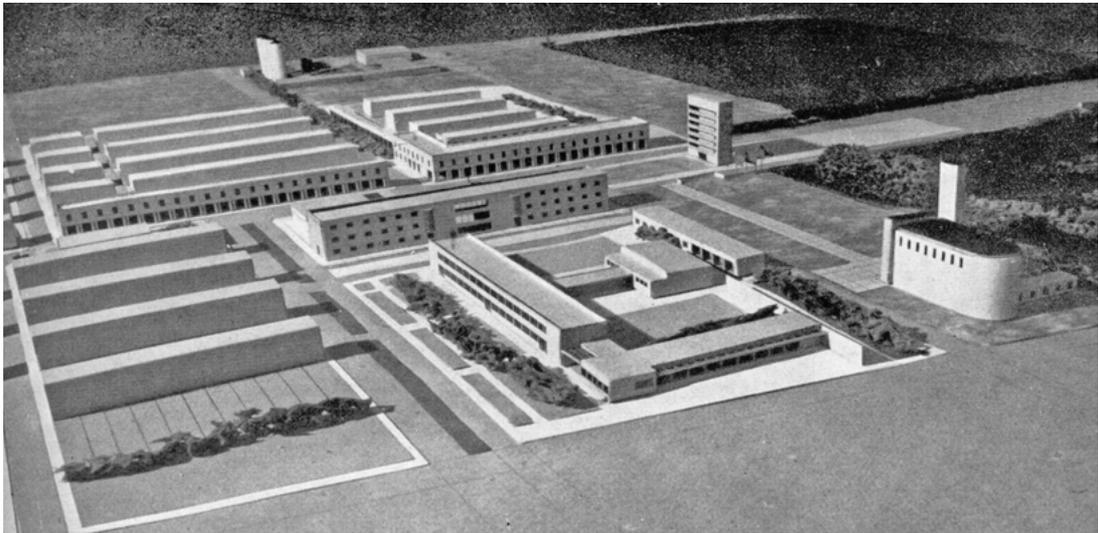


FIG. 161
Urban project for the city of
Aprilia (model). Tedeschi worked
with Saverio Muratori, Ludovico
Quaroni and Francesco Fariello
for the 1936 competition,
whose results were presented on
the occasion of VI Triennale di
Milano in the same year.

orderly suspended following a rational grid. Short and concise captions guide the visitor in the analytical process that Pagano applies to the heritage of Italian minor architecture to demonstrate his thesis: authenticity, honesty, essentiality are aesthetic values of the rural landscape and must be rediscovered to find the basis of an Italian interpretation of Modernism.

The results will be collected in the catalogue *Architettura Rurale Italiana* organized in two sections,¹⁹ with the first structured around Pagano-style passionate text defining rural architecture as ‘an immense vocabulary of the constructive logic of human, creator of abstract forms and plastic fantasies with clear relationships with the environment, with the climate, with the economy, with technology’;²⁰ the second articulated in a sequence of 62 full-page photos, each accompanied by a title that rejects any rhetorical tone: ‘Scala loggiata in una casa di Rieti (Lazio)’, ‘Balconi di legno in a casa di Primolano’, or ‘Casa di campagna presso Gandino in Valsertana’. This because Pagano claimed that the rural house corresponded to its own aesthetic: an artefact designed primarily as equipment for everyday life, a life that took place in continuity between the interior and the exterior, where the entire rural productive landscape represented the set of everyday life.²¹ Therefore, the 1936 survey focused on the mutations of recurring architectural and construction elements influenced by the environment, which produced volumetric articulation, repetitions and variations, asymmetrical arrangements all recorded by means of the photograph and providing some resonance with Tedeschi’s method later applied to the ‘whole monument’ of Plaza de Armas de Cuzco.

In 1949, Tedeschi was awarded with a long-term contract extension with the Universidad de Tucumán with IAU’s director Jorge Vivanco recognizing his innovative work in the field of History teaching and also offering the position of professor of Theory of Architecture – until then thought by Rogers. He also gave relevance to the preparation of a seminal publication, Tedeschi’s *Una Introducción a la historia de la arquitectura* (1951), where the Italian architect-educator would theorize on the concepts of ‘escala, espacio y paisaje’ following a new perspective towards the physical and social environment dominated by his personal notion of *space*.

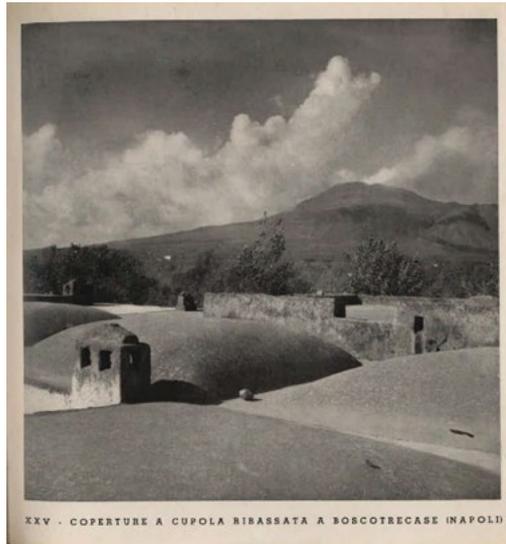
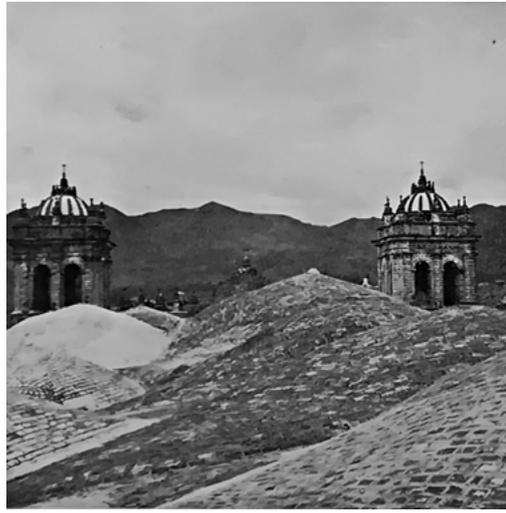
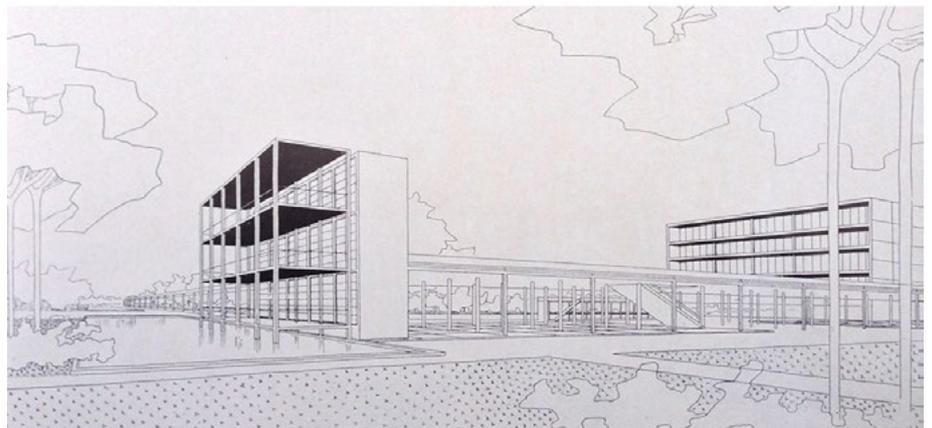


FIG. 162
 Photographs by Enrico Tedeschi investigating the relationships between Cuzco's built environment and the surrounding natural landscape (above). Photographs by Giuseppe Pagano investigating the relationship between Italian rural architecture and its local context (below).

FIG. 163
 Close-up from the perspectival drawing depicting the urban proposal for "Milano Verde". In "Casabella-Costruzioni" no.132 (1938), with an introductory essay by Giuseppe Pagano with the challenging title 'L'ordine contro il disordine'.



4.2 *Beyond the borders of the 'sociedad de masas'.
The urban project for the Gran Mendoza and its region*

Shopping centres, universities, cultural centres and public buildings will all regain their formal importance: they will be the monuments of a vast metropolitan territory marked by an impressive public transport network capable of augmenting and multiplying movement, contacts, and participation of every man according to the spirit of the new city.²²

Aldo Rossi, 1962

The Spanish colonization of Latin America was strictly a vast economic enterprise, with its organization enabled by the systematic foundation of cities. This enterprise developed a network of expedition routes establishing an interconnected infrastructure of mining extraction and agricultural production combined with the foundation of approximately nine hundred towns from Patagonia to northern California, not including Spanish appropriations of pre-Columbian settlements and infrastructures. While everything extracted - mined, harvested, or exploited - was immediately shipped overseas to satisfy European markets and ultimately expanded the economic and political power of the Spanish and Roman Catholic empires, cities were conceived as strategic points of exchange spread in constellation throughout a vast and previously uncharted territory, only connected by rivers, a few pre-existing roads, or the sea.²³

Peculiarly, the cities were organized according to a pre-established plan conceived in the abstract space of the law and never coinciding with any kind of *a priori* formalization. Indeed, the founding of the cities was regulated by the Law of Indies, the prime instrument that established authority and administrative power over the unknown territory and its resources. As the only unifying institution, the Law of Indies is a fascinating and extensive document that specifies all the aspects concerning the settlement of a city – site selection, urban planning and political organisation – periodically updated like in the case of the Philip II Ordinances (1573) which expanded the previous decrees by Ferdinand and Charles V. This set of 148 Ordinances,

22 Aldo Rossi, 'Nuovi problemi', in "Casabella-Continuità", no. 264 (1962).

23 On the implications of this enterprise in the last century, see the recent study by Felipe Correa, *Beyond the City: Resource Extraction Urbanism in South America*. Austin: University of Texas Press, 2016. See also the monographic issue titled 'Architectures of Latin America', "Harvard Design Magazine" no.34 (2011).

near to be the most effective and most complete planning document in the history of mankind in terms of their widespread application and persistence in specifying the physical and organisational arrangements that were to be developed in the new cities of America,²⁴ contains written instructions for the foundational act: the orthogonal grid pattern extended from a central plaza where the three powers of authority find their place, that is the national government, the church, and the governor's residence. The central plaza should be considered both symbolic and performative, since it represents the point of entry of the abovementioned colonization process that expanded not only towards the limits of the city, but ideally towards the whole territory subjected to the extraction and administration of local resources. Certainly, the orthogonal grid was the most practical layout to be applied, since it enables to easily translate textual instructions, to obtain a unitary plan, to exercise a centralized control and finally to accurately measure properties.

Concomitantly, and most importantly, the abstraction of law allowed the instructions to remain extremely adaptable to different geographic locations. Although the urban plans of a number of South American cities and capitals appear essentially the same, none of them looks like any other because the original gridded configuration was adapted to the particularities of local topography: the case of Buenos Aires grid on the flat expanse of the Argentinean plane is fundamentally different than the grids implanted in the Andean region, where the sites were constricted in valleys between large mountains. In truth, it was not only a topographical question that influenced the variations and adaptations of the grid system, as the laws also provided indications on a broader conception of the environment: elevation and exposure to winds, proximity to water, availability of pastures, good terrain and forests. Finally, it was accepted that these variations occurred over time with the grid system contracting in the case of cities that did not prosper, so that they could shrink and eventually disappear. In the opposite case, if instead they increased their economic power and influence in the enterprise's network they not only did expand following the same principle of the grid, but their stability was demonstrated by supporting the construction of significant works of ecclesiastical and civic architecture.

Indeed, the second unifying institution in this disperse enterprise was the Catholic Church and its strong apostolic mission that infused every step of the Spanish conquest of the New World. As the sole patrons of

24 See Axel I. Mundigo and Dora P. Crouch 'The City Planning Ordinances of the Laws of the Indies Revisited. Part I: Their Philosophy and Implications', in "The Town Planning Review" Vol. 48, no.3 (1977), pp. 247-268.

FIG. 165
 Mendoza's foundational act 1571 (left)
 Mexico City's Plaza Mayor 1956 (right)

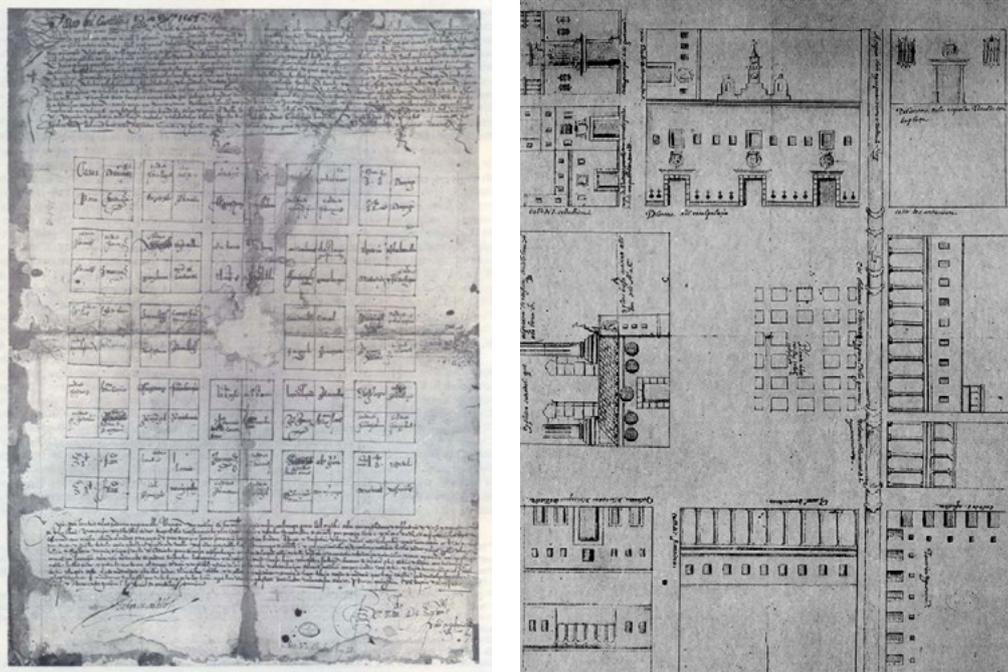
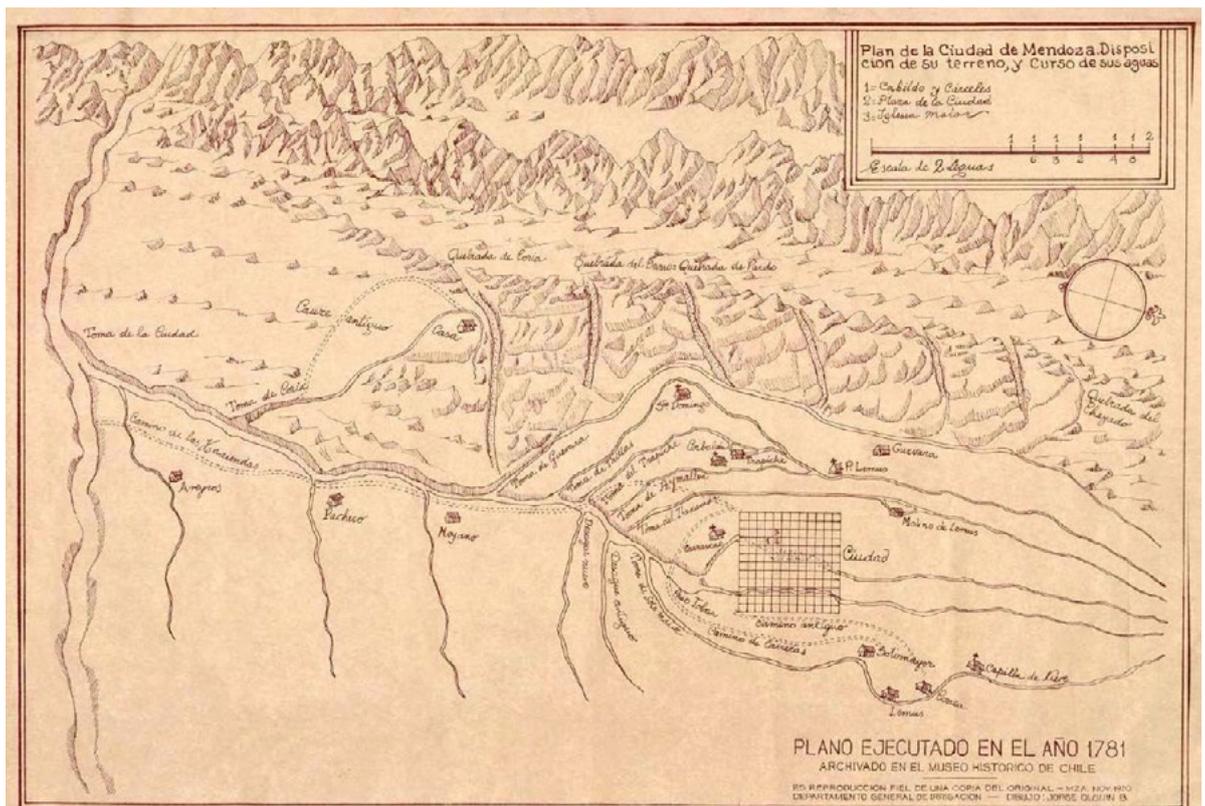


FIG. 166
 "Plan de la ciudad de Mendoza. Disposicion de su terreno y cursos de su agua" (1761).
 Archivo Museo Historico de Chile



churches, schools and hospitals, the Catholic clergy was the primary agent of dissemination culture and language, education, and health care in the first instance. Secondly, they occupied positions of political and economic power after the monarchies of Spain and Portugal becoming the continent's biggest investors and landowners. As pointed out by Francis Violich:

“Then as now, cities were focal points of the decision-making process. therefore, controlling them in a social sense was the first step to economic and political continuity for those in power”.²⁵

Although the monumental grandeur both in the scale of their urban interventions and their architectures was definitely more pronounced in capital cities such as Lima, México City, Bogotá, and Buenos Aires, the Spanish conquest proved enormously successful in developing a recognisable urban network, social environment and physical imprint also in the rest of the cases, where the plaza-church-grid complex not only survived as a very adaptable and reproducible unit but it functioned as a multi-scale device for a territorial scale project.

This aspect had certainly not gone unnoticed in Tedeschi's gaze upon his arrival in the peripheral region of Tucumán, and since his first surveys on the Plaza de Armas in Cuzco. What appears underestimated about Tedeschi's role as the re-founder of historical studies in Latin America, is the *urban* connotation of his studies. Or rather, the attention in recognizing the implications of the architectural scale in articulate a specific urban organization. On the one hand, it is interesting to consider the aforementioned Ordinances as a local silent precedent, especially for the fascinating combination between abstract code based on the normative principles for the government of an unknown territory and the increasing architectural ambitions resulting in sophisticated maps populated by multi-scale information. On the other hand, it should be considered a biographical precedent since Enrico Tedeschi left for Argentina in 1948 waiting to receive the results of two competition for recruitment to the School of Architecture at the University of Rome and Venice – as professor of ‘Caratteri Distributivi degli Edifici’ in the first and ‘Urbanistica’

25 See Francis Violich, ‘Evolution of the Spanish City: Issues Basic to Planning Today’, in “The Journal of American Institute of Planners, 1962. See also “Cities of Latin America, 1944” and “Urban Planning for Latin America”, 1987.

in the second.²⁶ Even without succeeding in both case,²⁷ thus turning his Argentinean temporary experience into a permanent one, the most interesting aspect concerns Tedeschi's tacit and unfulfilled connection with Venice. In fact, under the guidance of Giuseppe Samonà, the Istituto Universitario di Architettura di Venezia (IUAV) have declared the intention to overcome the abstract schemes of architectural rationalism to approach real-world problems, and this could only pass through a unitary thought combining architecture and urban planning.²⁸ Paradoxically, the title of 'arquitecto-urbanista' was the one that would have credited Enrico Tedeschi's figure in Latin America after Tucumán's experience.²⁹

Before the IAU's experiment was definitively abandoned, Tedeschi also began collaborating with other university institutions since the mid-1950s such as the Universidad Nacional de Córdoba, appointed as a professor and member of the Comisión de Estudios for the new campus plan.³⁰ Even if, the most tangible results there will be the formation of the IIDHA (Instituto Interuniversitario de Historia de la Arquitectura) in 1957 and the concomitant circulation of his lectures transcribed and collected by students in Córdoba as a distilled version of Tedeschi's *Teoría de la Arquitectura*, widely considered the

26 Still in Italy, Tedeschi worked for 'Ufficio Urbanistica della Sottosegreteria delle Belle Arti' at the Ministry of Education between 1946 and 1947. In the summer of 1947, Carlo Ludovico Ragghianti (who moved to London together with Zevi in 1939), the then Ministry secretary, created the Urban Planning Office coordinated by Zevi, Tedeschi, Calandra, and Franco Minissi with the aim of preparing a new urban planning law. Tedeschi's vocation on the urban scale is long-standing, started with pre-war proposals for Aprilia (1935), the Urban Plan of Circeo (1940) and later continued with the Urban Plan for the cities of Caserta (1945-1946) and Capua (1946-1947) together with publications and teaching on urban planning in Rome (1946) and his participation as a member of the National Institute of Urban Planning in Rome between 1946 and 1947.

27 For a better understanding on this episode see Paolo Nicoloso, *Le vicende del concorso per la cattedra di Urbanistica all'Istituto Universitario di Architettura di Venezia, 1947-1949*, in Patrizia Bonifazio, Sergio Pace, Michela Rosso, Paolo Scrivano (ed.), *Tra guerra e pace. Società, cultura e architettura nel secondo dopoguerra*, Franco Angeli, Milano 1998.

28 Samonà's re-foundation of the discipline, as he argued in 1948, pass through the conception of buildings that better corresponds to human needs overcoming the 'abstract schemes of rationalism' and facing real-world problems. Among the people chosen for this mission there were Luigi Piccinato, Franco Albini, Giovanni Astengo, Ignazio Gardella, Bruno Zevi, Saverio Muratori, Ludovico Belgioioso, Giancarlo De Carlo. In the microcosm of the IUAV Samonà managed to involve, albeit periodically, Ernesto Nathan Rogers who since the early-1950s would promote the CIAM Summer Schools initiated in London in 1949 (see Chapter 1).

29 See Cecilia Raffa, 'Teoría para la construcción de una ciudad: Enrico Tedeschi y su vínculo con la morfología urbano-edilicia de Mendoza (Argentina, 1960)', in "Cuaderno Urbano. Espacio, Cultura, Sociedad", no.25 (2018), pp. 73-90.

30 Meanwhile, the contract of extraordinary professor was renewed and he continued to teach in Tucumán until 1958. In 1954 Tedeschi moved to San Juan, where he was appointed Head of the Departamento de Arquitectura y Urbanismo at the Universidad Nacional de Cuyo (where he taught Historia de la Arquitectura y del Arte, Teoría de la Arquitectura and in 1955 he led also the Architectural Design Studio) together with History teachings in Córdoba.

rst architectural theory of the continent.³¹

In the meanwhile, Tedeschi obtained the recognition of his professional qualification by the Argentine authorities in 1954, joining the Sociedad Centrales de Arquitectos in the city of Mendoza and participating in the proposal of a set of municipal ordinances on the urban development of the city. Most of the local technicians and professionals involved in this public consultancy, including Daniel Ramos Correa, will gathered into a planning body called CEPyCE (Comisión Especial de Planeamiento Urbano y Código de Edificación) aimed at updating Plan Regulador (1942) to the ambitions of the Gran Mendoza and its regional dimension.³² Thus, in 1960 the CEPyCE decided to launch a national competition in July 1960 in search of two figures: first, a ‘profesional urbanista’ in charge of the plan at the scale of the metropolitan region; second, a ‘profesional especializado en estructuras de edificios’ to draw up a new the building code.³³

The city of Mendoza and its territory are a perfect example of the high degree of adaptability inherently belonging with the Law of Indies with the natural landscape playing a fundamental role in modifying the isotropic distribution of the grid: while the mountains mark a sharp limit to the West on the border with Chile,³⁴ a dense network of canals interrupts the rigidity of the foundational grid. In addition, the search for a greater agricultural potential determines the dispersion beyond the original layout and railway connections require further deviations from it. In a monographic issue of the architectural magazine “Summa” (n.99, 1976) dedicated to Mendoza, Marina Waisman would have evidenced the inextricable relationship between city and region:

“Uno podría llamarla quizás ‘Mendoza la verde’ o ‘Mendoza la del sol y del buen vino’, de acuerdo con el (cierto) slogan turístico. Pero esos nombres no nos dirían nada del coraje, de la lucha sin descanso, de la empecinada fe y el permanente esfuerzo humano que representa haber construido esta verde Mendoza en medio del árido desierto, en una zona que tiene apenas el 35% de la humedad

31 See Sebastián Malecki, ‘Historia y Crítica. Enrico Tedeschi en la Renovación de la Cultura Arquitectónica Argentina, 1950-1970’, in “Eadem Utraque Europa” no.14, 2013, pp.137-174.

32 El Gran Mendoza included departments of Luján, Las Heras, Maipú, Godoy Cruz, Guaymallén and Mendoza. The institutional body included bureaucrats, legal advisors, professionals and office technicians from Municipal Secretary of Public Works and Hygiene, the Professional Council of Engineers, Architects and Builders, the Society of Constructors, and Mendoza Division of the Sociedad de Arquitectos.

33 See Cecilia Raffa (2018), p.80.

34 The mountain road leading to Santiago de Chile is just 300 km away from Mendoza.

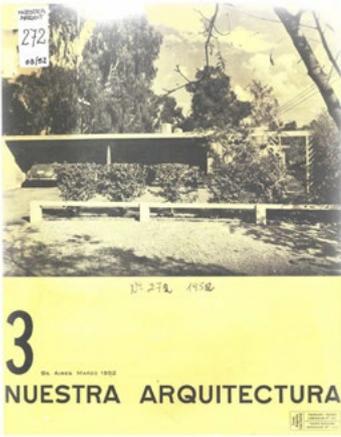


FIG. 167
 "Nuestra Arquitectura" was the local architectural magazine that gave more space to Tedeschi's writings on the theme of organic architecture (March, 1952) but above all on the pedagogical question of teaching architecture and urbanism (February, 1954).

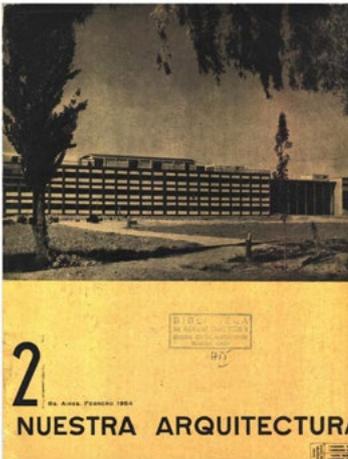


FIG. 168
 Plan Regulador de Mendoza (1940) and the subsequent phase. The competition was launched in the sign of reworking the idea of centrality put in crisis by the frequent seismic events and consequent reconstructions.



normal para su latitud, que está sujeta a grandes variaciones de temperatura, y además a las caprichosas veleidades del agua que, escasa en sus formas adecuadas para la vida, desciende en cambio periódicamente con violencia de la cordillera, arrasándolo todo al paso de sus aluviones. Como si esto fuera poco, ha de agregarse aun a este cuadro de hostilidad natural el rasgo más dramático, el del sismo”.³⁵

The sinuous lines on the ground that invade the city are now connected with the complex system of viticulture, blurring the boundaries between the countryside and the city, while the seismic problem is another fundamental aspect to be taken into consideration by the future Capo de la Oficina de Planeamiento of the Municipality of Mendoza. Consequently, the notice of public competition for professionals based in Argentina distanced form the search for eminent personalities, but looked rather at the interpersonal skills and previous knowledge on the region issues, as the designated professional would have coordinated a team of architects from the Municipality of Mendoza and thus perfectly integrated in the bureaucratic apparatus of the planning offices.³⁶

Despite the fact that some influential articles signed by Tedeschi were already circulating in the Argentine specialized magazines in form of programmatic document, such as ‘La enseñanza del Urbanismo en las Universidades Argentinas’,³⁷ it is believed that Tedeschi’s ‘programa arquitectónico’ formulated in his *Teoria de la Arquitectura* appeared extremely convincing for the jury and interpreted as an easily adaptable system to the Mendoza specific case, given its marked environmental connotations structured around the concepts of ‘naturaleza’, ‘sociedad’, ‘arte’.³⁸ It was evident that Tedeschi’s profile clearly corresponded to that required by the

35 Marina Waisman, ‘Mendoza nel desierto’, in “Summa”, no. 99, 1976.

36 “Suficiente prestigio y personalidad as to cooperate positively in the conformación de la conciencia urbanística de sus colaboradores y de la población en general”. Quoted in Raffa (2018), p.80. During the seminar on the work of Enrico Tedeschi in Mendoza (Sella and Adagio, 2012) Miguel Ángel Guisasola remembers: “Luego de su paso por las facultades de Córdoba y San Juan, llegó a Mendoza requerido por la Municipalidad de la Capital y la Provincia para encarar un plan urbanístico que, a pesar de no llegar a formularse completamente, dejó líneas fundamentales y conceptos que modelaron el desarrollo urbano y edilicio de la ciudad durante varias décadas [...] Entre ellos, los más importantes fueron los del “basamento y torre” en los perfiles edilicios”.

37 Testo tratto dalla relazione presentata alla Jornadas de Urbanismo nel novembre 1953, su iniziativa della Facultad de Arquitectura y Urbanismo della Universidad Nacional de Tucuman. Tedeschi E., ‘La enseñanza del Urbanismo en las Universidades Argentinas’, in *Nuestra Arquitectura*, no. 295 (1954), pp.50-55. Si veda anche il capitolo ‘Espacio Externo. Urbanismo y Paisaje’ in *Introducción a la Historia de la Arquitectura* (1951).

38 See Enrico Tedeschi. *Teoria de la Arquitectura*. Buenos Aires: Nueva Vision, 1962.

ompetition,³⁹ so he was unanimously appointed ‘arquitecto-urbanista’ of the city-region of Mendoza in November 1960. However, net of the environmental connotations of Tedeschi’s theory – published only later in 1962 – the most intriguing and less-explored aspect in this affair lies perhaps in the abstract format of that theory, that is that *distilled* version of diagrammatic and systematic instructions circulating between Córdoba students and now exercise the greatest fascination to the local bureaucratic apparatus in which Tedeschi would be increasingly introduced almost like a professional expert conversant with a modernized Law of Indies’ ordinance.

The first report known as ‘Informe Tedeschi’ immediately elects densification as the primary principle to regulate the future development of Gran Mendoza with relevant implications on the architectural scale. This excluded the hypothesis of new functional districts in defence of irrigated areas essential to support the agricultural production of the province and imposed a progressive tax on the vacant lots in the central areas of the city fabric.⁴⁰ Subtly, this study aims for a vertical development of the city alternative to the current one, thus it included a graphic apparatus of urban sections compared on the basis of their architectural scale: (1) low buildings of post-earthquake Mendoza, (2) buildings in construction during the report formulation, (3) buildings to be built in the future. Again, these sections show a marked environmental connotation as they claim the protection of the so-called ‘urban arboleda’ – solar radiation, orientation, wind circulation.⁴¹ However, what is striking from this study, though rather underestimated, is Tedeschi’s privileged solution envisaged in the diagram of a stratified vertical city: a 9-meter-high plinth that incorporate commercial activities in close contact with the streets and its natural ‘arboleda’, above which is situated the inhabitable structure of ‘viviendas y oficinas’ with a 15 meters set-back from the streets layout and variable heights that increase as you get closer to the city center. That is, a diagram of a city confronting a modern process of bureaucratization.

Tedeschi describes this process in a lesser-known and very little commented text, which is essential for understanding the *urban condition* on

39 Cecilia Raffa traces correspondences between the 16 categories specified in the competition brief and Tedeschi’s postulates anticipated in the course of his previous scientific activity See Raffa (2018), p.81.

40 The report dates back to February 1961. The first phase involves analysis of the natural landscape, urban structure, cultural landscape, demographic and socio-economic aspects, land uses, state of buildings, building standards, public services, social and cultural services, transport, industrial activities, commercial, tourist and administrative.

41 This aspects will become prominent in Tedeschi’s professional career. Since 1973, Tedeschi coordinated the IADIZA, Instituto Argentino de Investigación de Zonas Áridas.

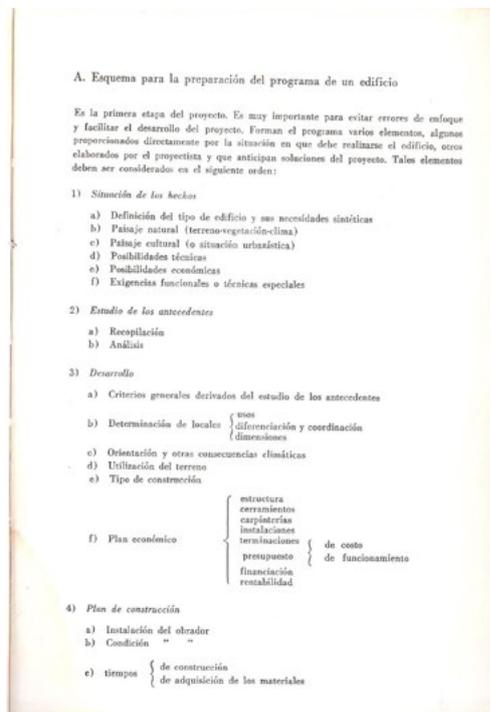


FIG. 169
 Tedeschi's "Teoría de la Arquitectura" which consolidated his position as the initiator of architectural criticism in Latin America, was profoundly marked by environmental connotations. Even distilled in a sequence of tree diagrams at the end of the book dissecting the ecological system of the region, to which a handy device named helioindicador was already included in the first edition (1962).

Esquema C



Esquema D

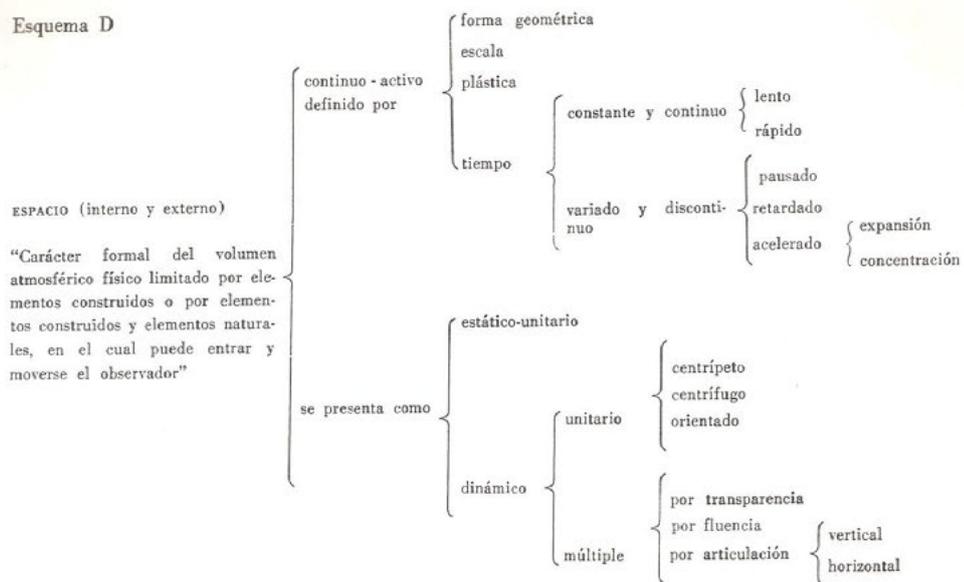
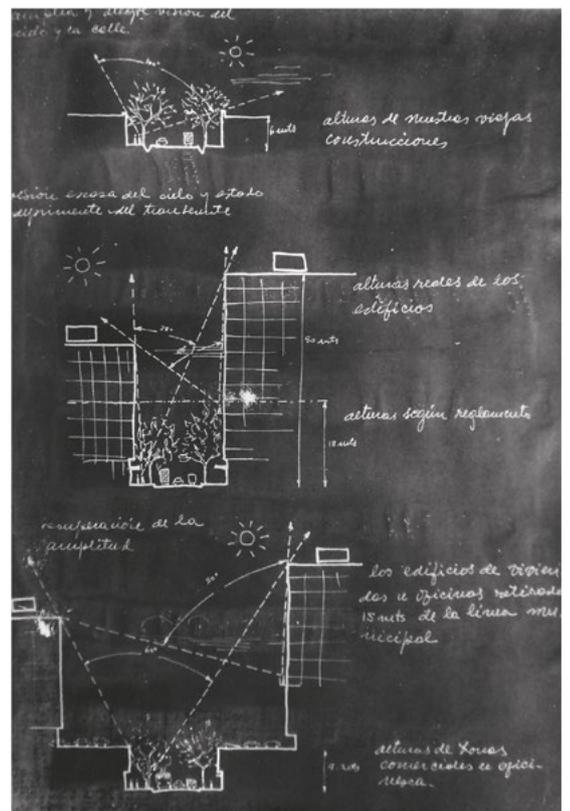
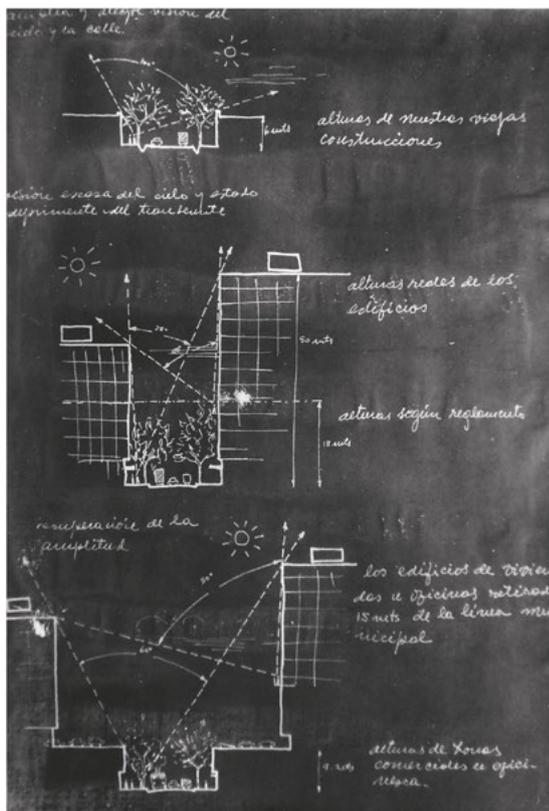
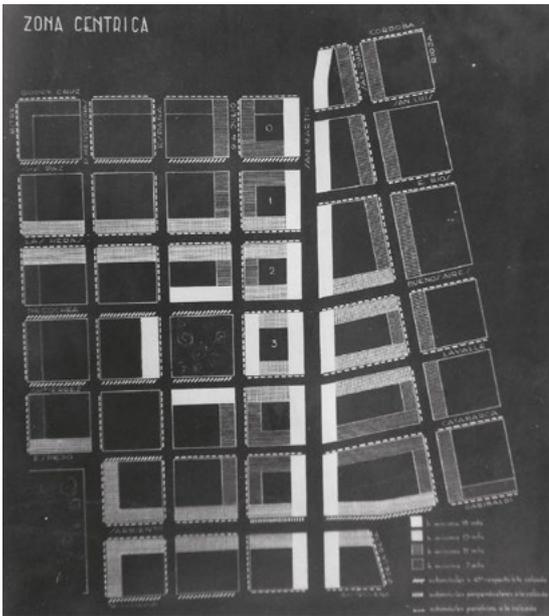


FIG. 170
 Sketches and diagrams belonging to
 "Informe Tedeschi" (1961).
 Images from Cecilia Raffa (2015).



the basis of which the Italian architect-educator would adapt his educational project to the context of Mendoza. ‘La arquitectura en la sociedad de masas’, was structured around a simple but powerful observation: ‘la aparición de la sociedad de masas va al par con la aparición de la ciudad de masas’.⁴² It is interesting to note that despite this statement and a narrative based on the canonical opposition between dispersion and concentration of the city, Tedeschi does not side explicitly with either of the two *ideal* models but proposes a more targeted analysis of the bureaucratization process that better reflects the post-war situation – presumably conditioned by his institutional role in Mendoza at the time. After having summarized the physical, economic, social, cultural problems of the contemporary *metropolis* as a chaotic and pathological structure in which operate contrasting and unbalanced factors, and after having rejected solutions like ‘tecnicismo, abstractificación y maquinismo’, Tedeschi makes his argument on the very contribution of the modern architect:

“La arquitectura no puede hacer otra cosa que seguir las fortunas de la sociedad, que le dicta programas y temas [...] es una consecuencia directa de la sociedad de masas la creación de temas nuevos para la arquitectura y la transformación de otros tradicionales [...] Satisfacer necesidades que son productos de la sociedad de masas y de las clases que han hecho recientemente su ingreso en el escenario social – el habitante de la vivienda económica, el industrial, el comerciante, los empleados, los obreros, los enfermos – obliga sensiblemente a cambiar la situación del arquitecto, no solo por lo que se refiere al modo de desarrollar su actividad profesional, sino también por la manera de enfocar su tarea”.⁴³

While references to Lewis Mumford and Frank Lloyd Wright are to be expected in Tedeschi’s discourse when he argues that ‘personalidades creadoras y diversificación regional pueden contribuir en resolver esta situación’,⁴⁴ Hilberseimer’s mention sounds more intriguing. On the one hand, Hilberseimer projects like *Grossstadtbauten* and *Trabantenstadt* (1925) revealed a peculiar approach to urban planning that resonates with *Informe Tedeschi*, especially

42 See Enrico Tedeschi and Rodríguez Bustamante, *La arquitectura en la sociedad de masas* (Buenos Aires, 1962). The book combines the transcription of a lecture that Tedeschi gave at a conference in Córdoba in 1960 (first part) with the theories of the sociologist Norberto Rodríguez Bustamante from the Universidad de Buenos Aires (second part).

43 Enrico Tedeschi. *La arquitectura en la sociedad de masas* (Buenos Aires, 1962), p.36.

44 *Ibid.*, p.32.

in the search of the urban role of architectural dimension. Even more so if we consider Hilberseimer's 'Zeilenbau' linear block – which also found in the first projects of Vladimiro Acosta (1936) a South American environmental variation.⁴⁵ However, as said, vertical city is not assumed as an *ideal* model to be imitated. Rather, Tedeschi draws a subtle line that uses Hilberseimer's work to make explicit a still ongoing urban process:

“El segundo tipo de ciudad de masas es mas reciente, y se ha hecho posible por el progreso de las comunicaciones rapidas, especialmente el telefono y telegrafo. Se trata de la ciudad burocratica. La ciudad industrial expresa el dominio de la actividad manufacturera que transforma la materia; la burocratica la del comercio y la finanza, que dirigen y ordenan de lejos la produccion y su distribucion [...] Es interesante notar como la ciudad burocratica haya terminado por representar a la ciudad de masas mas que la industrial. La industrial, en epocas mas recientes y por varias razones que no corresponde ahora analizar, tiende a distribuirse y articularse, la burocracia a concentrarse”.⁴⁶

As recently observed by Aureli commenting Hilberseimer's works (2011), immaterial production creates an increasingly flexible model of association and human exchange compared to material production, where the choreography of the assembly line requires a predictable and regulated occupation of space. Faced with this scenario in which predictability of the machine is replaced by the unpredictability of human behaviour, the architectural device necessarily tends towards a 'zero degree of formal and spatial articulation'.⁴⁷

In this regard, the architectural work post-produced by Hilberseimer for the Chicago Tribune Tower competition (1922) appears to be the best answer to this problem, revealing unexpected connections with Tedeschi's educational project which will be readapted to a new urban condition. The Chicago Tribune competition brief called for a building for the company's

45 Hilberseimer's linear configuration of the thin slabs influenced the internal distribution and the modes of living, radically changed from the traditional apartment through a complex degree of collectivity with highly flexible apartment where different rooms can potentially merge into larger spaces. See Richard Anderson (ed.), *Metropolisarchitecture* (New York: Columbia Books on Architecture and the City, 2015), *Un'idea di piano* (Marsilio, 1985) and *In the Shadow of Mies: Ludwig Hilberseimer, Architect, Educator and Urban Planner* (Chicago: The Art Institute of Chicago, 1988) edited by David Spaeth Pommer, Kevin Harrington.

46 Enrico Tedeschi. *La arquitectura en la sociedad de masas* (Buenos Aires, 1962), p.34.

47 See Pier Vittorio Aureli, 'Architecture for Barbarians: Ludwig Hilberseimer and the Rise of the Generic City', in "AA Files" no.63, 2011, pp. 3-18.

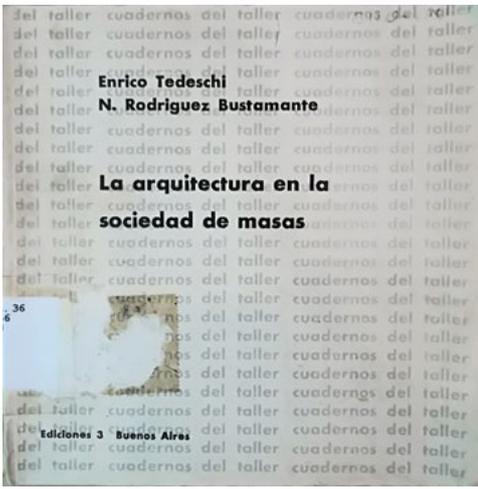
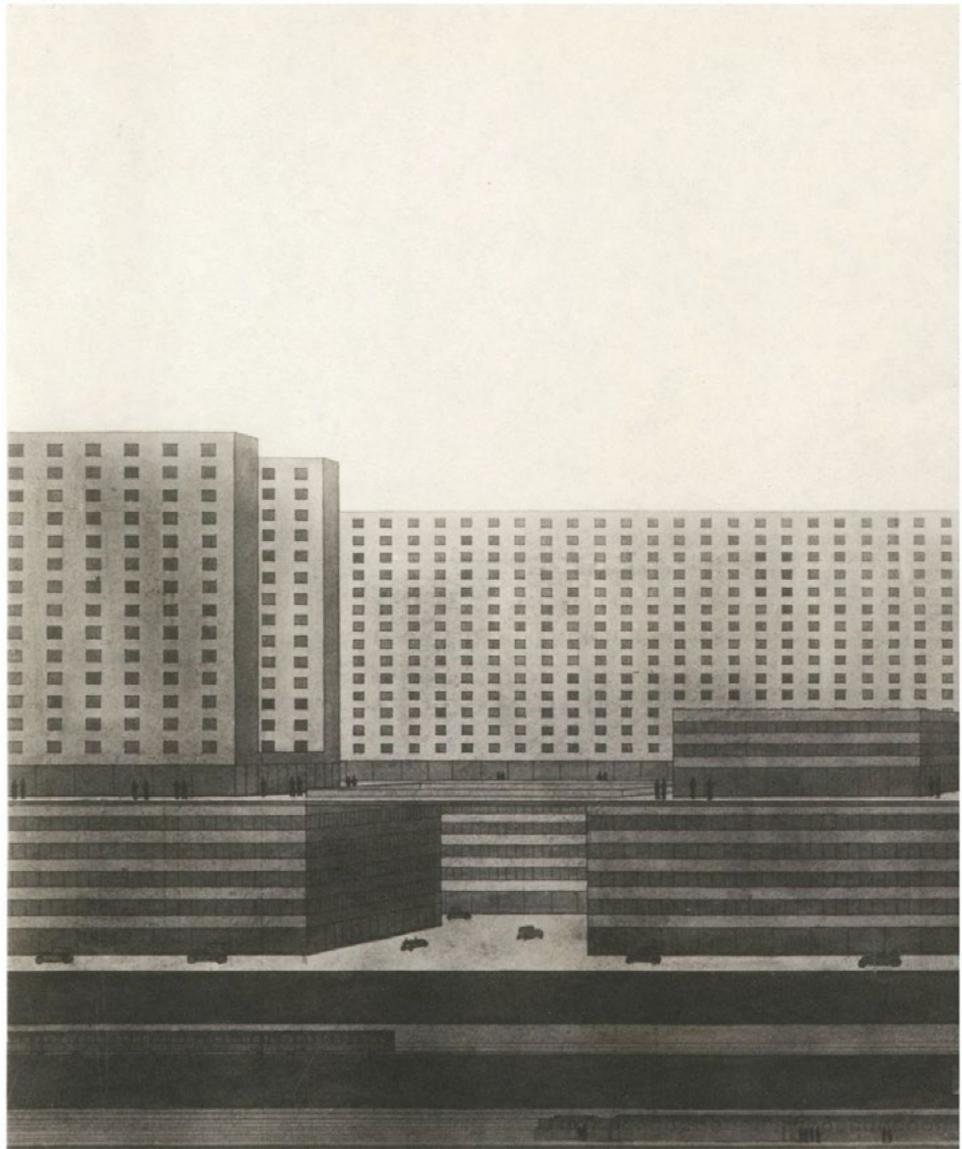


FIG. 171
Front cover of the book “La Arquitectura en la sociedad de masas” (1962) which combines the transcription of a lecture that Tedeschi gave in Cordoba in 1960 (first part) with the theories of the sociologist Norberto Rodríguez Bustamante from the Universidad de Buenos Aires (second part).

FIG. 172
Hilberseimer’s High-Rise City (1924)



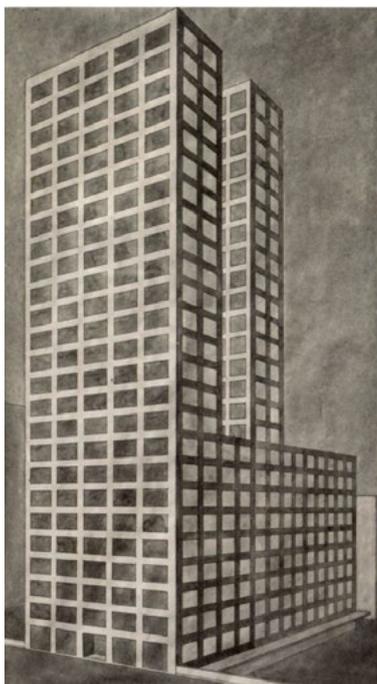


FIG. 173
Ludwig Hilberseimer
Chicago Tribune
competition entry, 1922

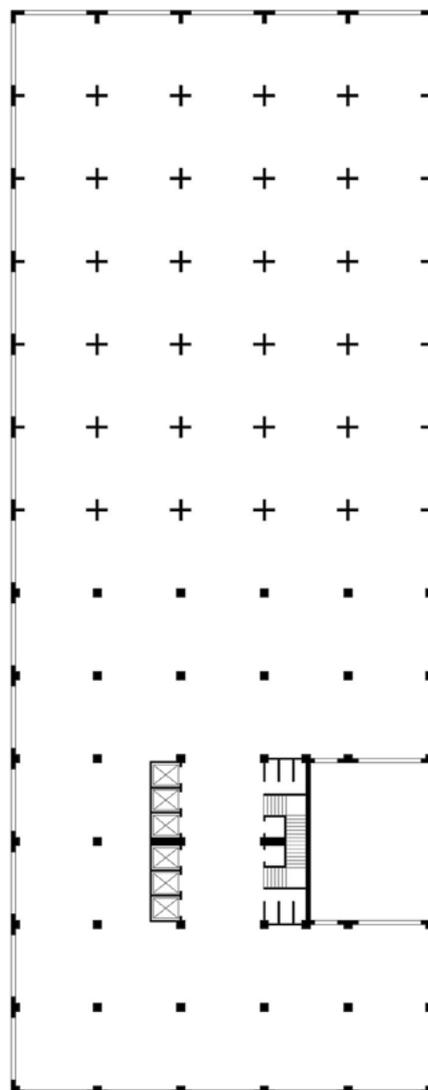


FIG. 174
Ludwig Hilberseimer
Chicago Tribune typical plan
(redrawn by the author)

0 5 10m

headquarters efficient and iconic at the same time. While many projects invested in the uniqueness of their proposal, Hilberseimer's was reduced to the rigorous application of a typical free plan punctuated by a field of columns suitable to any use.⁴⁸ But if the typical plan had already become the cornerstone of many American skyscrapers, the neutrality of the plan literally projected onto the building's envelope through a uniform distribution of the square openings was the very radical move of Hilberseimer's proposal reinforcing the generic appearance of the building. In fact, the theoretical project of Hilberseimer's Chicago Tribune not only radically interpreted the same process of 'industrialization' of the bureaucratic apparatus that affects the mass society also described by Tedeschi, but also explored the consequent dissolution in the entire generic system of the city.

Finally, from a deeper analysis of the graphic schemes accompanying the Informe Tedeschi to describe the densification strategy of Mendoza, the conjunction line with Hilberseimer's urban thinking calls into questions two other aspects. The first point concerns Hilberseimer criticism of Le Corbusier's City for 3 million inhabitants (1922) and its self-standing cartesian skyscrapers that would have not solved the fundamental problem of the contemporary metropolis: circulation and mobility. That is, the basic ingredients of Tedeschi's urban plan for Mendoza on which he will also adapt his educational project in contrast to the grand plan for the Ciudad Universitaria de Tucuman – from which he had gradually slipped away precisely because of the excessive influence of Le Corbusier's principles over the Argentine colleagues.⁴⁹ The second point concerns the intermediate scale investigated by Hilberseimer in order to conceive the city through its architecture. Even in the case of Tedeschi, albeit with substantial differences given by the urban layout of colonial derivation, Mendoza's plan was tested on a very precise scale: the manzana block of the city, which makes it possible to measure the relationships between the building height and its 'entorno'.

If the annotated sketch of the manzana block provides indications on the environmental aspects of the region, Tedeschi is keen to highlight a particular interest in the façade:

“Fachadas individuales esteticamente unidas del resto del edificio

48 Hilberseimer did not submit his proposal to the competition, and the project was first published in “G” magazine following the proposal for the Bürohaus, Mies van der Rohe's model for the office building conceived as a vast open space (see later in Chapter 5). See also Pier Vittorio Aureli, ‘The Barest Form in which Architecture Can Exist: some Notes on Ludwig Hilberseimer's Proposal for the Chicago Tribune Building’, in “San Rocco” no.2, 2011.

49 For a better understanding about this episode see Chapter 1.

concebidos como unidad arquitectonica y estructural”.⁵⁰

This will be the architectural element that identifies Tedeschi’s urban proposal, accepting a controlled vertical development of buildings and assuming mobility and circulation as primary functions of the bureaucratic society. But displaying mobility and circulation in the foreground and confusing them with the actual function of the building, is not only the result of Tedeschi’s urban proposal. Rather, it will provide the prototypical space that best exemplifies his educational project applied to the urban condition of Mendoza where even the most formal bureaucratic apparatus of university institution must be ready to face its impending dissolution into the generic systems of the city:

“El progreso industrial reduce el numero de los operaios, y en cambio aumenta el de los empleados [...] Los poderes de la finanza, del comercio, del seguro, de la aministracion publica – siempre mas vinculada y identificada con los procesos financieros”.⁵¹

The CEPyCE continued to exist after the final report will be submitted at the end of 1961, but without Enrico Tedeschi, Daniel Ramos Correas and Raúl Pano Gelly, as the three had just ventured into the urban project for the new Universidad de Mendoza.

50 Annotations alongside Tedeschi’s sketches reads: “edificacion alta aislada, eliminacion de los patios interiores, fachadas bien ventialdas y asoladas, zona comercial con buena iluminacion natural, vistas desde los balcones, calles bien arboladas y ruidos eliminados, abundantes playas de estacionamentos, regulacion de la densidades de la poblacion”.

51 Enrico Tedeschi. *La arquitectura en la sociedad de masas* (Buenos Aires, 1962), p.28.

FIG. 175
Annotated axonometric sketch belonging to
"Informe Tedeschi" (1961).
Images from Cecilia Raffa (2015)

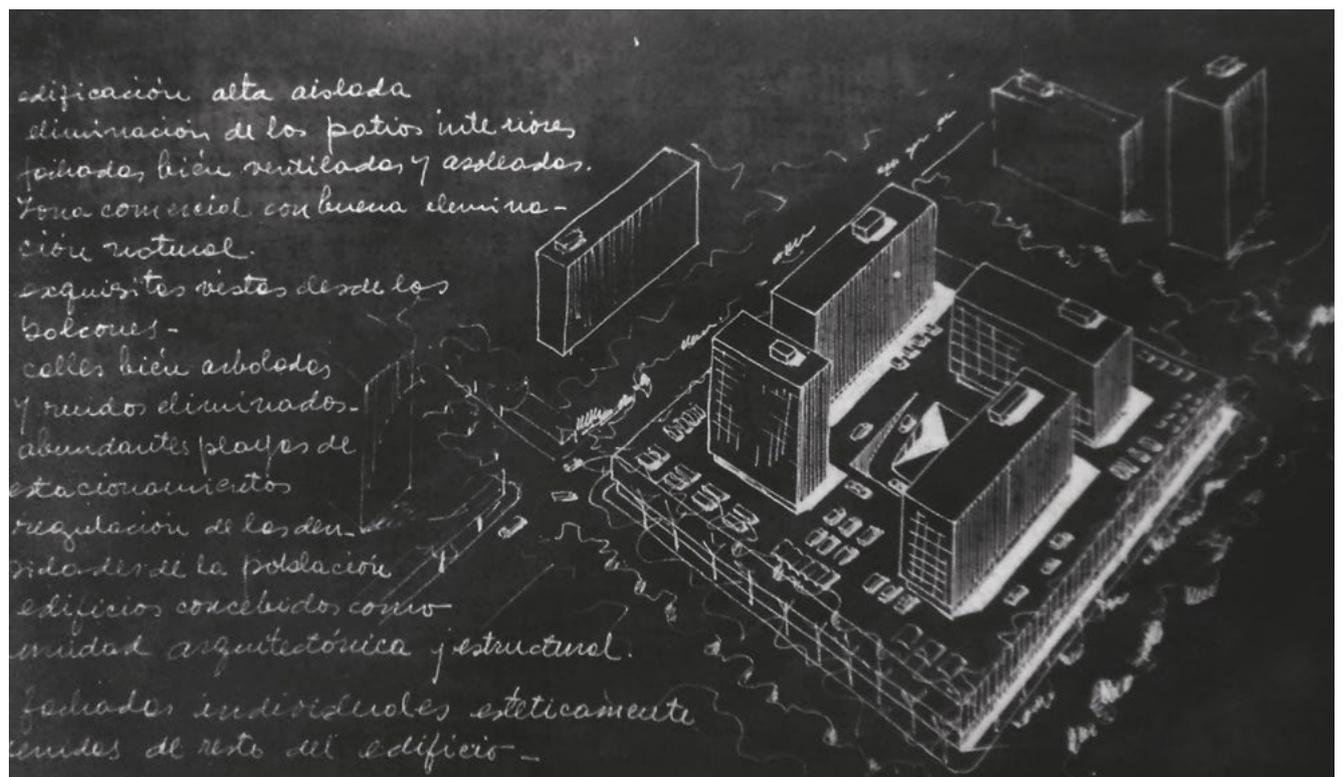




FIG. 176
Facultad de Arquitectura de
Mendoza (FAUM), 1964.
Image from Archivo Descote

4.3 *Architect-educator-entrepreneur.*
Universidad de Mendoza and the contextualisation of its typical plan

Where there is nothing, everything is possible.
Where there is architecture, nothing (else) is possible.⁵²

Rem Koolhaas, 1985

The epicenter of Tedeschi's work became the peripheral region of Northern Argentina which included Tucuman, Cordoba and Mendoza, although local interests frequently extended beyond national borders. In 1959, the Italian architect and theorist received the title of academic member from the same Pontificia Universidad Catolica de Chile and just one year later a comparative article between the two countries on the university question appears on the pages of "Nuestra Arquitectura" (no.377, 1960), edited by Marina Waisman – who together with Tedeschi had just founded the Instituto Interuniversitario de Historia de la Arquitectura (IIDEHA, 1957). The title 'Crónica chilena para uso de argentinos' is eloquent with respect to the circulation of ideas activated in that period, with Marina Waisman praising the conducive environment of Chilean universities to be taken as a source of inspiration, not pure imitation, for Argentine educational institutions marked by a growing 'desconfianza, escepticismo y la masividad':

"No pienso que debemos imitar a nuestros amigos chilenos; no lo creo posible ni deseable. Pero si creo que si no queremos que nuestras universidades terminen por ser simples campos de entrenamiento para profesionales más o menos eficaces debemos tratar de reconstruir para ellas un clima que sea verdaderamente un clima universitario: un clima de relaciones humanas dignas y elevadas; un clima de cordialidad, de mutua confianza y de común amor al estudio y al mejoramiento espiritual; un clima en que el desamor, lo desconfianza, el descreimiento y la despersonalización queden definitivamente desterrados".⁵³

52 Rem Koolhaas, 'Imagining Nothingness', 1985 (from *S,M,L,XL*, p.199).

53 Marina Waisman, 'Crónica chilena para uso de argentinos', in "Nuestra Arquitectura", no. 377, 1960. Together with Raúl Bulgheroni, Waisman was part of the official FAU delegation of Universidad de Cordoba that participated in the 'Primera Conferencia de Facultades y Escuelas de Arquitectura' organized in Santiago de Chile in 1960.

Against this backdrop, the Universidad de Mendoza was founded in 1957 as a private institution of the Instituto Cuyano de Educacion Integral (ICEI) and then recognized as a public institution in 1959. In September 1960 Enrico Tedeschi was proposed by Daniel Ramos Correas as the exemplar leader to organize and direct the new Facultad de Arquitectura y Urbanismo of the Universidad de Mendoza (FAUM) – in conjunction with the upcoming competition for the head of the municipal planning office. And even then, Tedeschi be appointed by unanimous vote as the principal responsible for the whole educational project which included: (1) the articulation of innovative curricula and programs; (2) the formation of the academic community from the establishment of the teaching roster to students recruitment; (3) the design and construction of the new university campus. The following text contains the description that most circulated within the specialized magazine of the time and incorporated in the few contemporary studies on the FAUM, the first building of the new university campus designed by Tedeschi:

“La estructura aparece, en acuerdo con la situación sismica, sólidamente arraigada en el terreno, abriéndose hacia arriba en la ramificación de las columnas que son cónicas, acentuando la sensación de empuje y progresiva elevación. Las formas plásticas escultóricas de las fachadas, si bien vigorosas, no se superponen a su función de limites de espacios sentidos tanto en su valor de uso como en el valor de partes del espacio de la naturaleza y con esta conectados, no sólo por la transparencia de los elementos sino también por el carácter orgánico de la forma plástica.

El prevalecer de elementos de sección curva suaviza el rigor del trazado geométrico de las fachadas, donde la escala humana resulta claramente indicada por las galerías con sus barandas. El patio que une el edificio con la calle proporciona la preparación espacial necesaria para quien se acerca y permite establecer un ángulo más conveniente para una visión total.

Esta preparación se acentua por el hecho de que el terreno sube hacia el edificio de manera tal que el piso de la planta baja se encuentra un metro y medio más alto que la cota de calle y, por lo tanto, aproximadamente a la altura del ojo del observador.

Se ha introducido también una corrección óptica en la cubierta haciendo salir hacia afuera la cumbrera de los techos con respecto a

su apoyo, a fin de evitar que los frentes aparezcan inclinados hacia atrás, como pasaría si se hubieran mantenido totalmente sobre el mismo plano vertical”.⁵⁴

These words contain all the references to Tedeschi’s theoretical framework already exposed in several occasions, from the *organic* character and the *plastic* form of the building’s envelope up to a sort of phenomenological and experiential explanation of the building set-back from the street. Only a few lines are dedicated to the typical free-plan derived from pedagogical needs:

“Las plantas altas sólo tienen diferencias de tabiques que deben ser removibles dado el carácter de las actividades pedagógicas, pero dejando siempre locales con buena iluminación bilateral.

Esa exigencia dio lugar a un partido de estructura simple, sin soportes intermedios”.⁵⁵

However, by privileging the interpretation of this architectural work as a direct descendant of Tedeschi’s theoretical framework its radical educational project has been almost totally lost. That is, university compromised with a precise idea of urbanity where mobility and circulation come to the fore uncovering the concept of informal education in this episode.

The new institution began its activities in October 1961 in the spaces of a neo-colonial building in Avenida Boulogne Sur Mer in the center of Mendoza. Enrico Tedeschi invited to the official inauguration already claims not only the importance of a new university campus, but specifies the objective to maintain the central position in the city also for the new campus, since this represented a success factor for the formation of an advanced educational environment. Evidently, this reflected the work he was coordinating within the other institutional body – Oficina de Planeamiento de Mendoza – through which a densification strategy was initiated. And in fact, the figure of Tedeschi is clearly placed at the intersection between the role of urban planner for the city of Mendoza, that of educator at the head of a totally new academic project, and that of architect responsible for the design of educational spaces for the best development of renovated pedagogical practices. But another aspect adds a

54 From “Nuestra Arquitectura” no.433 (1966), p.34. Similar description will appear in a monographic issue on educational architecture under the title ‘Escuela de Arquitectura de la Universidad (libre) de Mendoza’, in “Summa” no.17, 1969.

55 Ibid., p.34.

degree of complexity to the figure of the architect-educator interpreted by Enrico Tedeschi in this episode corresponding to his managerial and entrepreneurial skills.

In fact, although the reception context was extremely favourable with the Italian architect recognized as an expert, Tedeschi will not be able to evade the managerial tasks necessary to accomplish his project including the financial feasibility of his ideas. The experience of Mendoza represents a moment in which the figure of the architect-educator – established ten years earlier in Tucuman along the lines of a CIAM-like collective – literally reaches that of *entrepreneur*, who continues to operate from within the bureaucratic apparatus but now directly involved in securing both consent and financial resources for the university institution he served. This is the most clear example in which the institution did not act as a ‘client’ for the architects-educators, but somehow makes use of their contribution in a more pragmatic sense than that of influencing the architectural debate on post-war modernism.

Against this backdrop, Tedeschi suggested accessing a stet financing from the Fondo Nacional de las Artes of Buenos Aires (FNA). Then appointed by the university authorities as manager of the loan he started evaluating vacant plots in the city of Mendoza – which were the more taxed under the new regulations in order to increase densification – as long as the choice falls on a narrow plot in the western sector of Mendoza urban grid. But it was only in 1962 that Tedeschi would have taken the total control of the project by supporting a self-financing initiative and revealing his fundraising skills: loan vouchers issued by the university and destined for the parents of potential students begin to circulate to financially support the construction of the new campus buildings. This fundraising campaign, also conveyed by the local press, relied on a sophisticated rhetoric that prefigured the achievement of the final goal – the new campus – passing through the idea of the sum of small contributions that, for that occasion, were called ‘ladrillos’.⁵⁶ Just like those *red bricks* that in the global imagination encapsulate excellent education systems.

Curiously, this communication strategy did not find any correspondence in the early design explorations conducted by Tedeschi that, together with his students, was stimulating conceptualization and experimentation about formal and material possibilities through the creation of physical models. Far from being scale models of hypothetical campus buildings, these spatial structures aimed to speculate on the concept of permeability – of air and light in the first instance – and that of transparency of the different materials. Not the *literal* one guaranteed

⁵⁶ See Leonardo Codina, *La estructura como instrumento de una idea* (2013).

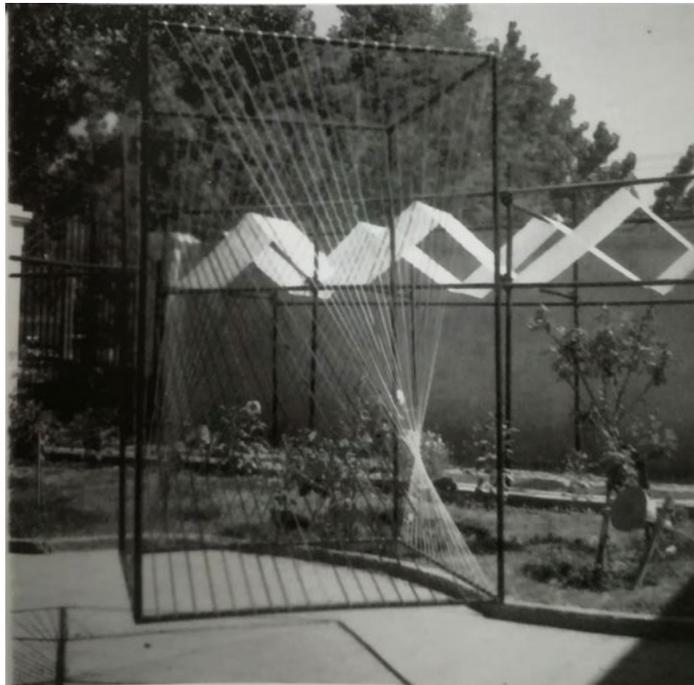
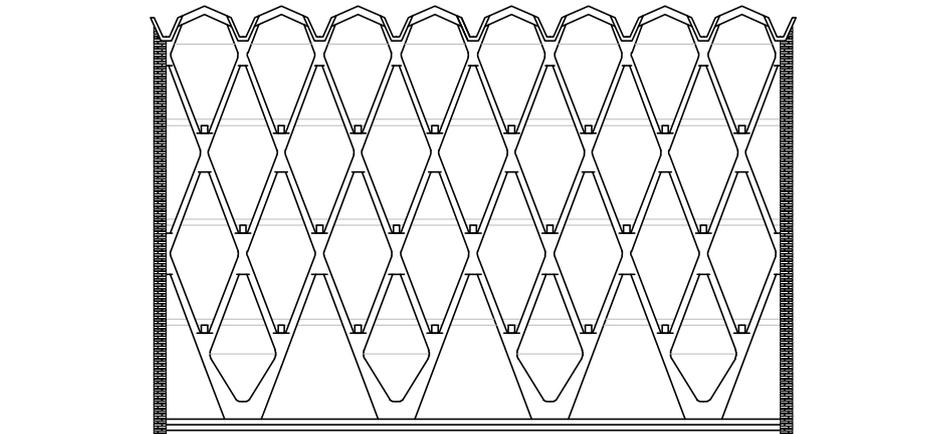
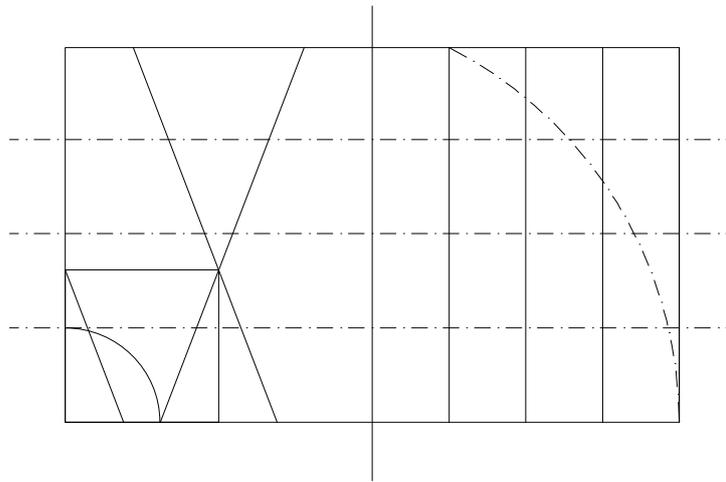


FIG. 177
Design explorations conducted by Tedeschi and his
students on the formal and material possibilities
to be applied to the FAUM building.



0 10

FIG. 178
FAUM facade designed according to a precise geometric order
(redrawn by the author)

by the glazed surfaces, but that produced by applying variable degree of tension to the material as in the case of the tissue ribbons or diagonal wefts of rope wrapping three-dimensional steel frames.

Finally, the local media that had conveyed the fundraising campaign are also the first to acclaim the conclusion of the first campus building labelling the FAUM as a 'novedad estetica', and praising the fact that the *regional research* propagandized by the university institution even materialized in the morphological *relationship* between the building's façade and the typical cultivations of the region.⁵⁷ All these comments have generated various appropriations of Tedeschi's architectural work especially in the field of organic currents. Although the issues of allusions to human and plant forms to describe the term *organic* has already been explained in several previous articles stressing the fact that:

“To reach the essential reality, it is necessary [...] to reduce nature from the confused collection of appearances to its proportional and mathematical laws”.⁵⁸

Indeed, the FAUM façade is the architectural element on which the application of these laws has been invested in the most eloquent way. In fact, Tedeschi's design started from the plots limits to obtain a mathematical module, using a golden ratio to develop the entire composition for the façade apparently conceived as an autonomous work of art only guided by the numerical exactitude to control its formal implications.

The building is thus constructed as an unitary, symmetrical and modulated volume contained within the façade structural formations with a uniform image rather successful in amplifying the 'pequeñez' of the building. The narrowness of the plot negotiated by Tedeschi was more than compensated by the direct connection with the streets and the urban environment of Mendoza. Thus, a deep set-back of the volume was conceived to liberate the ground and create continuity between the city and the university realms. This move was also visually accentuated by the elevation of the building on a 0,45 m plinth, for a total approximately 1,65 m above street level. For the rest, the long façade remains the

57 Publications appear in local newspapers such as 'El tiempo de Cuyo' and 'Los Andes': "The plastic expression results from the same structure, and is presented with a character of were simplicity, but with novelty and grace. We believe that this building will constitute one of the most characteristic works of the architecture of Mendoza, the very Mendoza effect, whether voluntary or accidental, of the interweaving of the columns that constitute a pattern similar to that which occurs in some forms of the typical crops of our region" (from 'El Tiempo de Cuyo' May,6 1962).

58 Translation by the author from Enrico Tedeschi 'Arquitectura Organica. Primera Parte', in "Nuestra Arquitectura" no.272, 1952.

element on which the greatest creative resources have been invested: a concrete membrane follows a non-orthogonal geometry that isotropically expands for the entire vertical surface by respecting the mathematical partition into 8 modules (2,44 meters each) from which the repetition of the four typical-free floors also derives.⁵⁹

Hence, if it is true that the FAUM façade represents an autonomous work of art that legitimizes its interpretation as an exemplary formalization of Tedeschi's theoretical framework based on the application of aesthetic laws to environmental issues, it is equally true that the radical nature of this project must be reconsidered by virtue of the urban vision of its author exercised from within the local bureaucratic apparatus. This produced a platform for the free exchange between the city and the university materialized in Tedeschi's architectural work, whose reduction to an empty volume extremely simplified as a vertical repetition of free typical floors coincided with Tedeschi's educational project for Mendoza's urban university guided by his pragmatic choices at least as much as his theoretical ones. And in fact, the mathematical exactitude was not only responsible for aesthetic issues, but it appears essential for the materiality of the entire building too.

FIG. 179
Enthusiastic reception of the building in local newspapers (left)
compared to the moderate reception in foreign magazines such as
“L’Architettura Cronache e Storia” (1963).



59 See Codina (2013), who also interpreted Tedeschi's 'modulación' based on the golden ratio as a pure derivation of his theoretical framework, both assumed as aesthetic values to formalize a 'contenedor espacial que es cuerpo estructural' according to a rational principle and Tedeschi's autonomous creative intentions (p.23).

FIG. 180
Ground floor plan
(redrawn by the author)





FIG. 181
Construction site initial stages.
Archivo Descote

4.4 *The inhabited envelope.* *From material gesture to sophistication of concrete construction*

After all, concrete was City par excellence,
the definite sign of a step forward in life. ⁶⁰

Patrick Chamoiseau, 1992

In 1963 Francisco Bullrich includes Tedeschi's educational building among the pages of his book *Arquitectura Argentina Contemporanea*.⁶¹ Then some images have a good international circulation in the following years, though reductively situated within esthetical and structural categories that hardly explain Tedeschi's managerial attitude not only regarding his well-developed fundraising skills, but also his complicity with the local construction industry that was introducing a peculiar prefabrication process in the region. In fact, while the sculptural expressiveness and seductive materiality of the *non-orthogonal* concrete façade generally acclaimed for its 'suavidad' may recall the design gestures admired, but also criticized, of Latin American modernism, the FAUM is the first prefabricated concrete in the country entirely made up of standardized elements later assembled on site. Even the Italian architectural magazines focused on the structural performances of the FAUM *quake-proof* façade:

“In complesso, dunque, un criterio strutturale anticonformista in campo antisismico, espresso con notevole chiarezza nel reticolo architettonico delle facciate. La FAUM ha voluto rovesciare i concetti strutturali tradizionali. Anziché sulla rigidità dei nodi e sull'abbondanza delle sezioni, la struttura si basa concettualmente sulla elasticità delle facciate uguali”.⁶²

Indeed, Mendoza is a highly seismic region, where the strict building codes were in contrast with the pre-stressed concrete structures for which both the municipal technicians and the government must be convinced of their efficiency. This

60 Patrick Chamoiseau, *Texaco*, Paris: Gallimard, 1992.

61 See Francisco Bullrich. *Arquitectura Argentina Contemporanea*. Buenos Aires: Nueva Vision, 1963, p.158.

62 In the article titled 'Non-Orthogonal: Deviationist Elevations' from "Architectural Review" (no.794, 1963), and 'Reticolo anti-sismico di Enrico Tedeschi', in "L'Architettura Cronache e Storia" (no.92, 1963).

operation had already started through the same lines of the local newspapers that announced the inauguration of the FAUM building, welcoming a revolutionary educational project that dissolves every barrier between the city-region and the university by making academic knowledge freely flow in its urban context and incorporating city life within its educational system as much as possible. In this sense, if the 'taller' (studios) remains the core of Tedeschi's pedagogical approach, the theoretical lectures expanded even acquiring a public character with open programs of 'cursillos, debates, mesas redondas y exposiciones publicas'.⁶³ The first of these programs aimed at both potential students and local professionals was set up on the inauguration day, with the university institution exhibiting building materials and technologies made available by local construction companies, to which a space commensurate with their sponsorships will be dedicated in the aforementioned newspapers pages.

In this cooperative context, Tedeschi had advanced the design of the building together with some university colleagues including structural engineer Roberto Azzoni for the general calculation, architect Miguel Ángel Giraud as construction manager, Padro Magni as 'contratista de mano de obra', Daniel Ramos Correas for designing the green space – which in the end corresponds to 3/4 of the entire plot – and finally the Italian-born engineer Diego Franciosi for the design and production of reinforced concrete pre-tensioned elements. Diego Franciosi (1915-2004) had earned a leading position as manager of the Italian company SCAC (Società Cementi Armati Centrifugati) opening the possibility for Tedeschi to imagine alternative solutions for the steel structures he was exploring with his students. Franciosi arrived in Argentina in 1947, where on behalf of the Vianini Company, a pioneer in the field of pre-tensioned large tubes for high-pressure aqueducts in collaboration with Techint, founded the Supercemento company to carry out the works commissioned by Argentinean Obras Sanitarias. Driven by his spirit of innovation and his predilection for difficult places, he works in Patagonia, then in Chile and finally in 1958 in Mendoza, where he settled with his family to manage the SCAC plant, the Italian company founded in 1920 which, among other things, used to produce pre-tensioned concrete elements as poles for high voltage lines with the process of centrifugation.

The process was widely applied at the beginning of the 20th century, but Diego Franciosi was the first to experiment on these prefabricated elements testing the poles resistance in cases of mixed steel armature. Many scrap pieces of these tests appeared extremely resistant, so that they became test components

63 From 'El Tiempo de Cuyo', May, 6 1962.

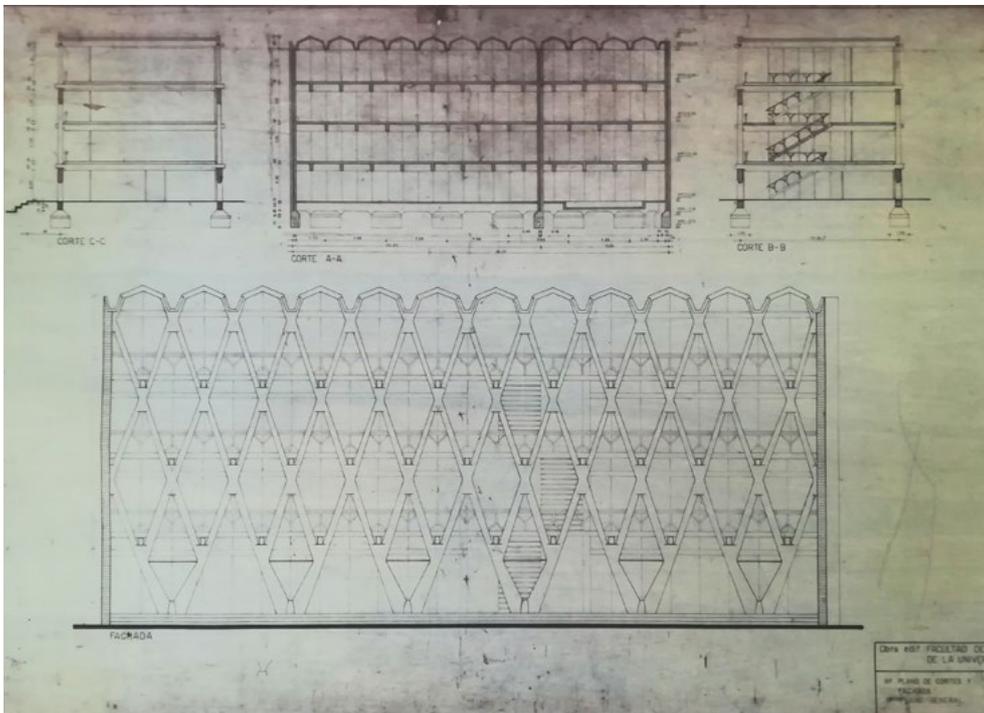
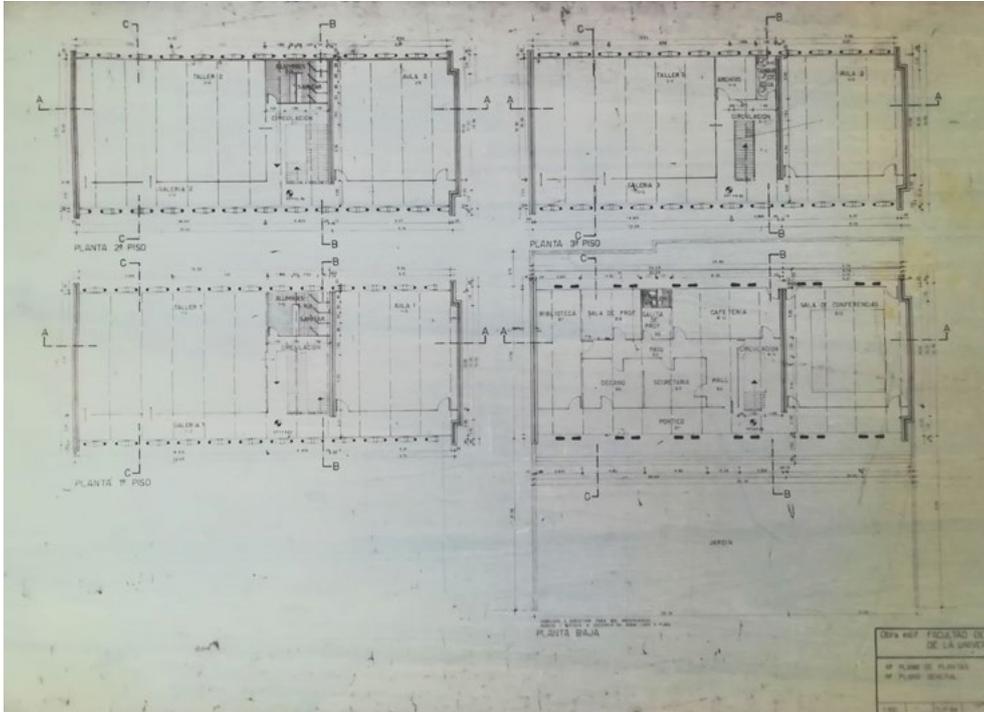


FIG.182
 Plans and sections original drawings.
 From FAUM Archive Mendoza

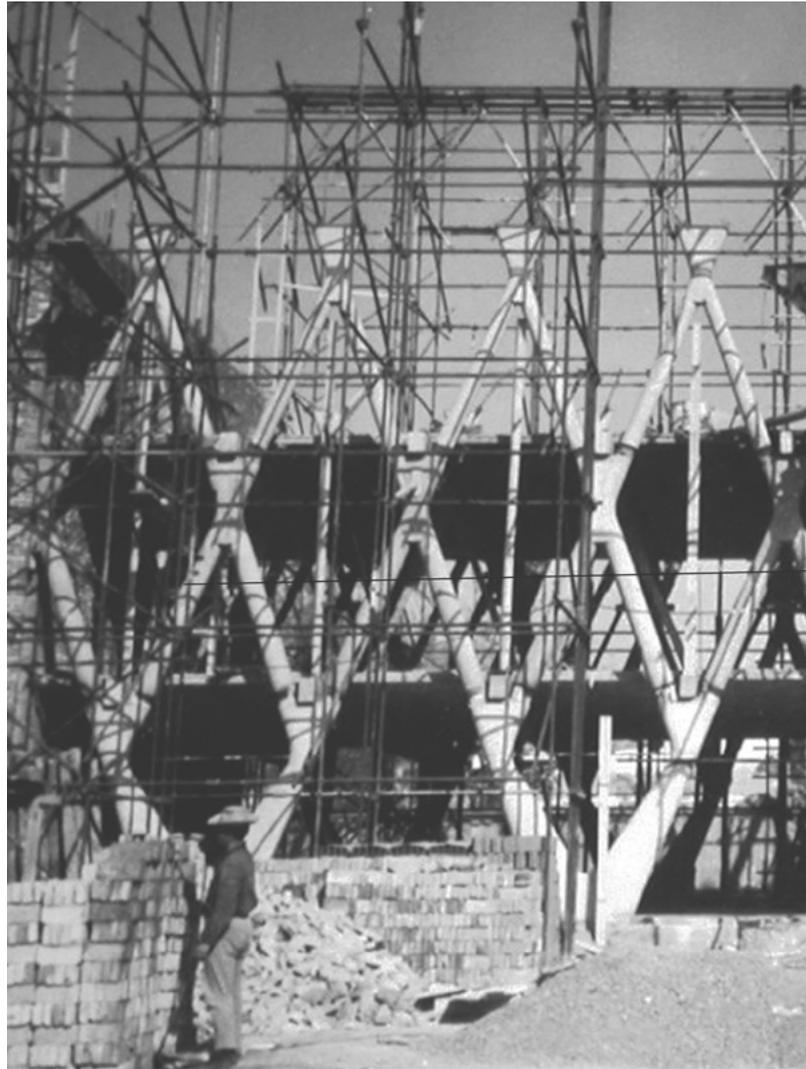
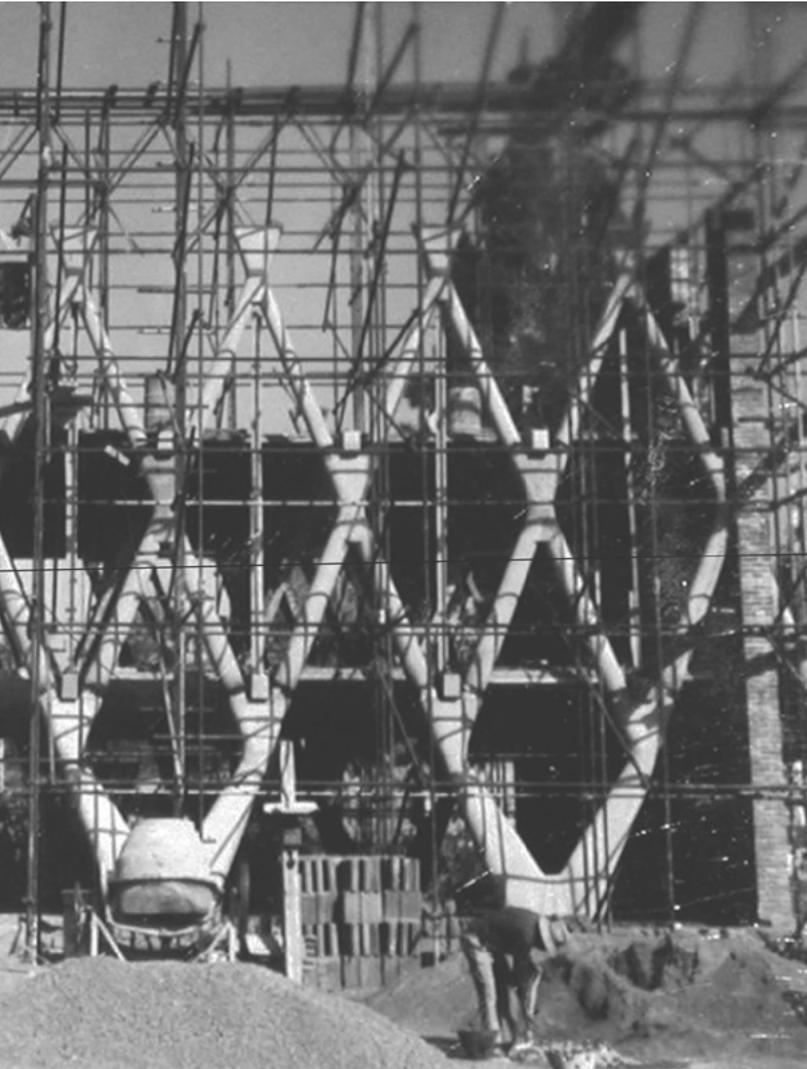


FIG. 183
Construction site assembly stages.
Archivo Descote



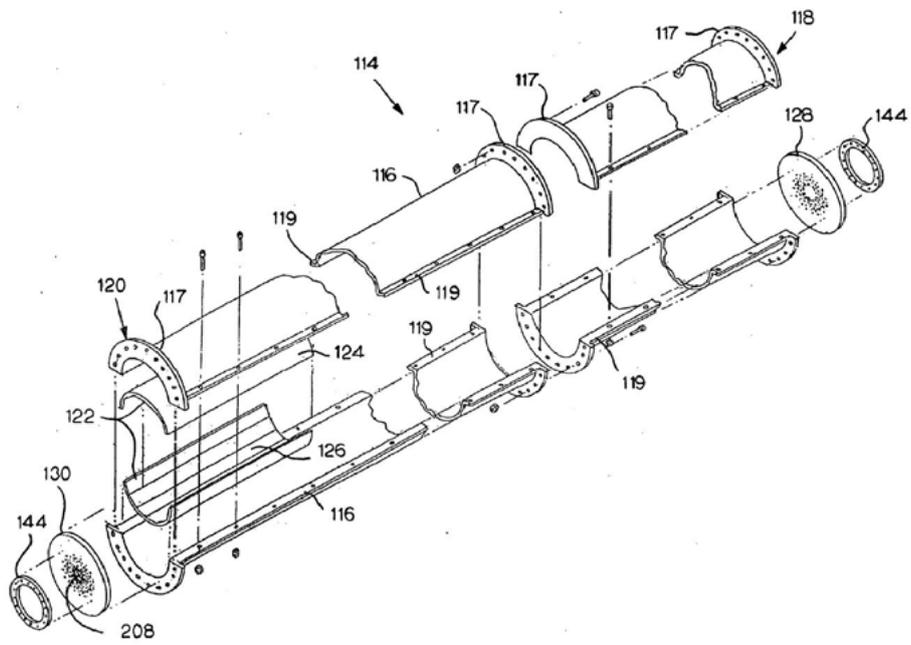


FIG. 184
Steel formwork for centrifugation process of concrete
used by S.C.A.C. since early 1920s

for the façade designed by Tedeschi and his collaborators. What happens next, is that the entire building will be conceived according to the this prefabrication process, and after the meeting and negotiations even Franciosi's participation in the construction process materialized in a sort of co-financing, through the supply of the scaffolding system necessary for the assembly phase.⁶⁴

Consequently, the numerical exactitude sought in the formal composition of the façade is converted into a pragmatic objective directly connected to the way in which the entire building would have been fabricated: prefabrication, assembly, completions and finishes. The pre-stressed reinforced concrete elements produced in Franciosi's factory included conical centrifuged columns, pre-stressed beams, X joints, slab joists. The centrifuged columns varied in shape and size of its diameter decreasing with height. The 0,50 pre-stressed beams reached a span of 12,50 m between their supports – the two main façade. The X joints are prefabricated elements that connect both the four conical columns that converge in each node, and these nodes with each of the pre-stressed beam. To facilitate the assembly phase, these joints were already connected with the corresponding columns in the factory, forming a two-legged torso as it was called in construction jargon. Finally, the slab joists were limited to a length of 2,20 m. Meanwhile, the on-site work exclusively consisted of continuous foundations, the V-shaped pillars of the ground floor and the elevation of the retaining walls, that is a 0,15 m reinforced concrete wall completed with a double exposed brickwork.

From a logistical point of view, raising the two retaining walls went hand in hand with the assembly of the two main façade punctually anchored to them. Once the twelve beams of the first floor had been raised, and welded to the V-shaped pillars of the ground floor, the process continued with the elevation of the concrete-and-brick retaining walls to the point where the façade elements were anchored to them by means of half-X-shaped joints. Once the pieces were assembled and the walls raised up, the transverse beams of the floors (8 for each span) were also positioned and welded to the joints completing the the first cycle of a process that would be identically repeated to build the subsequent floors. Finally, the building appeared as a totally permeable structural grid interrupted by brick walls. The finishing work took longer than the assembly phase, with the plants conveniently grouped at the back to facilitate maintenance while the light partitions were based on standard industrial dimensions (2,44 x 1,22 meters) –

⁶⁴ From a conversation between the author and Roberto Franciosi, son of Diego Franciosi, in March 2021. Franciosi was the manager of the SCAC company located in Maipú, Mendoza. In collaboration with José Cartellone's company, one of the main construction companies in Mendoza, he creates a factory of large prestressed beams, the PREAR, which produces Y-section beams for the construction of large warehouses with spans up to 20 meters, and other beams and elements that have been commonly used in bridges, highways, large buildings, etc in Mendoza and its province.

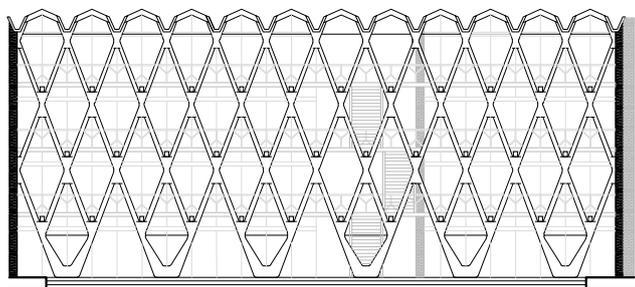
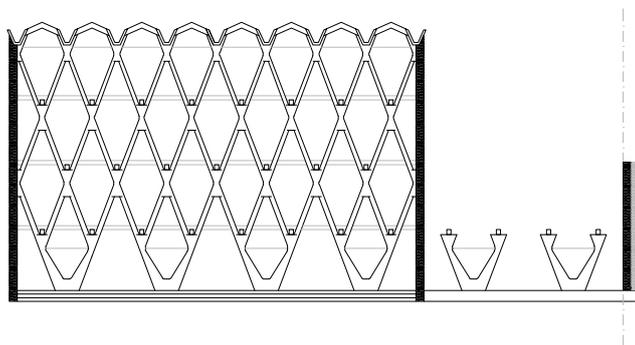
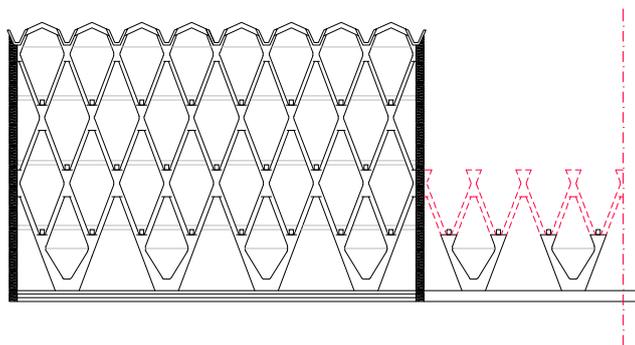
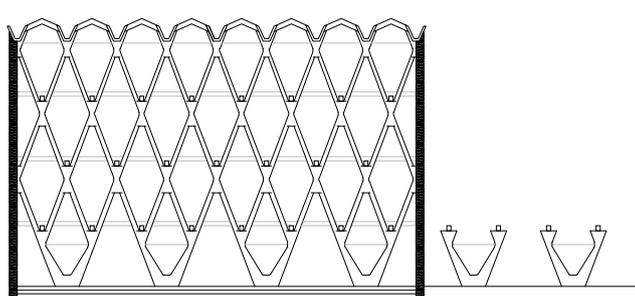
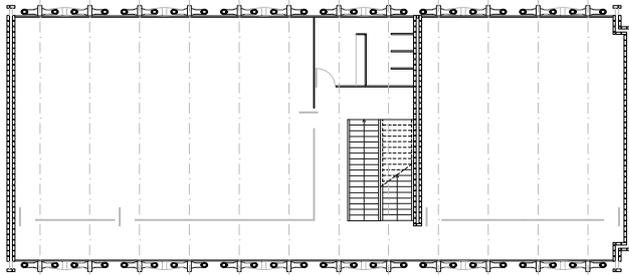
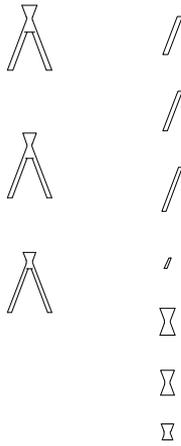
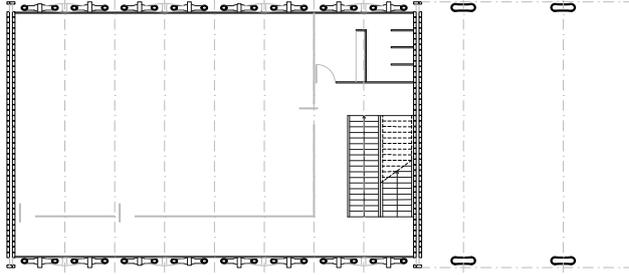


FIG. 185
Extension phase (redrawn by the author)

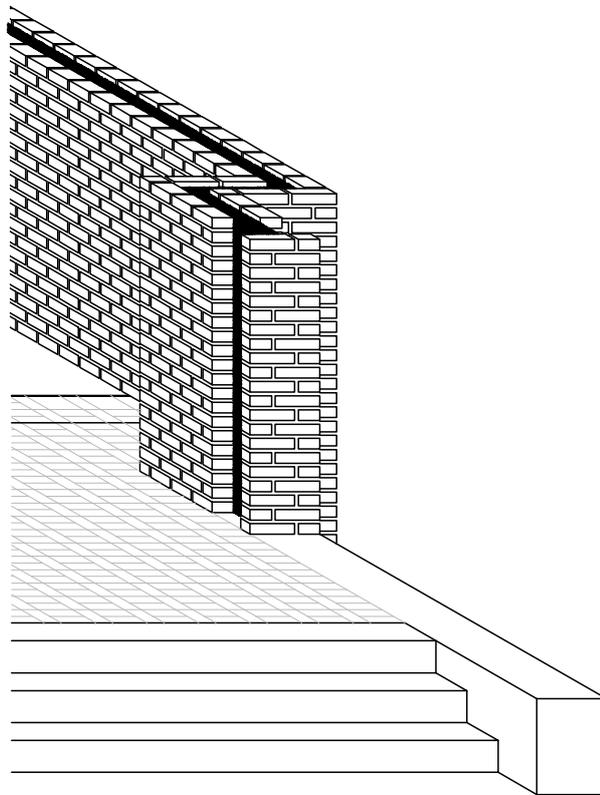


corresponding to the initial module of the entire project.⁶⁵ However, in the midst of this meticulously systematized construction process Tedeschi's managerial attitudes are again called into question when the university authorities tempted by a future expansion decide to buy the adjacent plot – despite this required a renegotiation of the state financing by the FNA and without which it would have been impossible to go beyond the completion of the ground floor. It is interesting to note that this decision taken by the institution was not only stimulated by the increasing confidence towards growth and expansion of that moment, but it was rather adapted to urban dynamics: rather than renounce to a central position, negotiations were also made for small proximity lots. Additionally, following the new acquisition which corresponds to about 1/3 of the original project, Tedeschi must necessarily make to some adaptations to survive his initial composition meticulously regulated both by formal (golden section) and construction (prefabrication) laws.

This implied the continuation of the existing façade scheme, adding two cast-in-place V-shaped pillars and thus completing the ground floor with the resources at their disposal. Only with the extension of the loan obtained at the end of 1963 the construction system was reactivated to adapt the project to its final version. The work required was that of dismantling the nodes in order to replace them in contact with the new retaining wall and thus to expand the branching system following the now iconic *non-orthogonal* grid until the new limit of the university property. Even if, the solution that allows to maintain the integrity and coherence of the original grid allowing a certain degree of adaptability to unpredictable situations – such as that represented by the expansionist aims of the university institution entrusted to the architect-educator-entrepreneur manoeuvres – appeared to be the brick wall.

Paradoxically, those 'ladrillos' relegated to the mere containment of the iconic façades and instrumentally evoked to support the university managerial campaign of self-financing, are used to obtain the best adaptation both to the real conditions of the lot and to the powerful geometry of the façade: only through a very hand crafted detail folding the brick wall to meet the façade extreme it was possible to cover the entire plot surface. About a year later, in October 1964 the works were completed and celebrated with the aforementioned exhibition organized by Tedeschi, which announced the start of his educational project in front of all the institutional authorities, financial bodies and private construction companies that exercised a certain influence in this ecological system. This, without ever imagining that the same bureaucratic apparatus within which Tedeschi had masterfully exercised his role, would have influenced his dismissal in the climate of political radicalization and theoretical shift that reached its peak in the early-1970s.

65 See Codina (2013).



*FIG. 186
Construction detail showing the adaptation of the brick side wall to simultaneously cover
the new boundary of the univeristy property aftere expansion
and keep the geometry of the main facade intact
(redrawn by the author)*

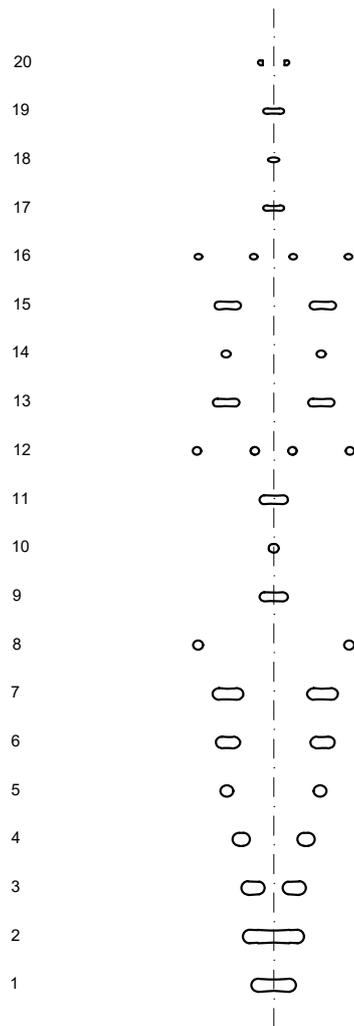


FIG. 187
 Sections of prefabricated facade elements gradually changing
 and branching with building's height.
 (redrawn by the author)

4.5 *The invisible environment*

The artist, as a creator of anti-environments or counter-environments, created to permit perception of environments, has a very peculiar role in our society.
The artist as a maker of anti-environments becomes the enemy in society.
He doesn't seem to be very well adjusted. ⁶⁶

Marshall McLuhan, 1967

Most historians have pointed out that in Argentina the 1960s began in the mid-1950s. Those years represented a time of cultural modernization, 'los años dorados' of public universities, the dissemination of new disciplines such as sociology and psychology, the emergence of the 'nueva izquierda argentina' together with the proliferation of socialist and marxist groups. However, little light has been thrown into the weakening of Tedeschi's theoretical framework paradoxically amplified by the visits of international guests invited for the IIDEHA seminars, at the end of which it will be the FAUM project that will survive the theoretical framework from which the building is commonly made to descend. Reyner Banham's visit to Argentina will take place in the summer of 1968, at Bullrich's invitation to lecture in the sixth IIDEHA international seminar. In the letter of acceptance of the invitation, Banham exposed the issues he intends to discuss:

"I should point out that though I am best known perhaps for my work on the stylistic and intellectual history of the Modern Movement (Theory and Design in the First Machine Age) my present field of study is concerned with the architectural history of mechanical services and environmental controls (electric, lighting, heating, ventilating, air-conditioning, etc). Would this be of your interest?" ⁶⁷

⁶⁶ Marshall McLuhan, 'The Invisible Environment: The Future of an Erosion', *Perspecta*, Vol. 11 (1967), pp. 161-167.

⁶⁷ See Claudia Schmidt, 'Would this be of your interest?' Reyner Banham's Seminars in Argentina and the Debate About Environmental Control in 1968', in "Bitácora", no.33, 2016, pp.118-125. In these years

Banham's interest in technology was no accident. Commonly portrayed as the inventor of Brutalism or Pop architecture, Banham's contribution is more importantly recalled here as the spokesperson of a post-war generation searching for the alliance between techno-environmental problems and the persistence of modernism. Trained in mechanical engineering and serving as an engine-fitter during the war, he moved to London with his new wife Mary Mullett – artist, printmaker and teacher – where he developed his enthusiasm for architecture intercepted by Nikolaus Pevsner, who enlisted him for the staff of the “Architectural Review” giving space to Banham's thoughts coagulated in his first book *Theory and Design in the First Machine Age*.⁶⁸

However, as Banham himself points out in the letter, his studies benefited from the research grant awarded by the Graham Foundation of Chicago for the two-year period 1964-1966 and shifted towards what remains perhaps one of his most radical books: *The Architecture of the Well-Tempered Environment*, published just a year after his Argentinian seminar by The Architectural Press (London, 1969).⁶⁹ Its radical nature stems not only from its internal upturning of art historical approaches, but also as a counterpoint to the emerging postmodern culture since 1969 was the same year of George Baird and Charles Jencks *Meaning in Architecture*, resulting as the offshoot of their 1967 co-edited issue for “Architectural Association Quarterly”.⁷⁰

Thus the Argentine seminar is organized in the middle of a contested territory of architectural theory in the late 1960s recently described by Sylvia Lavin (2020) with the concept of *postmodernization*, as a cycle of seven meetings at the universities of Córdoba and Rosario between 28 June and 5 July 1968 – while student protests in the Western world had just exploded even if no mention is made by the British historian. Rather, his seemed that of influence the architectural discourse of a peripheral region, fascinated by

Banham publishes several works in which he highlights a clear expression of the technological advances available: “A home is not a house”, 1965, “The Great Gizmo”, *Industrial Design* September 1965, *New Brutalism: Ethic or Aesthetic?*, 1966).

68 This book not only took issue with Pevsner's own vision of ‘high’ architecture, but also with the entire modern tradition calling for a technological architecture that in the end might not even be recognizable as ‘architecture’. See Todd Gannon, *Reynier Banham and the Paradoxes of High Tech*, The Getty Research Institute, 2017.

69 The University of Chicago Press which will print the second edition in December 1984. The Spanish version of the book will be translated into *La Arquitectura del Entorno bien climatizado* (Buenos Aires: Ediciones Infinito, 1975) with an apparently harmless choice that replaced the illustration of the abstract diagram that stood out on the cover of the English version with a photograph of air diffusers and exposed lighting fixtures from the United Nations Building in New York that, instead, betrayed the original message.

70 Interestingly there are two essays included in *Meaning in Architecture* which go against the considerations of the other contributions. Both Reynier Banham ‘The Architecture of Wampanoag’ and Nathan Silver ‘Architecture without Buildings’ fear a return to rigid monumentality in architecture due to semiology's emphasis on past traditions.

FIG. 188
 Reyner Banham's acceptance letter addressed
 to Francisco Bullrich with the English critic
 proposing the well-tempered environment as
 the central theme of his
 seminars for the IIDHEA.
 Image from Schmidt (2016)

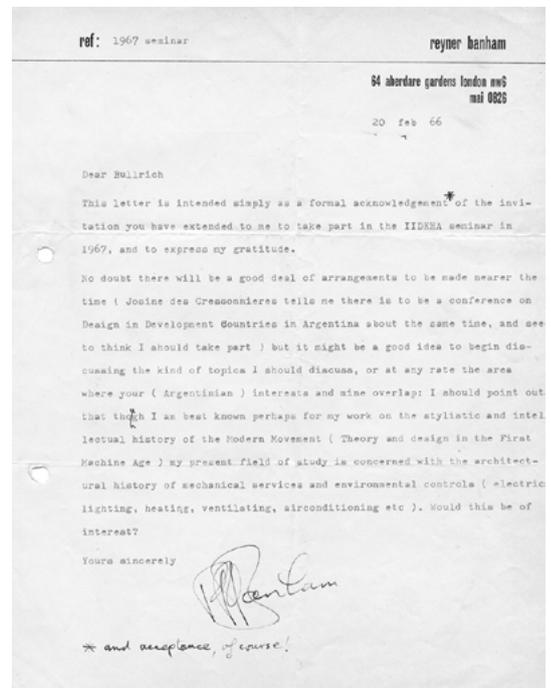
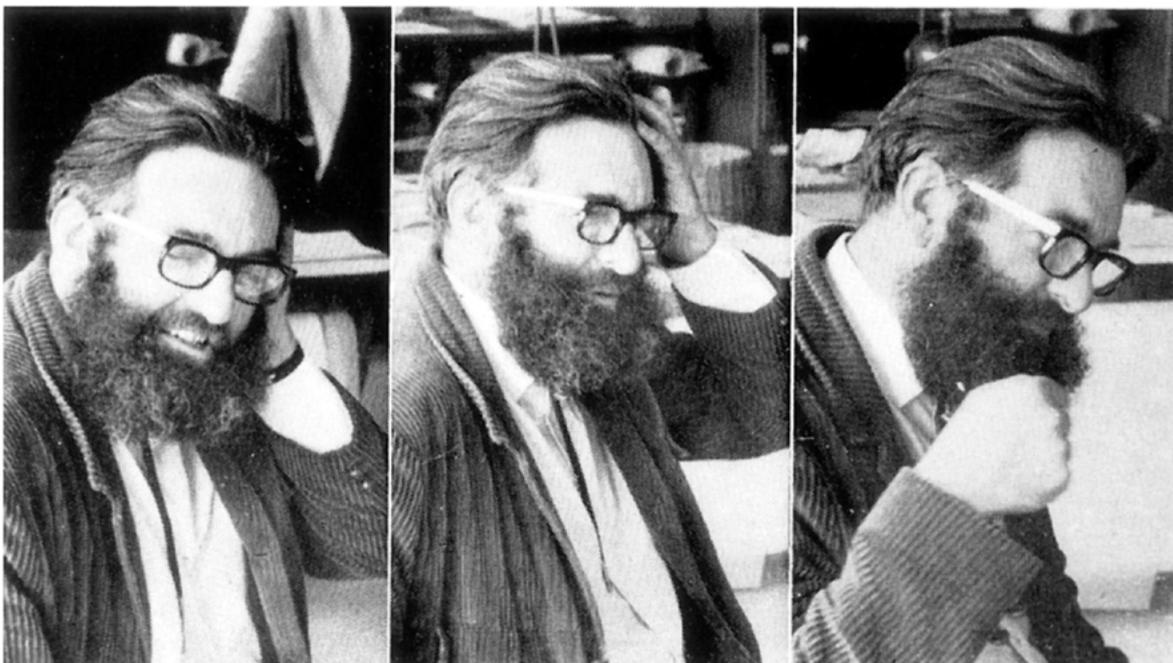


FIG. 189
 Rayner Banham interviewed in Argentina during his 1968 seminars.
 Image from "Summa" (no.13, 1968)



the research work of the Institute founded by Tedeschi and his colleague in 1957 in a context of geographical remoteness and cultural isolation but without diverting attention from what was happening in the new centers of debate such as Buenos Aires. Banham's concerns, in fact, appear not so much addressed to its potential interlocutors within the IIDEHA but rather to the conference organized by the International Council of Societies of Industrial Design – sponsored by UNESCO – which would most likely overlap with his visit, not only in terms of calendar but, obviously, in terms of its contents. It was the Seminar of Industrial Design Education in Latin America organized in Buenos Aires by the architect and philosopher Tomás Maldonado – back in 1968 from the forced closure of the Hochschule für Gestaltung in Ulm (HfG) he served as director – who was approaching the concepts of environment and ecology from a different angle.⁷¹

The first encounter between the two dates back to the time when Maldonado invited him to give a lecture at the HfG in Ulm in 1959, when the polemic verve of the English historian targeted the 'warm glimmer of moral self-affirmation' of the designer educated to shape the reality in the climate of ascetic and elitist 'community'.⁷² The discussion was about the Ulm school idyllic posture against the external world that practiced both monastic seclusion and ideological dissidence against the conservative political forces: moving up to the hill, the building's ascetic modernism was a materialised proclamation of a dissident institution.⁷³ Evidently, from Maldonado's perspective the notion of 'human environment' cannot be solved in the atmosphere produced inside Banham's *inflatable bubble*:

“Our relationship with the environment in which we live is comparable, say, to the relationship between a container and its contents, each of which has developed independently of the other [...] And yet there is no doubt that here the container and the contents, the human condition and the human environment, are the result of one and the same dialectical process, one and the same process of mutual conditioning and formation”.⁷⁴

71 The keynote speaker in the conference were: Maldonado (president), Misha Black (UK), Arthur Pulos (USA), Roger Tallon (Franch), Limari Tapiovara (Finland), Josine des Cressonnières (Belgium), Alexandre Wollner (Brasil), Teresa Gianella Estrems (Perù) e Basilio Uribe (Argentina). See Claudia Schmidt (2016).

72 See Ulm 6, Reyner Banham, Diener des Allgemeinwillens.

73 See Anna Maria Meister 'Radical Remoteness. The HfG Ulm as Institution of Dissidence' in Ines Weizman, *Architecture and the Paradox of Dissidence*. London: Routledge, 2013.

74 Struck by the flagrant contradictions between the multiplicity of emergent environmental design proposals, Maldonado elaborates his arguments in the USA during the Visiting Senior Fellow at the Council of Humanities of Princeton University, which began in 1966 and later resulted in the publication



FIG. 190
*Tomás Maldonado returned in Argentina in 1968
after the forced closure of the Hochschule für Gestaltung in Ulm (HfG) he served as director.
The Ulm school idyllic retirement from the world is considered both monastic seclusion
and ideological dissidence against the conservative political forces.
Image from Ana Maria Meister (2013)*

Banham's visit is entrusted to Marina Waisman, since Bullrich is coming out of his wife mourning Alicia Cazzaniga with whom he was designing the iconic National Library together with Clorindo Testa, and also taken up by with the preparation of the visiting semester at Yale University – invited by Vincent Scully – on the basis of which he will publish his *New Directions in Latin American Architecture* also in 1969.⁷⁵

However, it will not be mere organizational issues to immediately make evident the marginality attributed to Tedeschi's positions in the emerging discussion about environment in architecture. Banham entitled his first lecture 'El concepto de control del Ambiente. La arquitectura como técnica ambiental', in which he begins by judging the emphasis placed by historians on structural innovations to be incomplete and excessive when this addressed free circulation or free plans by omitting any consideration of heat control, sound insulation, lighting or communication means trying to *civilize* technology instead of incorporating it as a design input:

“La historia de la arquitectura, tal como ha sido escrita hasta el presente, no ha encontrado razones para disculparse o explicar una división que no tiene sentido respecto a la modalidad con que los edificios son usados y pagados por la raza humana [...] el servicio mecánico ha sido casi excluido totalmente de toda discusión histórica hasta la fecha. La cuestión es que la historia de la arquitectura que se encuentra habitualmente en los libros trata casi exclusivamente de las formas externas de los volúmenes habitables tal como revelan las estructuras que los encierran”.⁷⁶

Without any hesitation in undermining the foundations of his mentor's book *Pioneers of the Modern Movement* (Pevsner, 1936) or in offering the Argentine audience anecdotes like that of the Berlin conference in which Giedion is publicly pressed by him on the inaccuracy of his most recent publications stubbornly based on the search for what was considered 'lo típico' in the sense of exemplary, while 'en cambio yo me atengo a la significación en inglés: lo común, lo convencional'.⁷⁷ To the precarious conditions faced by industrialized

La speranza progettuale: ambiente e società. Turin: Giulio Einaudi, 1970.

⁷⁵ Francisco Bullrich, *New Directions in Latin American Architecture*. New York: George Braziller, 1969. Vincent Scully was a guest of IIDEHA before Banham.

⁷⁶ From Reyner Banham, *Problemas de historia ambiental*. Córdoba: IIDEHA, 1969, p. 35.

⁷⁷ *Ibid.*, p.38.

societies, Banham will respond by considering book catalogues, patents, price indices, advertising and publications outside the academic sphere as primary sources for illustrating advances in environmental technology, also making use of the extraordinary analytical drawings prepared by his wife Mary considered far more significant than the photographs that limit each approach to a formal question.⁷⁸ In fact, Banham organizes his seminars on the format of the *case studies* despite they were not to be considered exemplary models, nor the first of their kind. On the contrary, the intent is to highlight the architectural works that have been involved in a context in which the availability of technologies had actually increased.

What is interesting is that these seminars will be transcribed and translated in Spanish, and then published by the IIDEHA as *Problemas de Historia Ambiental* – a book that circulated well before the translation of Banham's *Well-tempered environment* in 1975.⁷⁹ Therefore, it will be through this publication that the shift from the concept of environment as it was discussed by Tedeschi will suffer the greatest blow, amplified by the analysis conducted by Banham on the project of one of Tedeschi's champions. In Banham's narration, Frank Lloyd Wright plays a leading role more for his mastery in managing technological aspects than for his spatial inventions: Banham's analysis of the Larkin Building built between 1903 and 1905 differs from those commonly reported lingering on the fluidity of its interior spaces, deriving this spatial condition on the positioning of the technological systems. It is interesting to note that among the local *virtuous* projects, Banham indicates Marco Zanuso Olivetti factory in Merlo (1959-1961) as emblematic case in which the design of the technological components 'for the first time in history' appeared under the control of the architect.

The 'Estructuras Inflables' were also part of these seminars illustrated in the fifth lecture as 'algo de primicia mundial', since the first exhibition took place only a few months earlier in Paris by hand of the Utopie group.⁸⁰ This also included the 'first great monument of environmental wind-baggery', that is the mobile theater designed by Victor Lundy and Walter Bird for the U.S. Atomic Energy Commission as the world's oldest inflatable structure 'conceived as an architecture and designed by an architect'. Although, this opened up to the 'new

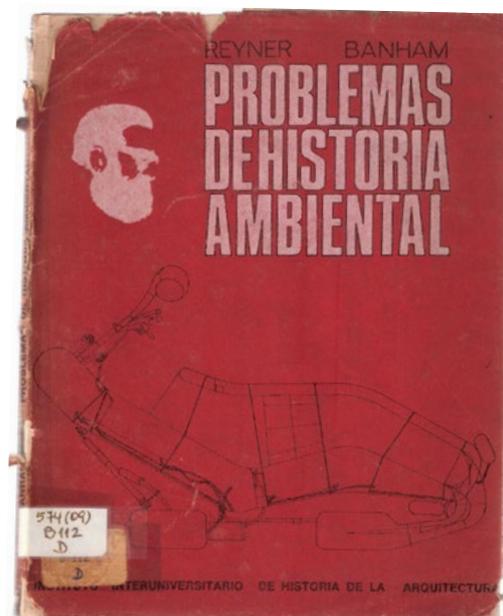
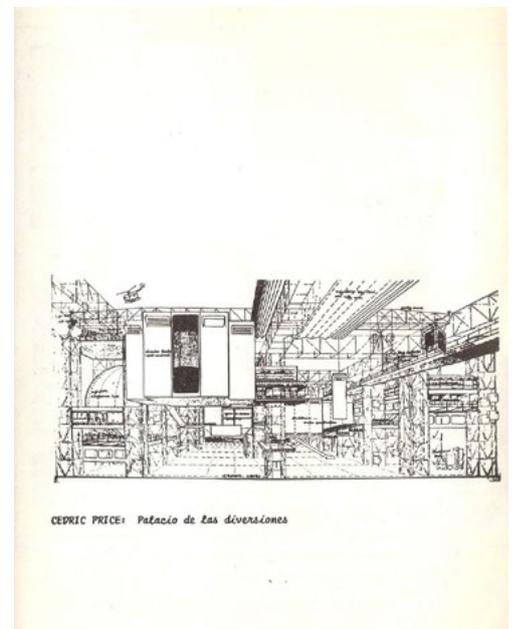
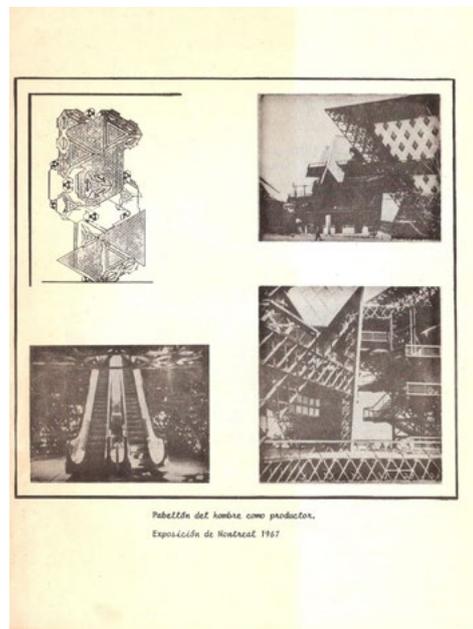
78 A selection of inventors are presented as part of an evolutionary process necessary to understand the situation of the profession at that time.

79 Reyner Banham, *Problemas de historia ambiental* (1969).

80 This gave him the experiential component to the previous article 'A home is not a house' written without having any experience inside an inflatable structure. The exhibition presented a broad selection of inflatable structures, ranging from industrial products to experimental architectural design. In the catalogue, the Utopie architects Jean Aubert, Jean-Paul Jungmann, and Antoine Stinco establish an inventory of diverse objects through a combination of photographs and technical object descriptions with the museum's curator Pierre Gaudibert writing in his introduction about the 'aesthetics of everyday life'.

FIG. 191

Banham's lectures and seminars were immediately translated into Spanish and published in the volume published by IIDEHA under the title "Problemas de historia ambiental" (1969) which prompted the circulation of his ideas in that context long before the translation of his *Well-Tampered Environment* (1975).



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problem' of an architecture completely detached from the place where it is built:

“Para mí es el teatro de Río de Janeiro, pero para otros es el de Dublín o el de Stuttgart. Donde quiera que esté sigue siendo el mismo edificio”.⁸¹

Banham's euphoria clearly accentuated the gap with Tedeschi's reference field:

“El historiador debe llamar la atención de los arquitectos hacia estos hechos [las obras relevantes] por todos los medios, con espectacularidad si es necesario, como en una campaña de propaganda”.⁸²

However, the moment this propaganda reaches its peak is certainly the last lecture, ‘¿Cómo escribiremos la historia ambiental?’, presented by Banham himself as a talking-head show alternated by the Argentinean students timid attempts to question some of the mind-blowing argumentations. The most daring of these tries to attack all the paradoxes involved in Banham's search for an ‘architecture beyond building’ claiming Croce and Venturi's theories, instigating the lecturer's unforgiving answer:

“I think I will have difficulties in answering this question; I believe that the critical concepts used in the history of art and architecture are too much grounded on concepts derived from aesthetics [...] What for me makes architecture and industrial design worth studying is that architecture is more than art, it involves all the creative activity of humans, both technical and cultural [...] The moment a final judgment is given on a work, it is because the work is already dead”.⁸³

On the one hand, the precariousness of the critical judgment was in clear contrast with the principle of autonomy on the basis of which the audience of those seminars has been educated, especially around the figure of Tedeschi and

81 Reyner Banham, *Problemas de historia ambiental* (1969), p.58.

82 See Waisman interview to Banham published in “Summa” no.13 (1968), pp.19-20.

83 Translated by the author from Banham, *Problemas de historia ambiental*, p. 28: “Creo que tendré dificultades en contestar a esta pregunta; yo creo que los conceptos críticos utilizados en historia del arte y de la arquitectura se basan demasiado estrechamente en conceptos derivados de la estética [...] Lo que para mi hace a la arquitectura y al diseño industrial dignos de estudio es que la arquitectura es más que un arte, involucra toda la actividad creadora del hombre, tanto técnica como cultural [...] En el momento en que se da un juicio definitivo sobre una obra, es porque la obra ya está muerta”.

his theoretical framework. On the other hand, however, raising the need for a 'situational judgment, that is a judgment formulated from the moment the building begins to be used, when one can begin to understand whether it is adequate or not, if it has undergone changes to adapt and how those changes are assimilated',⁸⁴ provides a commentary to redeem Tedeschi's educational project and the FAUM building that literally embodies it. In fact, without ever mentioning Tedeschi's university building, the main argumentation of Banham's seminar shifts towards the 'arquitectura indeterminada o no-formal' to which the FAUM educational building was already contributing as a silent example well before his visit, perhaps more convincingly than to the aesthetics of indeterminacy that supported Banham's champions proposals like John Weeks Northwick Park and Cedric Price Potteries Thinkbelt – this last just launched as an example of 'knowledge factory' at the regional scale as opposed to any institutional concept of university.⁸⁵

In his article curiously concurrent with these events, Marshall McLuhan is the one that best prophesies Tedeschi's destiny and the progressive erosion of his theoretical positions on the concept of the environment:

“The artist, as a creator of anti-environments or counter-environments, created to permit perception of environments, has a very peculiar role in our society. The artist as a maker of anti-environments becomes the enemy in society. He doesn't seem to be very well adjusted”.⁸⁶

Firstly, the political radicalization that Banham had ignored reached the peak of student contestation also in Latin America, which in the case of Córdoba and Rosario led in 1970 to the revolutionary pedagogical experiment of the 'Taller Total', namely a knowledge-based horizontal structure between professors and students epitomized in a single design studio incorporating students from second to last year:

84 "Summa" (no.13, 1968).

85 The Potteries Thinkbelt, among the most celebrated examples in Banham's seminar, consisted of Cedric Price's critique of the traditional university system. Situated in a decaying industrial landscape, rather than in the usual urban or rural site, the Thinkbelt occupied one hundred square meters of the once-vital Staffordshire Potteries. It was designed to be an infinitely extendable network, as opposed to a centralized campus, and to create a widespread community of learning while also promoting economic growth. The framework for the network was a hundred-year-old railway system no longer in use. Not only would it transport people between housing and learning areas, but the cars themselves would become mobile teaching units. Complete with inflatable lecture theaters, foldout desks, and information carrels, the units could be combined and transferred to various sites as needed. See Hardingham, S. & Rattenbury, K. (2007) *Supercrit 1: Potteries Thinkbelt*. London: Routledge, 2007.

86 Marshall McLuhan, 'The Invisible Environment: The Future of an Erosion', in *Perspecta*, Vol. 11 (1967), pp. 161-167.

FIG. 192

Typical plans sequence obtained by highlighting the sections of prefabricated facade elements gradually changing and branching with building's height.
(redrawn by the author)

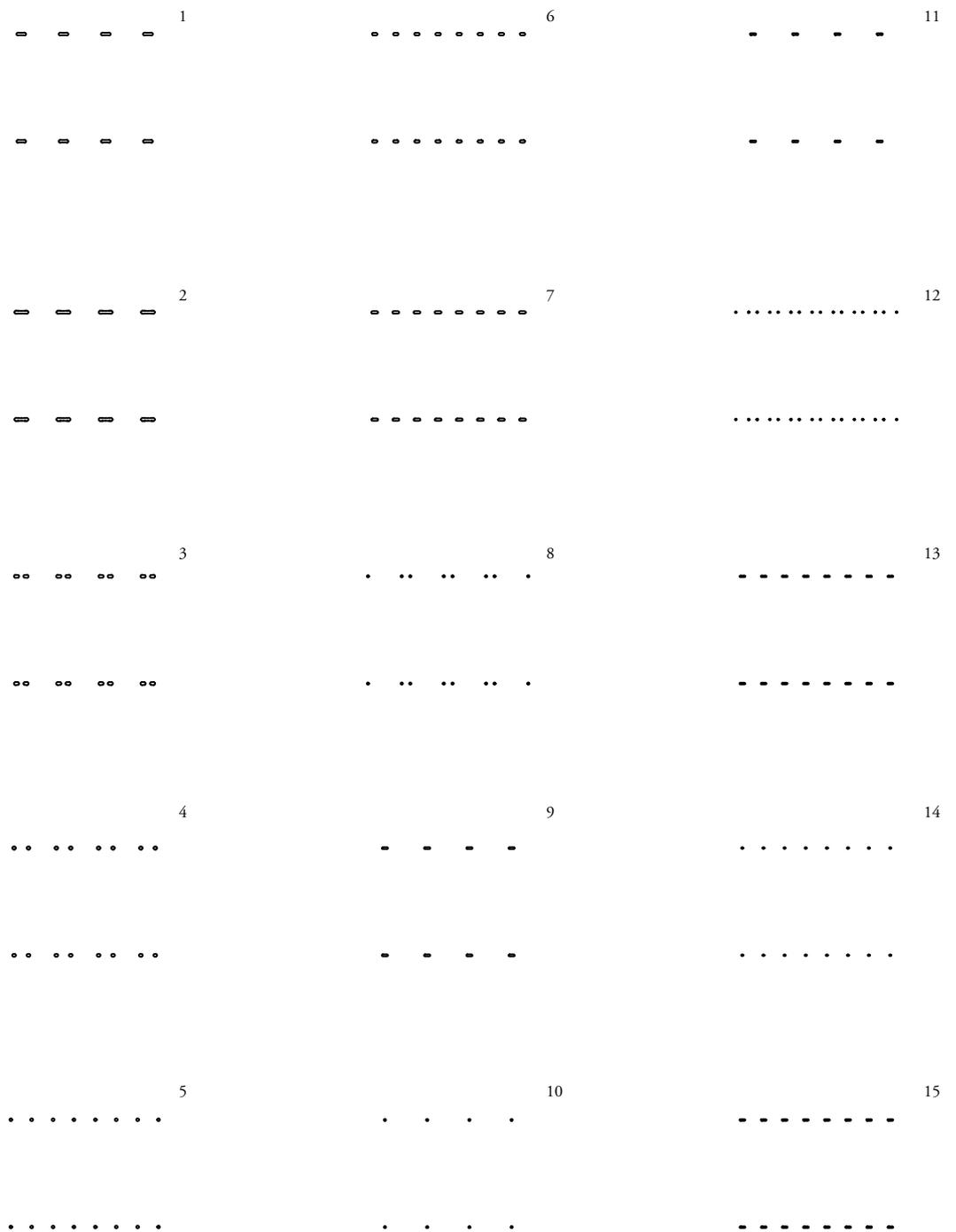
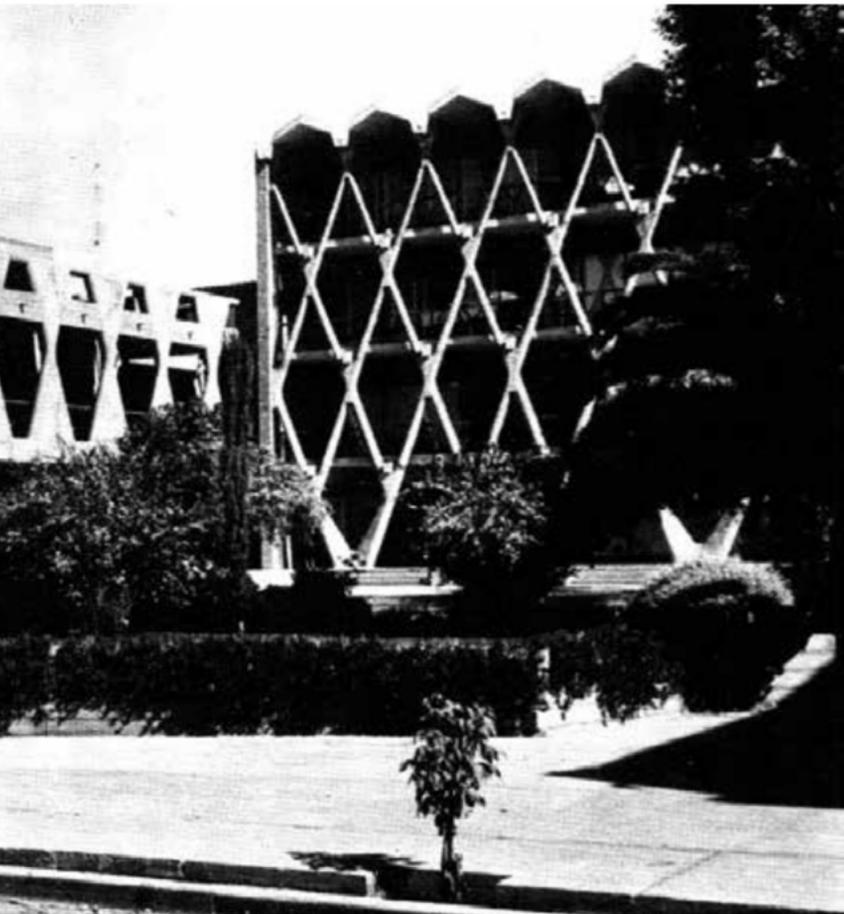




FIG. 193

*The urban campus of Mendoza was completed through the addition of other university buildings that explore the original principles established by Tedeschi by exposing circulation and movement in the foreground in direct contact with the city.
Image from Raffa (2015).*



“Lo que se propone en última instancia [el Taller Total], es la firme convicción de que es necesario replantear críticamente el rol del arquitecto, la concepción de la arquitectura que lo determina y su enseñanza aquí y ahora [...] asumirse como actores de un proceso que lleve a comprender la Arquitectura como práctica social, generada en la sociedad, interpretada interdisciplinariamente, asumida y resuelta por el arquitecto, y donde el *usuario* es su destinatario, continuador y hacedor en comunidad del producto: el hábitat humano”.⁸⁷

Secondly, the same year Taller Total is inaugurated in most Argentine universities, IIDEHA will host Umberto Eco as a guest of the last IIDEHA seminar in La Plata in July 1970, after which Marina Waisman publishes *La estructura histórica del entorno* (1972), whose title is already indicative of the series of theoretical displacements: reality could no longer be interpreted exclusively through the analysis of the creative work, but the ‘delimitación de un nuevo territorio’ was necessary. The semiotic turn together with the students occupation of the FAUM in 1973 will determine the Tedeschi’s dismissal from any institutional position.

Finally, if Tedeschi’s university project survives his theoretical framework it is worth returning to its architectural elements to reconsider its relevance within the contemporary discourse. A critical aspect call into question its *envelope*, going beyond the formal categories and structural performances of its iconic façade since the critical analysis exposed in this episode demonstrated the ecology behind it. Referring to Alejandro Zaera-Polo two-part article (2008) that claimed for the political agency of the envelope against the plan’s hegemony,⁸⁸ it can be argued that despite the apparent lack of a clear political exposure of its author that caused Tedeschi’s dismissal from university positions and the overcoming of his theoretical framework hitherto acclaimed throughout the region, there is a ‘politics of the envelope’ working in his project.

And this can be found in Tedeschi’s educational project and against the emerging euphoria towards indeterminism, informal and ‘architecture

87 The brief experience of Taller Total is also explained in Malecki (2103), p.167.

88 See Alejandro Zaera-Polo ‘The Politics of the Envelope’, in “Log” no.13-14 (2008). Followed by ‘The Politics of the Envelope, Part II’, in “Log” no.16, 2009: “Historically, from Durand to the post-war Soviet modernists, the flat-vertical envelope has often been associated with explicit political programs and the desire for a new, open society freed from natural and historical constraints and governed by healthy, egalitarian, and rational laws [...] Engaging with ecological concerns is contemporary architecture’s most direct path to political effect, and this performative agenda depends - increasingly - on the envelope’s design and integrity. A political ecology might enable architecture to regain an active political role, via basic but fundamentally radical forms of instrumentalization, and to overcome the artificial and perhaps politically motivated division between nature and politics”. From Zaera-Polo (2009), p.107.

beyond building'. On the one hand, the FAUM project was successful in correctly interpreting the educational needs that required adaptation to a new condition of urbanity whose radical nature envisaged by Tedeschi working from within the local bureaucratic apparatus consisted in the dissolution of the university institution within the generic system of the city. The architectural device which made it possible to achieve the authentic urban university was the *inhabited envelope*, that is the much commented permeable façade with circulation and movement exposed in the foreground inextricably connected with the vertical sequence of typical free plans. On the other hand, a more targeted analysis on specific construction detail reveals Tedeschi political position against neutrality: the beam section is reduced its front view from 50 to 25 cm where the structure changed direction to increase shear strength, and the interior ceilings are not finished or smoothed with any neutral surface. On the contrary, this peculiar detail highlights the friction generated between the light aluminium-and-glass partitions enclosing the *generic* rooms and the downstand-beam perforating them. That is to say, stopping a step before the zero degree of architecture by exposing the inertia that still (should) exist even in the most urban educational project such as that of Mendoza, whose concept of informality is increasingly compromised with and attracted by the generic system of the city and its invisible environment.

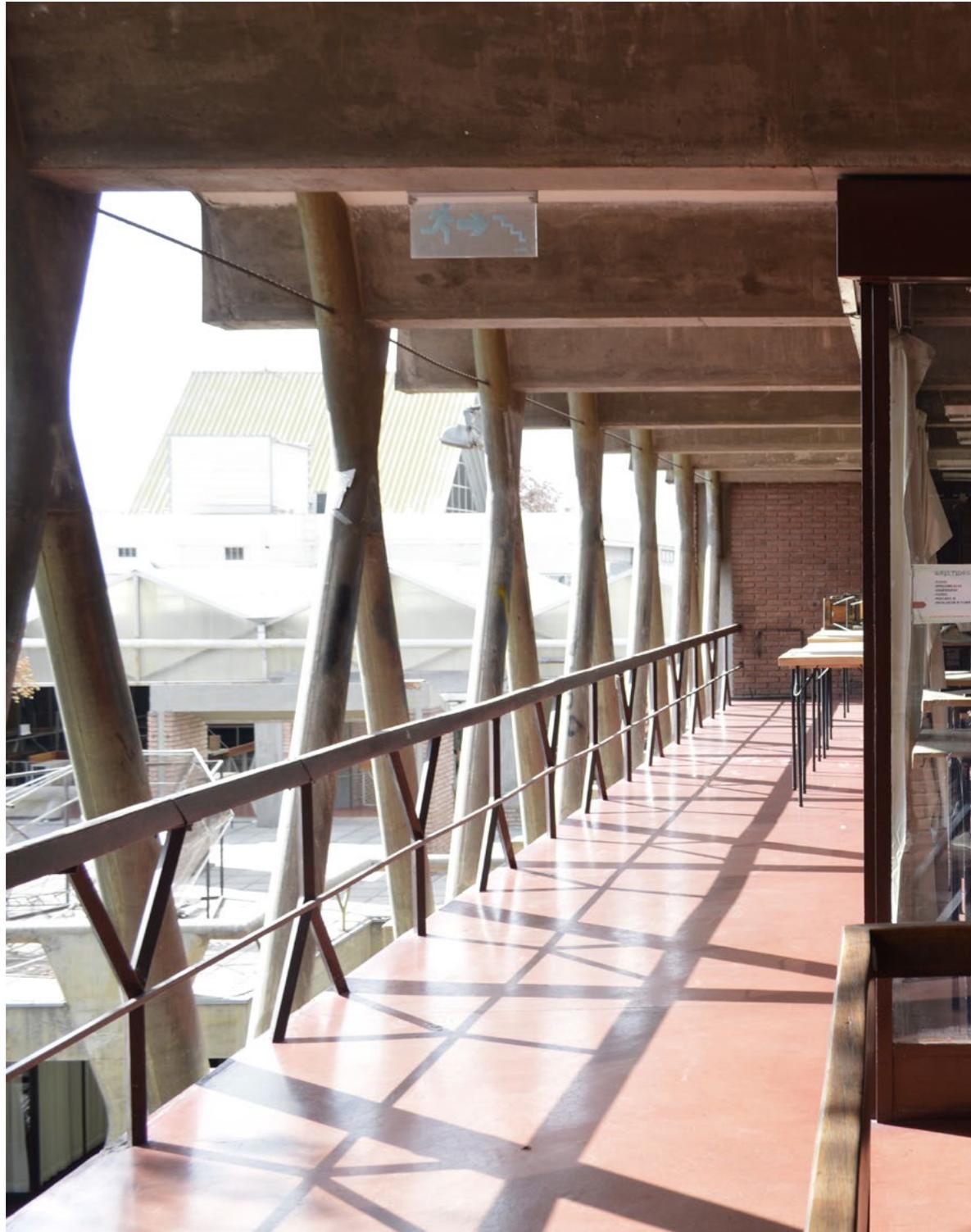


FIG. 194

The principle of continuous and uninterrupted transition from the classrooms, the habitable galleries, the public space obtained through the building set-back up to the urban environment of the city of Mendoza does not produce a smooth neutralization of educational space, but rather produced an architectural work that exhibits and preserves the friction necessary to support Tedeschi's inhabited envelope through its tiniest details.

(photo by the author)



Chapter 5

The atrium and its prodigious effects.

Universidad de Buenos Aires interiorization of its *proyecto inmaterial*

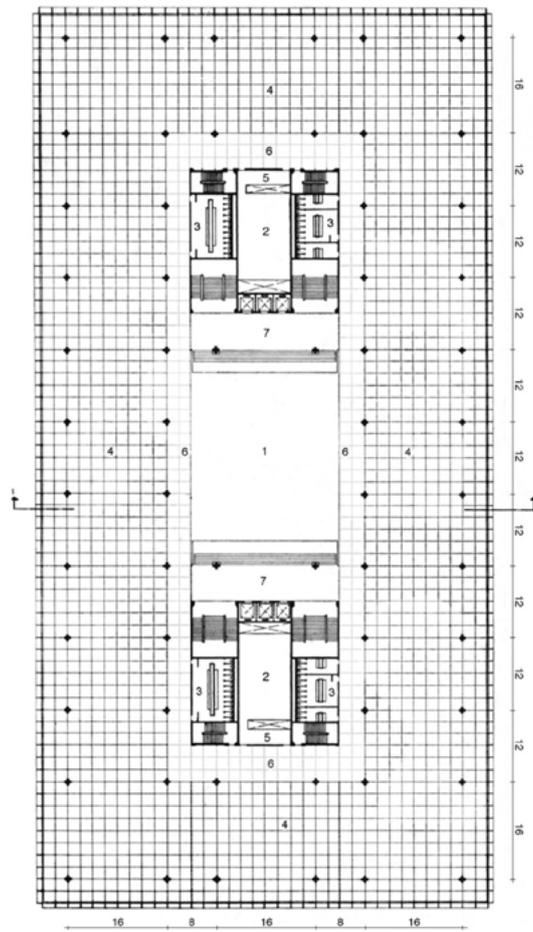


FIG. 195
Universidad de Buenos Aires Pabellon II, III (early 1960s).
Image from "Costrucciones" (no.219, 1969)

ABSTRACT (ITA)

Il ruolo di Enrico Tedeschi nella costruzione di una rete regionale che operava in dialogo con il Cile e con altri esponenti periferici del dibattito sulla modernità, aveva retto il confronto con il crescente accentramento culturale della capitale Buenos Aires, stimolando la sperimentazione sul progetto educativo fino alla variante tipologica di un volume verticale e completamente permeabile, a piena disposizione della città di Mendoza.

La proposta per la nuova Ciudad Universitaria de Buenos Aires, che segue solo parzialmente le prime indicazioni offerte dal Plan Director di Le Corbusier (1937-38), fa il suo ingresso nel discorso architettonico solo nel 1967 grazie alla pubblicazione su riviste specializzate locali del suo blocco didattico. L'edificio in costruzione trovava spazio nella sezione 'técnica' di due numeri consecutivi della rivista argentina "Nuestra Arquitectura" anche se, per la verità, si trattava del blocco tipo sulla base del quale era (infra)strutturato l'intero insediamento universitario che aveva compreso, almeno inizialmente, un'imponente opera paesaggistica sulla sponda argentina del Río de la Plata. Sorprende che la divulgazione del progetto di un campus universitario in una capitale importante come Buenos Aires, sia stata affidata all'esattezza dei numeri piuttosto che alla maestosità della scala o all'espressività del linguaggio architettonico, riducendo la descrizione del blocco tipico all'efficienza del suo diagramma strutturale e agli strumenti gestionali a supporto della logistica.

Il Capitolo 5 si propone quindi di esaminare come il messaggio di efficienza di un diagramma astratto abbia contribuito a propagandare la neutralità del blocco tipo della UBA come semplice 'caja para contener algo' adattabile a qualsiasi uso, oscurando la radicalità di un progetto educativo che aveva iniziato a prendere forma quasi un decennio prima. Progetto promosso da un'istituzione che intendeva ristrutturarsi come università della ricerca, introducendo istituzionalmente la collaborazione come mezzo per condividere i rischi, risparmiare sui costi e coltivare conoscenza condivisa. Un'articolata discussione sulla nuova Ciudad Universitaria di Buenos Aires ha inizio a metà degli anni '50 ispirata sia dalle politiche nazionali che ridefiniscono il ruolo del ricercatore come lavoratore a tempo pieno che dal continuo progresso tecnologico, con la FCEN (Facultad de Ciencias Exactas y Naturales) che promuove l'acquisto di una delle più avanzate macchine di calcolo come attrezzatura d'avanguardia accessibile a tutti i ricercatori del campus provenienti dalle diverse discipline. Il grande padiglione che contiene l'attrezzatura tecnologica del nuovo campus, sarà l'unica porzione costruita della prima versione del campus, elaborata a seguito di un concorso interno tra i professori della scuola di architettura, ma abbandonata quasi subito per la sua configurazione troppo rigida.

Una sua rielaborazione viene quindi affidata a Horacio Caminos e Eduardo Catalano, due progettisti argentini che non solo ricoprirono un ruolo di primo piano nell'esperienza di Tucumán, ma si distinsero per aver interpretato fin da subito la figura dell'architetto-educatore in perenne movimento tra istituzioni universitarie distribuite nella nuova geografia dispersa dell'immediato dopoguerra: prima in Europa (Architectural Association) e poi negli Stati Uniti (North Carolina State University, Harvard, MIT), dove combinano insegnamento e professione ai diversi ruoli assegnati

dalle varie istituzioni accademiche. La condizione di crescente mobilità, transitorietà e precarietà non solo rende interessante l'evoluzione della condizione de-territorializzata in cui inizia a operare l'architetto-educatore cosmopolita, ma risulta indissolubilmente legata allo stesso incarico per il nuovo campus della Universidad de Buenos Aires, ottenuto dal rettore Risieri Frondizi nel 1959 mentre i due architetti argentini stavano già partecipando alla formazione di progetti educativi avanzati nelle università statunitensi.

L'analisi critica progettuale del progetto rivelerà lo spostamento, sottovalutato, verso un nuovo territorio fino a quel momento totalmente inesplorato, che diventa invece territorio privilegiato per stimolare la componente relazionale del soggetto educativo fabbricato dall'istituzione universitaria di Buenos Aires: il grande interno, ovvero l'atrio a tutta altezza che scava internamente la massa compatta del blocco didattico, fa il suo ingresso nell'architettura educativa come struttura spaziale che permette di coltivare modalità alternative di vita, lavoro e socialità dispiegate senza nette distinzioni nella metropoli moderna. La proposta di informalità basata su relazioni e scambi interdisciplinari interni all'università e contaminazione con la città si adatta a un 'proyecto inmaterial' sostenuto dalla capacità di un soggetto sa navigare lo spazio interno e intercettare le relazioni urbane incorporate all'interno dell'architettura.

L'atrio è il dispositivo architettonico che rende possibili questi effetti grazie alla sua struttura formale, lungi dall'essere solo un espediente emozionale ad uso esclusivo della postmodernità. Semmai, prima della sua sensazionalizzazione che prenderà certamente la scena a partire dalla controversa stagione postmoderna – da cui si possono comunque trarre alcune considerazioni sulla derivazione formale dell'atrio – il capitolo discute una serie di esperimenti radicali condotti nel pieno del discorso moderno che avevano esplorato gli effetti dell'atrio interno nello spazio burocratico del concrete office building di Mies van der Rohe (1921), nello spazio domestico della Haus am Horn di Georg Muehe (1923), fino ad essere recuperato tra gli ingredienti dell'idea di urbanità che accompagnava il progetto di pedagogizzazione della periferia italiana, divenuto il campo di sperimentazione degli allievi di Ernesto Nathan Rogers nei primi anni Settanta e contributo radicale al pensiero rinnovato di progetto urbano moderno.

Ultimo episodio della traiettoria progettuale descritta in questa tesi, il progetto della Universidad di Buenos Aires sembra orientato a un processo di interiorizzazione come ultimo atto della progressiva contaminazione tra università e città. L'obiettivo di un progetto educativo basato sulla componente relazionale, con la struttura burocratica che ricerca la massima integrazione nell'ambiente in cui opera per garantirsi un ruolo nelle trasformazioni del mondo reale, ha prodotto una condizione limite. Rispetto al precedente caso di Mendoza, dove l'università retrocede a favore dell'uso pubblico dell'area antistante e lo spazio educativo è semplicemente delimitato da un reticolo strutturale completamente permeabile che media la continuità tra università e città, quello che vediamo accadere a Buenos Aires è l'incorporazione della città nel suo spazio interno ottenuta grazie all'erosione della consistenza architettonica.

Tuttavia, ben lontano dal concepire un mondo interno spettacolarizzato e artificioso che si pone in alternativa alla città, l'intento progettuale dei due architetti argentini deve essere interpretato come tentativo ultimo nella direzione della sopravvivenza di una coscienza urbana. Infatti, mentre Caminos e Catalano iniziano a lavorare alla loro proposta che prevedeva un sequenza disallineata di blocchi variati nella loro dimensione e disposizione su un suolo articolato quasi a riprodurre un sofisticato effetto-città, la situazione economica e politica mostra i segni di un'instabilità sempre più marcata che richiedono continui aggiustamenti ai due progettisti. Pertanto, la configurazione finale del campus ridotta a una sequenza ordinata di quattro blocchi tipo identici ed equidistanti tra loro, disposti su un suolo astratto, è ancora una volta un progetto urbano: se l'atrio interno diventa la struttura spaziale privilegiata da esplorare nel momento in cui il mondo esterno sembra non essere più sotto il controllo dell'architetto che lavora in condizioni di imprevedibilità assoluta, lungo l'asse che attraversa i quattro blocchi nella direttrice parallela al fiume viene disinnescata l'auto-referenzialità dell'atrio e sopravvive, in qualche modo, una certa condizione di urbanità in complicità con il mondo esterno.

NOTE

1. Pubblicato più tardi in "La Arquitectura de hoy" (no.4, 1947).
2. Gli articoli sono curati da due ingegneri specializzati della Universidad de Buenos Aires, in "Nuestra Arquitectura" (no.439-440, 1967).
3. In particolare, da una conversazione con Carlos Caminos (figlio di Horacio Caminos), si scopre la partecipazione a progetti di sviluppo delle aree degradate promossi dal MIT in associazione con la Graham Foundation, anch'essi riconducibili all'interesse di Horacio Caminos rivolto alla questione educativa attestato nel manoscritto 'Educación o catástrofe: decisiones críticas en el proceso de aprender' (1989).
4. Una delle principali argomentazioni sostenute da Charles Rice nei suoi lavori sullo spazio interno: *The Emergence of the Interior. Architecture, Modernity, Domesticity* (London: Routledge 2007) e *Interior Urbanism. Architecture, John Portman and Downtown America* (London: Bloomsbury, 2016).



FIG. 196
East elevation of UBA typical block.
Photo by the author

5.1 *Architecture as a framework of occupation.*
Pabellón II, III by Horacio Caminos and Eduardo Catalano

This is the first of two technical notes that *Nuestra Arquitectura* dedicates to the new FCEN pavilion (Facultad de Ciencias Exactas y Naturales) which is currently under construction in the Ciudad Universitaria de Buenos Aires. The note published in this issue deals in particular with its structural solution, leaving for the following the explanations on the planning activities method through the PERT system.¹

“Nuestra Arquitectura”, 1967

The project for the new campus of Universidad de Buenos Aires (UBA), whose location only partly followed Le Corbusier’s Plan Director indications (1933-1948), enters the architectural discourse with the publication of its ‘pabellón’, that is the typical block on the basis of which the entire university settlement was structured. The first analysis of the project appears in the section ‘técnica’ of two consecutive issues from the Argentine magazine “Nuestra Arquitectura” (1967), interested in a work that is ‘striking for its greatness, starting from the numbers that describe it: 75,000 square meters of covered area, 30,000 cubic meters of concrete, 3,000 tons of steel. Two monumental cranes, 36 meters high, move on the tracks that run along the building’s perimeter’.² What sounds striking, is rather the fact that the presentation of the new university campus in a capital city like Buenos Aires bases its description on the abstractness of *numbers* referring to the structural layout of the typical block, and on the management and logistical aspects of the construction site.³ Even the most recent analysis have observed that the uniqueness of this project ‘has nothing to do with the other public interventions’ promoted in those years in Latin America, due to the fact that UBA’s typical block ‘should instead be classified within the current of system architecture’.⁴

1 “Nuestra Arquitectura” no.439, 1967, pp.37-44, followed by no.440, 1967, pp.34-35.

2 The construction phases took from 1963 to 1968.

3 Adolfo Rubinstein, the civil engineer who describes project’s managerial aspects, argues that unpredictability went well beyond climatic variations, material supplies or contracts since the highly unstable economic-political context required a superior managerial capacity, that is pervasively ‘abstract’ every minimum task to manage the process. In “Nuestra Arquitectura” no. 440.

4 The systemic architecture classification is from FADU’s professor Mederico Faivre, in “Summa” no. 219,

Therefore, little or nothing has been discussed on the spatial, architectural and urban implications embodied in the profound educational reorientation taking place at the time. On the one hand, the comments offered by the Argentine magazine exalting oversized ambitions fall perfectly in place with the construction of a monumental complex respecting the canonical narrative of *Ciudades Universitarias* conceived from the early 1940s in the great South American capitals. On the other hand, the shift towards an abstract register of the same narrative with technological-managerial notations describing the qualities of reinforced concrete in terms of maximum flexibility and adaptability, rather than solid material expressiveness, suggests an unusual condition the project needed to confront.⁵ In actual fact, political and economic instability was increasingly forcing the university institution to reposition its role. Concurrently, instability within the modern architectural discourse now blatantly in crisis and openly opposed after Otterlo's CIAM meeting (1959), made the task of *internal* review of modern postulates extremely difficult. Against this backdrop, however, a more targeted analysis of the campus for Universidad de Buenos Aires is conducted here by reconsidering the work of the architect-educator involved in the project, the prototypical figure outlined in this study and interpreted in this episode by the two Argentine architects Horacio Caminos (1914-1990) and Eduardo Catalano (1917-2010), whose complex biography dates back to the formation of the IAU (Instituto de Arquitectura y Urbanismo) and the proposal for the new Ciudad Universitaria de Tucumán more than ten years earlier (see Chapter 1).⁶

The 'pabellón' was under construction at the time of the article published in "Nuestra Arquitectura",⁷ the second of four identical blocks to house Facultad de Ciencias Exactas y Naturales (FCEN), Facultad de Filosofía y Letras (FFyL), Facultad de Arquitectura, Diseño y Urbanismo (FADU), Facultad de Ciencias Económicas (FCE). The prototypical block is conceived on the base of a plan scheme: a rectangle of 150x74 meters,

1990.

5 Talking about contradictions in the use of concrete, Adrian Forty refers to Perret showing no particular interest in the 'modernity' of reinforced concrete, instead much more concerned with making concrete acceptable as a material for monumental architecture. See Adrian Forty, *Concrete and Culture: A Material History*, London: Reaktion Books, 2012.

6 The architect-educator has been outlined in the thesis as a paradigmatic figure operating from peripheral locations of the modern architectural discourse. In the course of the selected episodes, this figure evolves interpreting an increasingly de-territorialized condition.

7 Compared to the other selected cases, the project for the new Ciudad Universitaria de Buenos Aires did not circulate much beyond the local debate.

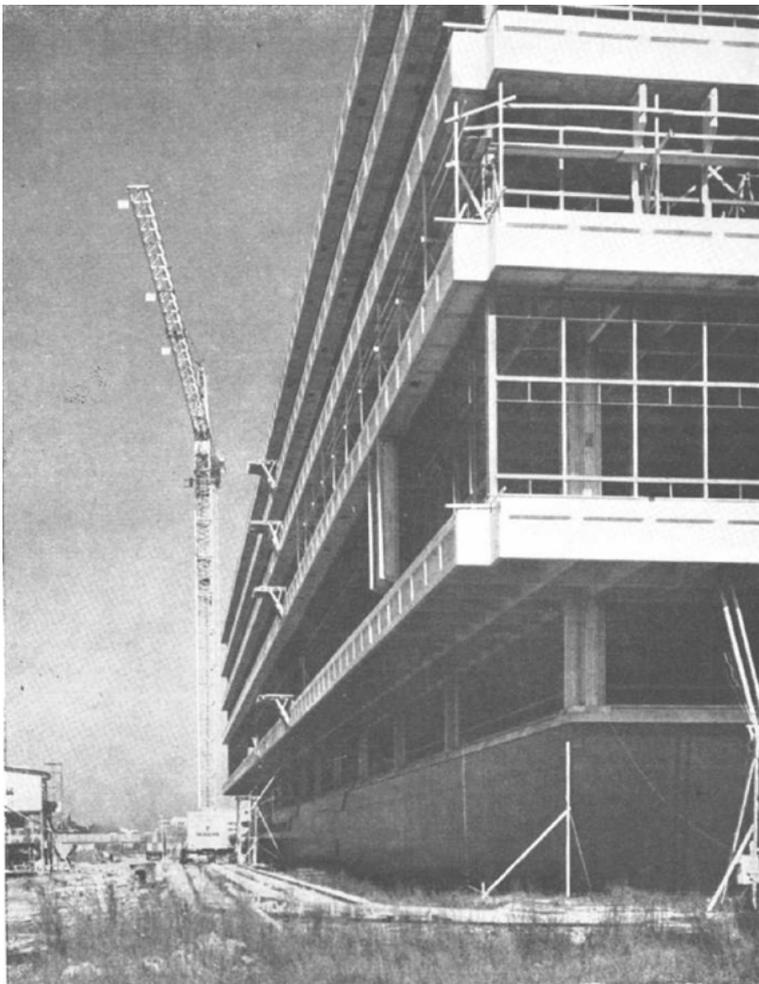


FIG. 197
Construction phase of UBA typical block.
Image from "Nuestra Arquitectura" (1967)

FIG. 198
In the commentaries of the time the typical block is often reduced to an abstract diagram of structural and managerial components.
Image from "Nuestra Arquitectura" (1967)

na técnica

La utilización del método de PERT en el cálculo de la estructura del edificio para ciencias exactas en la ciudad universitaria

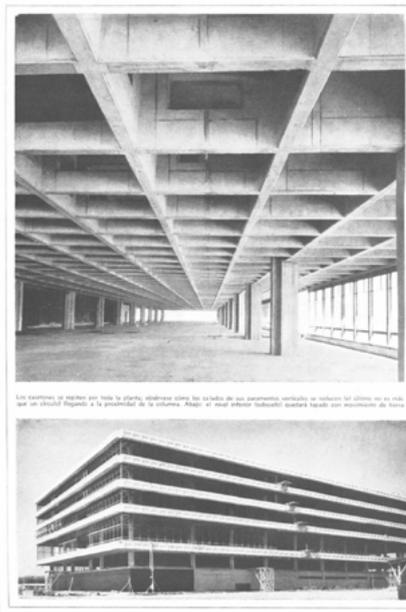
En las historias de la Ciudad Universitaria, especialmente en el barrio de Núñez, se ha comentado la existencia de un bloque típico que se ha convertido en un símbolo de la Facultad de Ciencias Exactas y Naturales de la Universidad Nacional de Buenos Aires. La obra es conocida por sus nombres: "Edificio de Ciencias Exactas" o "Edificio de Física". Este bloque es un ejemplo de la arquitectura racionalista y funcionalista que se desarrolló en la ciudad universitaria.

La estructura está formada por una planta central (IX) y dos alas laterales (I y II). La planta central (IX) es un espacio abierto que sirve como núcleo de circulación y conexión entre las alas. Las alas laterales (I y II) están diseñadas para albergar laboratorios y aulas, con una estructura de columnas y vigas que permite una gran flexibilidad en el uso del espacio.

El método de PERT (Program Evaluation and Review Technique) se utilizó para calcular el tiempo de construcción de cada una de las actividades del proyecto. Este método permite identificar las actividades críticas y determinar el tiempo mínimo necesario para completar el proyecto.

IX	IV	VI
IIa	IIb	IX
III	IV	XIII

Los resultados de este análisis permitieron optimizar el cronograma de construcción y garantizar que el edificio se completara dentro del tiempo y presupuesto establecidos.



divided into nine *zones* by an orthogonal grid – materialized in the expansion joints of the concrete structure – with 4 peripheral sectors at the vertices of the rectangle and 4 barycentric sectors in a more immediate relation with the central sector, with respect to which the whole scheme seems to rotate. Two identical and symmetrical cores are positioned on the two barycentric sectors along the major axis, containing the vertical circulation system (main staircase, service staircase, elevators), services and air conditioning system. The typical plan is replicated in height within the block: beside the ground floor (classrooms, administrative offices, canteen, cafeteria), it has in fact other 6 levels including a basement (auditorium, laboratories),⁸ a terrace, and intermediate floors with classrooms and laboratories (mixed with library, archive and workshops). The floors' height is 3,50 meters, with the exception of the basement and the first floor, which are about 6,00 meters in order to respectively place the auditorium and mezzanines.

The whole structure is reinforced concrete, with the exception of the mezzanines supported by metal joists resting on the greek-cross concrete columns and hung by means of tensors. The columns are positioned on the structural grid of 16x12 meters, distance obtained from the repetition of a concrete module that proportions all the horizontal and vertical building' surfaces, this in turn casted in metal formworks whose price, not particularly advantageous and highly variable in the climate of uncertainty at the time, represented the element of greatest risk to the success of the entire project. Therefore, the projection of risk has been compensated by the most repetitious construction system based on economics and convenience requirements: not only an extremely reduced number of formworks – equal to 1/3 of the floor area – was placed a disposal for the completion of the single block, but the same modular elements would necessarily have been recycled for all four identical pavilions and thus, for the completion of the entire complex of Ciudad Universitaria de Buenos Aires. The only variation in the design of the 2x2x1,5 meters high basic module, is in the radius of the holes applied to the faces of each module to make any type of canalisation possible with variations depending on the structural scheme.

This provides a 'grado máximo de flexibilidad', while the two cores that symmetrically distribute vertical circulation and services constitute the 'equipamiento mínimo y genérico para habilitar cualquier tipo de edificación vertical'. Among the other *economies* offered by the use of concrete, the "na" article mentions the great advantage in terms of the suppression of

8 Actually, this corresponds to the ground level covered by landfill that artificially defined campus greenery.

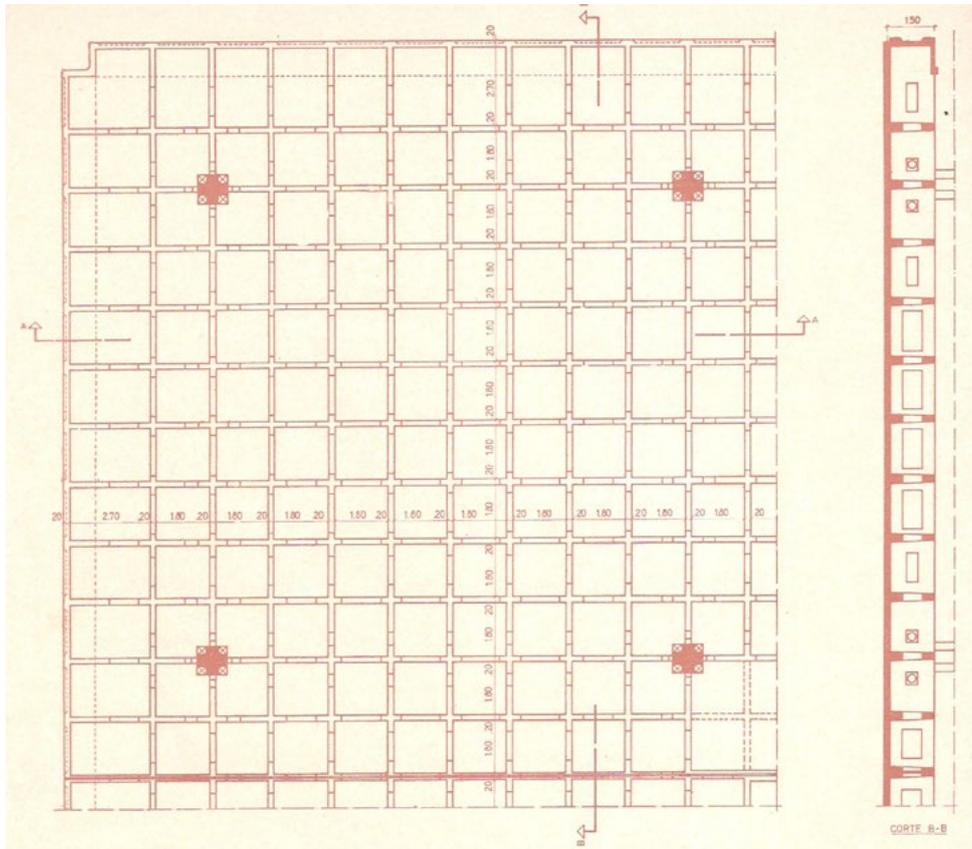
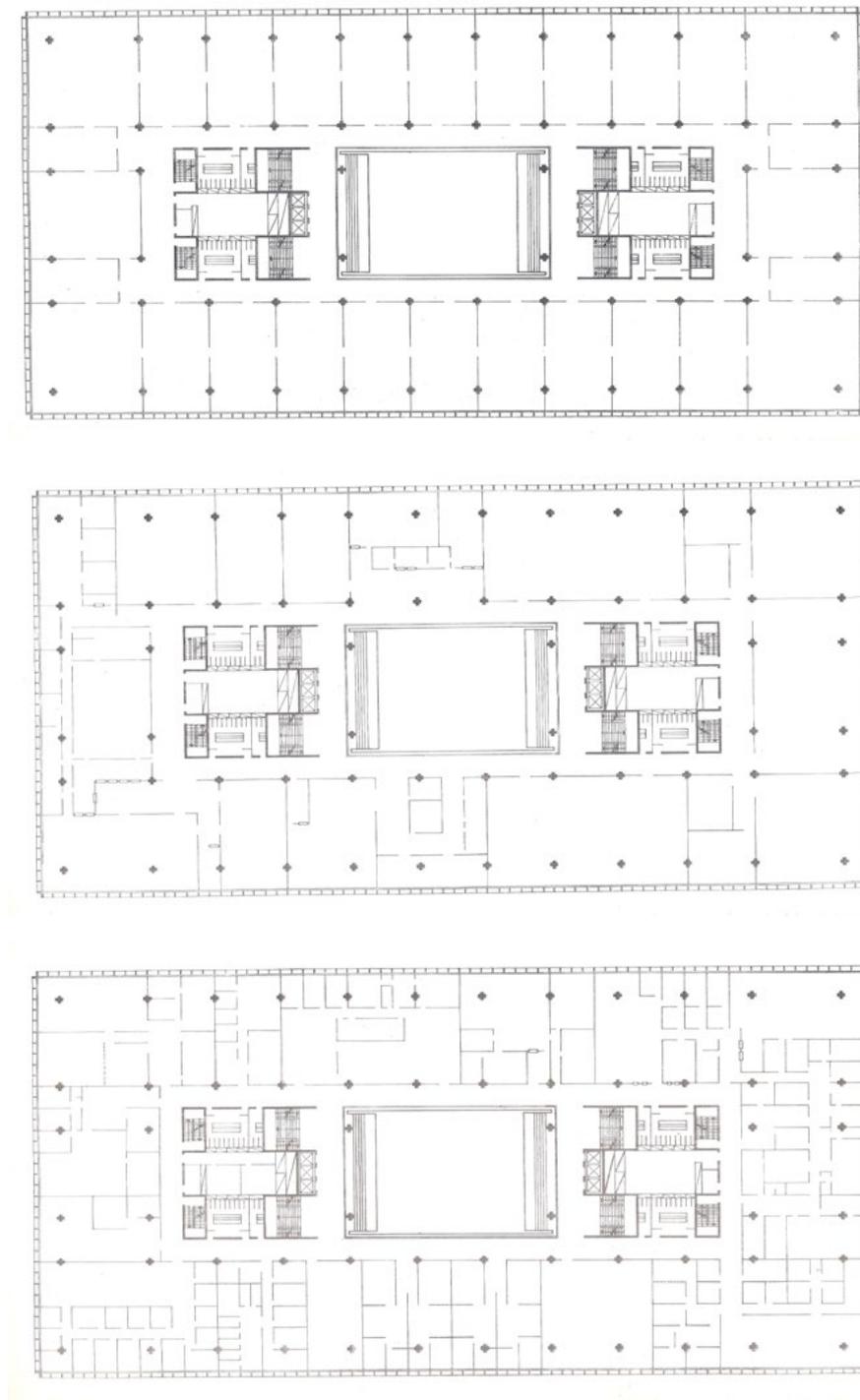


FIG. 199
Repetitiveness of the module that characterizes the horizontal structures of the typical block. The only element of variation corresponds to the hole sizes for installations and systems.
 Image from "Costruccion" (1969)

FIG. 200

The typical plan variations correspond to the space occupation strategies obtained with light and mobile partitions that have been used since the first transitional occupation while the block was still under construction.



plasterworks: ‘una mano de pintura transparente permit su fácil limpieza’.

Ultimately, what was observed in Buenos Aires from to the review propagated by the magazine’s editors is an architectural work reduced to its structural-managerial diagram, whose abstractness materialized in large spans and free spaces that can be easily reorganized according to the most diverse needs. This shows, mostly, the capacity for adaptation of this project, to a new university building as well as to production building or a more generic office building: a simple ‘caja para contener algo’ read the title, that is a ‘framework for occupation’ which seems to have been converted, almost occasionally, in the prototypical educational space for the nascent Ciudad Universitaria de Buenos Aires. An ‘occupation’ that in fact, in a few years, would have proved anything but improbable. When it was decided in 1971 that the FADU’s educational activities (Facultad de Arquitectura, Diseño y Urbanismo) could no longer be relegated to the 2nd floor of Pabellón II (dedicated to FCEN) – where the faculty was moved due to the inadequacy of the spaces available scattered around the city center – Pabellón III to which they were intended was still under construction. Its internal organization had been carefully planned to associate each ‘activity’ with a ‘specific’ space.

However, in that provisional situation with no preliminary project approving the internal ‘zoning’ of the block still under construction, it was decided to plan a series of interim interventions that would have allowed the rapid and immediate enabling of some block’s portions to initiate educational functions. FADU registers report the story in terms of a real capitalization of space and resources:

“To understand the impact of this ‘transitional occupation’, it should be considered that, as for teaching activities in particular, twice the surface available up to that moment in Pabellón II has been obtained. In addition, technical equipment would have been more appropriate: illumination system performed at much higher levels. In detail, it can be said that there will be 28 laboratories with 870 tables, which could be increased by 100 units if needed, covered in opaque melamine laminate and equipped with adjustable feet and filters to reduce noise. Each table accommodates 4 students, allowing a capacity of 3480 students simultaneously working in the laboratories, up to a maximum number of 3880. In general, each laboratory room has 4 whiteboards. The wall’s portions that are not occupied by blackboards or doors will be covered by assembled wood

panels to display students' works. The portion of the building that distributes classrooms for 'cursos teóricos' includes: 3 rooms with 632 seats, 2 with 370, 2 with 263, 1 with 241, 2 with 124 and 2 with 77, for a total of 3805 seats. The seats are made of ergonomically molded plastic and metal frame. All classrooms have a teacher's podium, opaque green blackboard, projection screens. Larger classrooms will have electronic equipment with 162 speakers. The library occupies an area 2-3 times larger than what was available in Pabellón II: the number of tables and chairs in the reading rooms will increase in proportion. The now expanded teacher room was completed with three rooms for academic meetings, dressing room and cafeteria. For the first reception of students and their administrative management, a department office will be located on the 3rd floor, with ample waiting space and cafeteria-bookshop as a complement. With this arrangement, the students' educational needs can be fully satisfied on 2nd and 3rd floor [...]"⁹

In the same registers, they clarify that the transitional nature of the occupation process should not favour any sense of insecurity and precariousness, in terms of low quality of the interventions: both materials and construction methods must be the same used for Pabellón II, already completed. But especially, all the partitions and systems installed in this phase must adhere to the highest degree of adaptability to the internal *zonification* and usages initially envisaged for the final completion of Pabellón III.

Apparently, this experience has contributed to increasing the hegemony of abstractness. While the process of informal appropriation of space took place (1) without constituting an obstacle to the completion of the building itself, (2) providing for adaptation to the pre-established *internal zoning*, (3) complying with the quality requirements of materials and technological systems, what we can see at work in Buenos Aires is optimization for maximum productivity in education, made possible within a space reduced to *setting* activated by an unexpected margin of freedom. This conception for which the efficiency of numbers is the only way to guarantee a certain degree of austerity needed to cope with external factors, seems to make its entrance as a counterpart to the iconic university complexes that had conveyed architectural modernism in the region. However, this assumptions also propagated through local specialized

⁹ Access to the three 'enabled' floors was guaranteed by a temporary circulation system that makes the first floor and mezzanine accessible to ensure the completion of the works. Translation by the author from 'Ciudad Universitaria', FADU registers (Biblioteca Sociedad Central de Arquitectos de Buenos Aires).

magazines, overshadowed those spatial implications instigated by a radical educational project in progress for some time, where a new alliance between university institution and the immediate context in which it operates would take the interior space as the privileged unexplored territory to reproduce a divergent urban condition.¹⁰

10 Following the analysis presented by Lyotard in *The Postmodern Condition: A Report on Knowledge*, Douglas Spencer explores how, within newly emerging and essentially cybernetic techniques of governmentality, the antagonisms that emerge from May 68 become the fuel for the refinement of its systems. Opposition to the system is answered not by repression but with its sublimation, through its incorporation within a system made more operationally effective by its inclusion. In Douglas Spencer, *The Architecture of Neoliberalism*, London: Bloomsbury, 2016, p.9. However, rather than placing this episode in the plots of postmodernism, the ambition here is to keep this anchored to the trajectory traced in this research that describes an educational project that originates in Tucuman and evolves without ever *becoming* postmodern, but remaining within the context of a critique of modernity from within its still operating institutional organizations.



FIG. 201

*Image from the front cover of "Revista de Arquitectura" (September 1938)
containing the early discussion on the need of a new university campus in Buenos Aires.*

5.2 *The barest form in which university can exist.*
From Plan Director to Universidad de Buenos Aires 'proyecto inmaterial'

The synthesis of the essential. That is to say, build the essential as a permanent presence and let what's variable or transitory take place without altering the essence.¹¹

Eduardo Catalano, 1955

The two consecutive issues of “Nuestra Arquitectura” documenting the construction phases of university’s pavilions date back to 1967. In actual fact, the commission assignment dates back to November 1962, and the idea of a new campus is even more distant. For a long time, Universidad de Buenos Aires has remained faithful to its urban layout despite the high degree of geographical dispersion in the city fabric. The first ideas for the construction of a university city date back to the late 1930s, inspired by Le Corbusier’s early proposals later presented in his Plan Director (1948), which hypothetically placed a university complex in the Northern coastal area – now occupied by the Jorge Newbery airport.¹² The idea of an autonomous university nucleus that would respond to modern planning and training requirements belonged to a broader thought that supported a ‘less aesthetic and more scientific’ urbanism favouring the rational organization of the city in different areas.¹³

With the creation of the Servicio Técnico del Plan de Urbanización under the direction of Carlos María Della Paolera in 1932, these ideas led to the municipal management related to the Plan Regulador, which aimed to scientifically resolve issues emerging from the polycentric configuration of Buenos Aires capital: circulation, connection with peripheral centers, housing, recreational spaces, and location of industrial areas through analysis supported

11 Eduardo Catalano, *The Constant : Dialogues on Architecture in Black and White*, Cambridge Mass.: Cambridge Architectural Press, 2000.

12 See “L’Architecture d’Aujourd’Hui”, no. 13/14 (1947).

13 Early vicissitudes related to the local debate around the location for a new Ciudad Universitaria de Buenos Aires have been discussed with Professor Roberto Fernández on the occasion of the doctoral seminars at the Pontificia Universidad Católica de Santiago attended by the author in Summer semester 2018, and reported with much more details in Mercedes González Bracco and Lucía Romero, ‘La creación de Ciudad Universitaria de Buenos Aires (1958-1966): Proyección de una Ecología común para la transformación de la vida académica en la facultad de Ciencias Exactas y Naturales’, in “Redes”, no. 39, 2014, pp. 115-137.

by diagnostic and statistical studies. In this context, an internal discussion within the institution arose over whether to promote a ‘espíritu universitario’ based on virtuous exchanges by grouping different faculties in one single place duly designed for this purpose:

“The University aims to provide not only training (instrucción) but above all education (educación) that allows the integral and harmonious development of the intellectual, aesthetic, ethical and physical abilities of the individual. This can only be fully achieved in the environment of healthy morality, sharing of ideals and advanced culture that develops in university cities [...] To obtain this a simple continuity of buildings is not enough, but instead what would be needed is ‘el comercio intelectual frecuente y la convivencia con hombres selectos y de conocimientos variados’ [...] where a high social environment makes ‘capacidades creadoras’ flourish. Cooperation and exchange (cooperación y el intercambio) are facilitated in university cities. Students of a faculty can take other courses, which is important for strengthening general knowledge. The university city has enormous advantages in terms of organization and institutional centralization, which influences the didactic, economic, administrative and cultural aspects. From the didactic point of view, excellent teaching (enseñanza) is obtained in good centralized institutions, avoiding waste”.¹⁴

These words by Bernardo Houssay (1887-1971) – future Nobel Prize for Medicine in 1947 – instigated various professionals belonging to another institutional body, Sociedad Central de Arquitectos (SCA), to combine this educational requirements with modern principles on urban planning. Thus, the need for a ‘plan científico integral’ to serve the idea of a university campus was disseminated through the pages of the periodical edited by SCA, “Revista de Arquitectura” September issue 1938.¹⁵ After a rather extensive analysis on historic precedents and contemporary examples from Europe and United States which pursued the most advanced ideal of ‘academic village’ towards the propagation of a productive atmosphere, the same editors asked Poder Ejecutivo de la Nación (PEN) for the interruption of all the work

¹⁴ Bernardo Houssay (1940), in Bracco and Romero (2014).

¹⁵ The aim was to create a favourable climate for the achievement of intellectual integrity, moral well-being, harmony in living, cordiality in relationships. See “Revista de Arquitectura”, September 1938, p. 397.

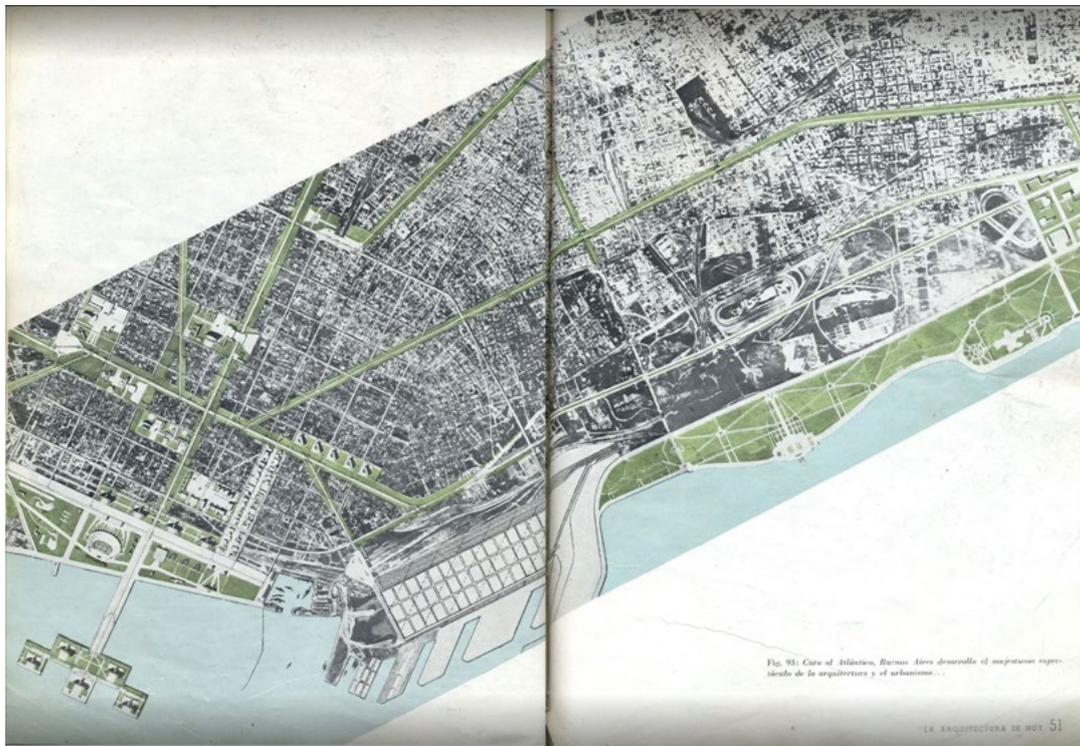


FIG. 202
 Le Corbusier Plan Director for Buenos Aires (above) elaborated in the mid-late 1930s and finally published in special issue of "La Arquitectura de hoy" (April 1947) together with early site location (below) envisaged by Sociedad Central de Arquitectos.

in progress concerning the Universidad de Buenos Aires, and inaugurate a true institutional process to decide the most appropriate location: a special commission of architects, together with faculty representatives, would develop a program to be used as architectural competition brief. However, the initiative was suspended for the next twenty years and no discussion on the subject appeared again in the magazine edited by the SCA, unless the firm dissent expressed in issue October 1939 against the repeated choice to proceed for single interventions as in the case of the faculties of Law and Medicine.¹⁶ We must therefore wait until the mid-1950s to see the debate on the university city reopened, via the appointment of Risieri Frondizi as rector of UBA (1957) and of Rolando García as dean of Facultad de Ciencias Exactas y Naturales (1958) – with this last becoming at the age of 38 deputy president of CONICET, the newly formed and most important public body for the promotion of scientific research.¹⁷

Formed between Buenos Aires and Harvard in the early 1930s, Frondizi established himself as a philosopher that challenged the idea of reality as a process, or the organic unity in constant motion, paraphrasing his mentor Alfred North Whitehead acutely aware of the potential of *abstractions* intended as ingredients of processes.¹⁸ But it is in the field of education that Frondizi invested his thoughts: he was co-founder of the faculty of Philosophy and Letters at Universidad Nacional de Tucumán (1937-1946), with a one-year break to pursue postgraduate studies at the University of Michigan (1943-1944) followed by a doctorate at Universidad Nacional Autónoma de México (1950) until, back in South America, he stayed in Caracas to initiate the faculty of Philosophy and Letters there before his appointment as rector of the Universidad de Buenos Aires thanks to a new government and the self-proclaimed Revolución Libertadora (1957).¹⁹ Both Frondizi and García, heirs of Reforma Universitaria that proclaimed ‘autonomía, cogobierno y extensión’

16 In chronological terms, within the specific publications on architecture, from the late 1930s articles edited by “Revista de Arquitectura”, interest in the project declined until ‘Un proyecto para la Universidad de Buenos Aires’, “Nuestra Arquitectura” no. 356, 1959.

17 Il Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET) was founded in Argentina under the nation’s Ministry of Science, Technology and Innovation in 1958 after the generalized need to have an academic organism to foster scientific and technological research in the country.

18 Thanks to a university scholarship, Frondizi studied at Harvard University under a group of distinguished philosophers, in particular when Alfred North Whitehead was a professor there from 1924 through 1937 organizing the famous Cambridge Sunday afternoon open houses which ran until Whitehead’s death in 1947. One of the major philosophical texts of the 20th century, Whitehead’s *Process and Reality: An Essay in Cosmology* (1929), propounds a system of speculative philosophy, known as process philosophy, in which the various elements of reality into a consistent relation to each other including *abstractions* as eternal objects, like numbers, that are potential ingredients of processes.

19 Risieri’s brother, Arturo Frondizi, became President of Argentina serving from 1958 to 1962.

in 1918, were convinced that this last principle aimed to integrate university institution with the social environment in which it operates ran the risk of being misunderstood when education was not associated with a professional role but that of a facilitator dissolved in the everyday social contingencies.

Thus, against the rhetoric of a university institution dispersed in the city districts that ‘conspired against the professionalization of scientific practice’,²⁰ the imaginary of a ‘nueva ciudad’ with a favourable climate for cultural and intellectual exchange internally promoted by the institution is again on the table. On these premises, the crucial change underlying the new educational project of Universidad de Buenos Aires precisely concerns the figure of the educator, that is the necessary repositioning within the bureaucratic apparatus of the university institution: scientific research and teaching become integral part of the same activity conducted, for the first time, by a full-time worker. It will be the government of Arturo Frondizi – Risieri’s brother that became President of Argentina serving from 1958 to 1962 – to introduce the figure of ‘investigador’ and ‘profesional de apoyo’ to be recruited by means of open competitions, and to provide funding for the shared use of advanced research equipment like in the case of the first computer machine ‘Clementina’. However, what should not go unnoticed are the spatial implications derived from these strategic choices that mobilized the new educational project.

On the one hand, the introduction of full-time has literally exploded the theme of space in the most practical sense, as the integration between teaching and scientific research to be performed in the same place and the provision of expensive and cumbersome technology equipment to be shared among all the faculties basically needed a greater amount of space.²¹ On the other hand, there was a pedagogical reflection in progress, which arose from the professionalization of educator identified, until then, with his social role. How could this social component survive, under the impulse of a new educational project focused on professionalized research? How the public image of the new educator could be reshaped, after being intentionally removed from the contingencies of everyday

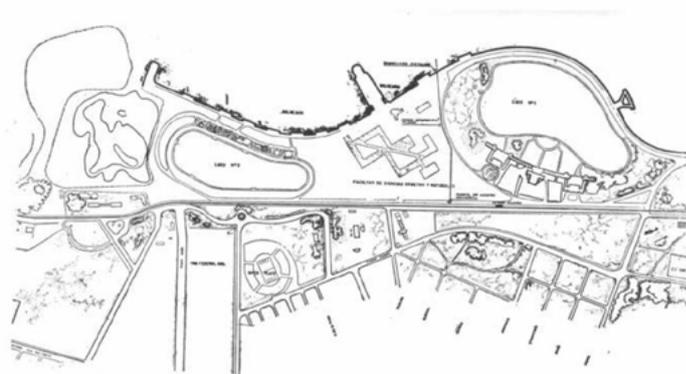
20 The urban dispersion of educational functions seemed to have contributed to strengthening a common imaginary in which the ‘social’ function of the university researcher was not perceived as autonomous and differentiated from other ‘social’ roles.

21 To give the sense of the regime of uncertainty and consequent austerity, worth reporting the anecdote provided by FCEN’ director García explaining the moment, with Pabellon I finished but still without furnishings. The government had prohibited the purchase of similar supplies in any public institution by decree, thus García changed the names in the financial statements: instead of asking for money to buy ‘shelves’ and ‘typewriters’, he asked for money to buy ‘antigravity supports for scientific material’ and ‘phoneme transcribers’. The trick worked: the dossier was approved, the materials arrived and the FCEN began its activities. In in Bracco and Romero (2014).

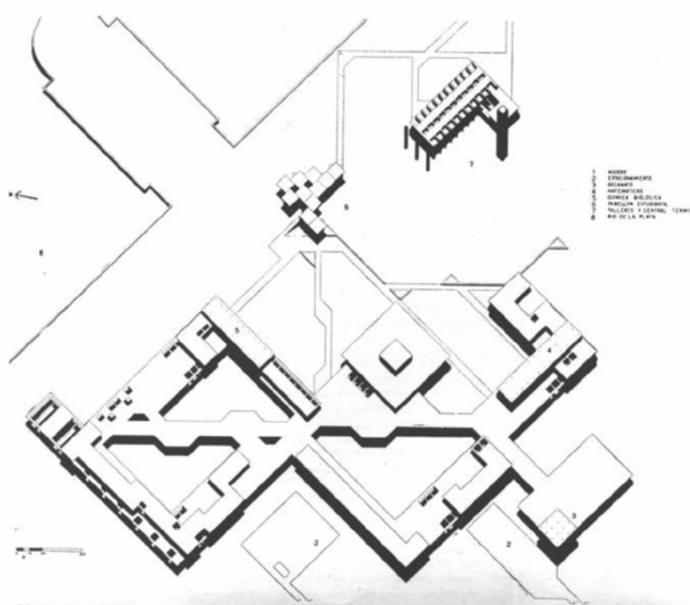


FIG. 203
“Clementina” was the calculation machine that occupied Pabellon I as the first university facility to improve collaboration and multidisciplinary within UBA academic environment.

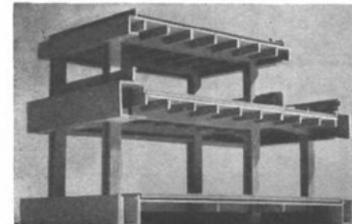
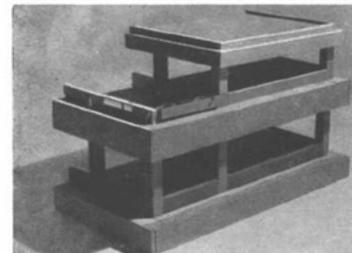
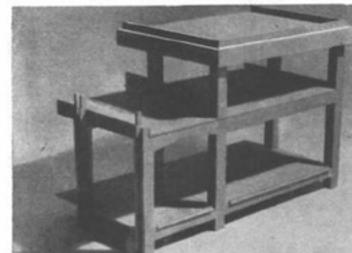
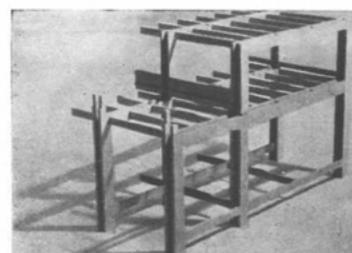
FIG. 204
The first design version of Buenos Aires university campus resulted from an internal competition in 1957. Images from “Nuestra Arquitectura” (July 1959)



Ubicación en el terreno



Planta general



life to be instead associated with a new specific workspace? This is the context of uncertainty within which this episode should be reconsidered:

“Despite difficulties and obstacles, Universidad de Buenos Aires is going to reorganize itself according to a new vision about its destiny and new programs which meet its objectives [...] I completely disagree with the choice of the location for the Ciudad Universitaria: Costanera Norte, the extreme point of the city. Taking into account its remoteness and isolation, its lack of communication, its eccentricity – ‘geométrico y social’ – this choice should be considered unpopular and inadequate for its purpose.”²²

Despite this dissent, the institutional body of students and professors supported the proposal and in November 1957 the Facultad de Ciencias Exactas y Naturales (FCEN) governed at the time by Rolando García established the Comisión de Construcción y Habilitación with the idea of accessing the funds provided by Legislative Decree 14.033 for the construction of new university buildings, while the Faculty of Architecture (FADU) designate the Comisión de Programa in charge of a feasibility study that consisted of two phases that run simultaneously: (1) internal design competition between FADU professors; (2) urban planning study to select campus’ final location. This last came from a collective of architects composed by José Alberto Lepera, Juan Ballester Peña, Alfredo Ibarlucía and Valerio Peluffo, whose recommendation of an area with unlimited possibilities of expansion and connection in Barrio Nuñez on the coast of Río de la Plata – 47 hectares of land reclaimed by the river and crossed by the railway – appeared just in line with the strategies adopted by Oficio del Plan Regulador de la Ciudad de Buenos Aires. On the other hand, the winners of the internal design competition – FADU’s young professors Francisco Rossi, Raúl Rossi, Elio Vivaldi, Enrique Massarotti and Florencio Alvo – were appointed to develop their proposal accompanied by FCEN’s specialized advisers that set the groundwork for the ambitious amalgamation program of eight departments: mathematics, physics, meteorology, geological sciences, chemistry (organic, inorganic, biological), botany, biology and zoology.²³

However, the basic requirement of proximity between teaching and research activities was translated into a rather obvious and disappointing

22 Wladimiro Acosta (RUBA, 1962: 349-354). In Bracco and Romero (2014).

23 The rector obtained a decree from the Poder Ejecutivo Nacional in 1958 to purchase the land, supplemented by a second decree that assigned a special budget for construction with the agreement that the project would have begun with the new facilities for the FCEN.

architectural solution: a sequence of cloister-like structures with each branch associated with a department simply layering a simply a *teaching* ground floor and a *research* high floor. Despite the proposal was rejected due to its limited potential, the same team was asked to redevelop the executive project for the sector including the departments of Physics, Mathematics and Meteorology, but above all, the newly founded Institute of Computing (1960) directed by Manuel Sadosky, the then FCEN's vice-president who had obtained the funding for purchasing the computer machine 'Clementina'. Ultimately, the complicity between FCEN's advisors, the founders of the Institute of Computing and the urgent situation that required a generous space to house the most exclusive and bulky equipment of the moment, gave birth to the first educational experiment responsive to the premises of the new Ciudad Universitaria de Buenos Aires.

That is a space designed for maximum optimization and sufficiently neutral to allow the shared use of technological equipment around which scientific research was planned, based on the exchange of ideas between different disciplines and their cooperation to solve the applied problems. Consequently, while the initial design proposal takes the form of 'Pabellón I' which inaugurated the concept of interdisciplinarity and collaboration promoted from within the university institution through the figure of a professional (full-time) educator, such an ambitious educational project reduced to the hasty, economic and pragmatic construction of a large container appeared more suitable for preserving the advanced technological equipment rather than favouring virtuous behaviours. Thus, rector Frondizi relaunched the idea of a proper Ciudad Universitaria and commissioned the project to a group of Argentine architects including Eduardo Catalano, Horacio Caminos, Eduardo Sacriste and Carlos Picarel – the last two would abandon the project pretty fast – together with the engineer Federico Camba, not before having thought of the option of the invited competition aimed at influential personalities of post-war modern architectural discourse.²⁴

The first proposal provided for an important modification of the coastline, which made it possible to obtain a total area of about 83 hectares, with the main connection with the city center running parallel to Río de la Plata intersecting an artificial branch of the river ending with a square-balneario placed in the center of the urban composition. More than 30 buildings constituted the campus plan, including primary and secondary

24 Catalano and Caminos were close to Carlos Coire, FADU dean between 1958 and 1962, who likely influenced the designation. However, the competition process appeared confused so that 'three foreign partners' abandoned the idea of participating. The invited architects, instead, decided to continue and "... ver que pasaba", but with the firm intention of detaching from the initial idea and of carrying out a preliminary project from the United States. In Carlos Coire, *Eduardo Sacriste. El hombre y su obra*, Buenos Aires: Universidad de Morón, 2004, pp. 95-99.

schools, libraries, collective housing, squares, experimental fields, a stadium, a swimming pool and faculty pavilions. What emerges from the proposal developed by Horacio Caminos and Eduardo Catalano, among the protagonists in Tucumán experience and IAU's foundation ten years earlier (see Chapter 1), is the search for a city-effect given by the variegated composition of regular different-size volumes, repeated and slipped along the axis of an orthogonal grid. This method is based on the careful consideration of empty spaces regulated by the same principle of repetition and variation: squares, excavations, platforms and terraced surfaces articulate the common ground participating in the overall composition as a concatenation of open-air rooms, not subordinate but in a relationship of equity with respect to the built volumes.

The sophisticated move of governing the Ciudad Universitaria monumental scale through a multitude of components held together in surface tension, seems to overcome the imaginary of great institution materialized in iconic and gigantic university complexes of Latin American capitals conceived on the basis of an expressive gestural approach. On the contrary, what we see at work in Buenos Aires is a rather pragmatic approach. In fact, the campus plan eccentric composition is mainly due to the ambitious infrastructural intervention, that is the positioning of the dam without which it would not be possible to imagine the Ciudad Universitaria in that strip of land: the three pavilions located north tamper with the symmetry of the entire settlement by displaying the adaptive capacity of the campus plan diagram with respect to its application in a real context.

The executive phase was approved at the end of 1962, but the increasingly precarious political and economic situation – that would culminate in the infamous *noche de los bastones largos* in July 1966) – considerably accentuates the conditions of unpredictability, inducing the two Argentine architects in charge of the project to take an even more pragmatic position: the diagram evolves in a second phase by drastically reducing its articulation in favour of a greater degree of abstraction turning the 'proyecto maestro' into what has been later called 'proyecto inmaterial'.²⁵ First, a line is drawn along the river bank indicating a much more moderate filling reducing the total area to 56 hectares. Second, the city effect from the first solution is reduced to the barest form in which university

25 This connotation is attributed by Marcelo Faiden, 'Ciudad universitaria de Buenos Aires, el proyecto inmaterial de Catalano y Caminos', in "Summa +", no. 135, 2014: "Su dualidad les otorga una curiosa estabilidad, capaz de resistirlo casi todo. El radical aprovechamiento que hacemos de ellos nos debería obligar a borrar toda huella de nostalgia o lamento al revisar promesas pendientes del proyecto de Ciudad Universitaria. Precisamente porque los materiales de construcción de estas arquitectura son el tiempo presente y el cambio".

FIG. 206
 Transition from the first design
 phase to the second one with Horacio
 Caminos and Eduardo Catalano in
 charge of the project.
 Image from "Costrucciones" (1969)

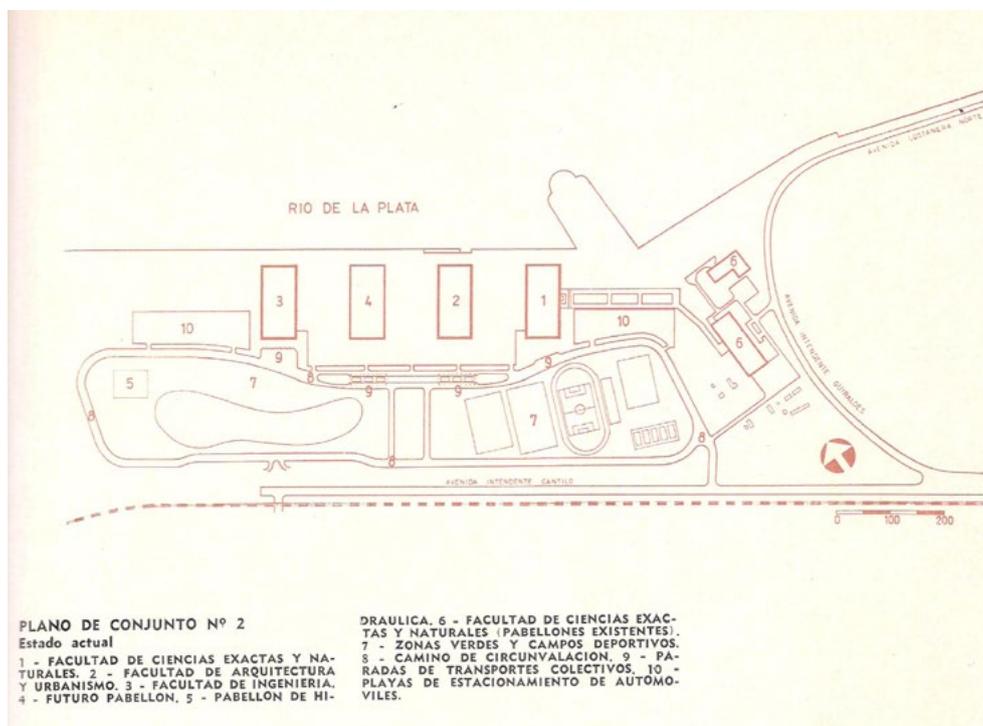
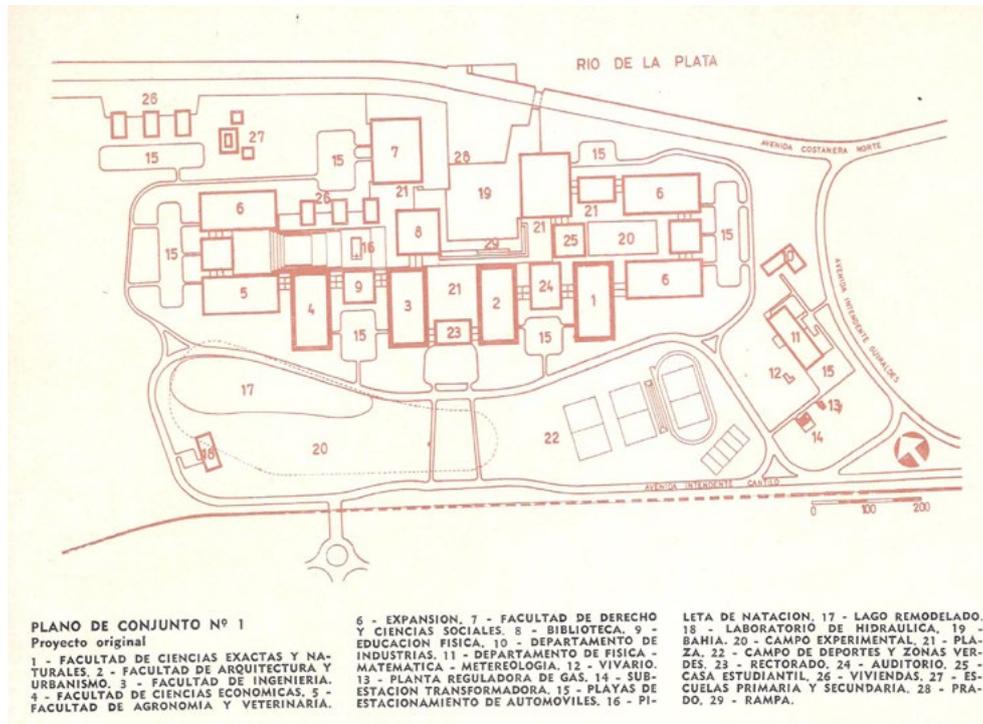




FIG. 207
Pabellon II on the background and
Pabellon III under construction
(1969).
Image from Atlas/Archive

can exist: the ordered and repetitive sequence of four large identical blocks, equidistantly disposed on an abstract surface. Indeed, a single block is about to become the prototypical educational space of the Universidad de Buenos Aires, moving the ambitions of the institution's revolutionary educational project to another unexplored territory.



FIG. 208
*MoMA exhibition "Ludwig Mies van der Rohe: Five Projects",
curated by Ludwig Glaeser (Nov 8, 1974–Feb 23, 1975)*

5.3 *The atrium-effect.* *Bureaucratization, domestication, and sensationalization*

The atrium struggling to maintain itself as a signature in the world of architecture's media over-exposure [...] It can easily be critiqued for the directness of its mythologizing of capital.²⁶

Charles Rice, 2016

Since the end of the 1960s, architecture has incorporated large interior spaces designated with the term 'atrium' to renegotiate its urban role even if this was anything but an exclusive of postmodernity. In 1975, a collection of visionary projects conceived by Mies van der Rohe in the early 1920s was exhibited in New York, in the Northeast Gallery of the Museum of Modern Art. The exhibition entitled 'Mies van der Rohe: Five Projects' is staged by Ludwig Glaeser, who curates the Mies van der Rohe Archive while working for MoMA between 1965 to 1977. The press release announcing the exhibition celebrates 'seven monumental drawings made for five visionary projects by Ludwig Mies van der Rohe: Friedrichstrasse Office Building, 1921; Glass Skyscraper, Concrete Office Building and Brick Country House, all from 1922; and Concrete Country House of 1923 [...] Mies van der Rohe, an ardent participant in the avant-garde movements, exhibited the designs and models for the five projects in 1923 together with the Novembergruppe, one of the main artists' associations of which he was president at the epoch. Since the drawings were made expressly for exhibition purposes, they are unusually large and take on the character of a manifesto'.²⁷ Although the large format of the drawings embellished by the charcoal stroke evidently represented the exhibition's clou, an interesting context note can be found in the same few lines:

"The visionary projects exerted the same influence on the development of modern architecture as the works created, and this was particularly true in the years following the First World War,

²⁶ Charles Rice, *Interior Urbanism. Architecture, John Portman and Downtown America*, London: Bloomsbury, 2016.

²⁷ From press release of MoMA exhibition "Ludwig Mies van der Rohe: Five Projects", curated by Ludwig Glaeser (Nov 8, 1974–Feb 23, 1975).

when economic uncertainty further reduced the chances of meeting enlightened clients”²⁸

These projects actually marked the period in which Mies, still in Europe, ventured into the production of projects developed without a real commission, in an attempt of networking spent in the context of absolute precariousness with Germany in the throes of inflation, strikes in the Ruhr industrial area and widespread public unrest.²⁹ In that context, the magazine “DAZ” (Deutsche Allgemeine Zeitung), for which Mies had promised to send an accompanying text for his visionary Burohaus image, was devoting a lot of space to the benefits of frugality and more ingenious strategies to obtain ‘more with less’. In actual fact, the building had already appeared in the press,³⁰ associated with the few but effective Mies’ words in the first issue of the new avant-garde magazine “G” (Material zur elementaren Gestaltung) edited by Hans Richter, Werner Graeff and El Lissitzky (May, 1923):

“We reject all aesthetic speculation, all doctrine, all formalism. Architecture is the will of an epoch translated into space: lively, changing, new. Not yesterday, not tomorrow, only today can be given form. Only this kind of building will be creative. Create form out of the essence of the task using the methods of our time. This is our work”³¹

The highly repetitive and brutally unadorned office building was presented as an innovative spatial structure, functional and perfectly consistent with the austerity climate of the time: ‘a house of work, of organisation, of clarity, of economy’ whose internal spatiality derived from the most efficient organizational model under the imperative of ‘maximum effect with minimal means’. This message of aversion to formalism proclaimed by Mies followed the editorial line of the emerging magazine “G”, according to which ‘the fundamental demand of elemental form-creation is economy. Pure relation of power and material. That requires elemental means, total control of means’. Although it is through the

28 Ibid.

29 The ‘visionary projects’ were the only resource for many architects of the time as German construction was paralyzed by compensation payments after the Treaty of Versailles and hyperinflation from 1922.

30 First, in the catalogue of the Grosse Berliner Kunstausstellung (Berlin: Grosse Berliner Kunstausstellung, 1923, p 34), and secondly, a few months before “DAZ” article, in the first issue of the new avant-garde magazine “G” (Material zur elementaren Gestaltung), edited by Hans Richter, Werner Graeff and El Lissitzky (May, 1923).

31 In “G”, May, 1923.

publication on “DAZ” that Mies hopes to obtain the maximum circulation of his project, the Burohaus will be unexpectedly illustrated in the first page of the magazine’s supplement ‘Kraft und Stoff’ – instead of the ‘culture’ section – generally dedicated to technological advancements.³² In this, sharing the same fate as the UBA university block illustrated in the technical section of the magazine “Nuestra Arquitectura” (1967) while it was still under construction. In 1969, before MoMA exhibition, Glaeser himself edited the publication *Ludwig Mies van der Rohe for the MoMA. Drawings in the Collection of The Museum of Modern Art*: a rectangular ring-bound format collecting 31 plates (63.5 × 46 cm) – still in print on the day of Mies’s death – that would have a discrete circulation in North American academic circles within which architects-educators Caminos and Catalano were also included for about ten years.

Among Glaeser’s introductory essays, the one related to Mies’ Burohaus is particularly revealing because it reconstructs, for the first time, the concrete office building typical plan. In fact, the notoriety achieved thanks to Burohaus ‘practical adaptability and structural explicitness’ was inversely proportional to what was actually known. Thus, the monumental perspective view just acquired by MoMA archive in 1968 and numerical notations reported in Mies’ previous descriptions have been taken by Glaeser as the only reliable sources. The resulting scheme corresponds to the repetition of a structural module consisting of two columns covering the span of 8,00 meters with 4,00 meters overhang on both sides (total cross section 16,00 meters), while regular distance between portals is 5,00 meters.³³ The reinforced concrete slabs bend perpendicularly upwards (2,00 meters) at the end of the overhangs, providing an effective solution in organizational terms, as all furniture components run along a continuous strip following the perimeter of the concrete structure for the sake of openness, accentuated by the continuous ribbon window whose transparency is masterfully reproduced in Mies’ perspective view.

What is striking is a more targeted analysis on this building beyond its structural scheme, also taken up by German historian Dietrich Neumann in 1992,³⁴ to reveal hidden effects within this architecture for austerity emphasising a decisive turning point in pre-war modern discourse which intended to escape

32 In “DAZ”, Sunday 5 August 1923, *Kraft und Stoff* Supplement, p.1. Dietrich Neumann specifies that the piece of writing that Mies promised to magazine’s editors will not arrive in time and it will be replaced with that of the editorial staff, in ‘Mies’s Concrete Office Building and its Common Acquaintance’, in “AA Files”, no. 74 (2017), pp. 70-84.

33 These operation made it possible to determine the spans on the side elevation portrayed in the perspective view: 4, 8, 5, 5, 5, 5, 5, 8, 4 meters. In Ludwig Glaeser, *Ludwig Mies van der Rohe Drawings in the Collection of The Museum of Modern Art*, New York: MoMA, 1969.

34 Dietrich Neumann, ‘Three early designs by Mies van der Rohe’, in “Perspecta” no. 27 (1992).

FIG. 209

From the previous publication edited by Ludwig Glaeser "Ludwig Mies van der Rohe for the MoMA. Drawings in the Collection of The Museum of Modern Art" (1969)

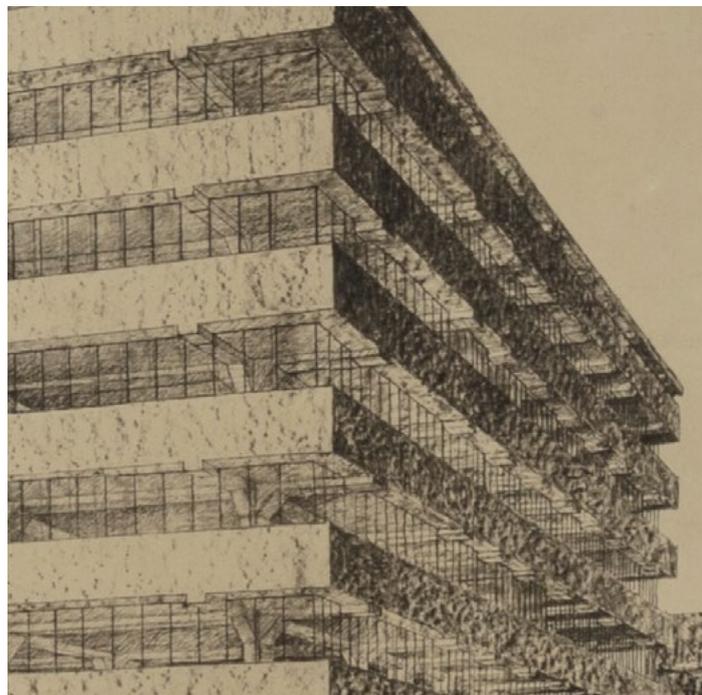


FIG. 210
Close-up of Mies Office Building showing the slight inclination of its vertical profile commented by Dietrich Neumann (1992)

structural rationalism in favour of ‘magical effects, optical illusions and poetry’.³⁵ The first of these effects is about the accentuation of building’s verticality through the inclination of its external profile. The floor area increases as the building grows in height, as denounced by the almost imperceptible, but constant, variation of the corner windows in the perspective view. While we see maximum optimization at work – with the pillars’ section that remains unchanged (reuse of the formwork) making possible to take on an additional load through the overhangs extension in each upper floor – it would seem to see Mies challenging the limits of how much office space could be obtained without erecting a skyscraper, just defined in the Prussian building code as a construction with more than six floors.³⁶ Not occasionally, a peculiar effect has been immediately recognized by Ludwig Hilberseimer describing Mies’ Burohaus:

“Through the dominating horizontality combined with the lack of columns in the façade the structural character of the building is entirely changed, so that through lack of supports a new architecture of hovering lightness arises”³⁷

or, even better in J.J.P. Oud’s words:

“Thanks to the coherent combination of load-bearing beams and loads, [they make possible] horizontal developments of enormous dimensions and the pure containment of space and mass. The old post-and-lintel system allowed us to build from the bottom up with an inward inclination; now we can go further and build from the bottom up, projecting outwards. With the latter system, the opportunity has been created for a new architectural plasticity [...] the rise of an architecture with an optically immaterial, almost suspended character.”³⁸

As said, on the previous Geasler intuitions, Neumann meticulously advanced the Burohaus graphic analysis in the early 1990s with elevations, sections and a

35 Ibid., p.12.

36 Classification as a skyscraper would have meant obtaining special permission from the public welfare ministry and many other official commissions, so while sticking to the city’s height limit (six floors) the Burohaus has a basement and an attic floor.

37 In Ludwig Hilberseimer, ‘Konstruktion und Form’, in “G”, 1924.

38 In J.J.P. Oud, “Über die zukünftige Baukunst und ihre architektonischen Möglichkeiten”, in *Fruhlicht I*, (1921-22); quoted from Ulrich Conrads, ed., *Bruno Taut 1920-1922, Fruhlicht, eine Folge zur Verwirklichung des neuen Baugedankens* (Berlin, 1963), 206.

FIG. 211
*Interpretative drawing
by Dietrich Neumann (1992) showing
Mies Office Building cross section and
the internal atrium*

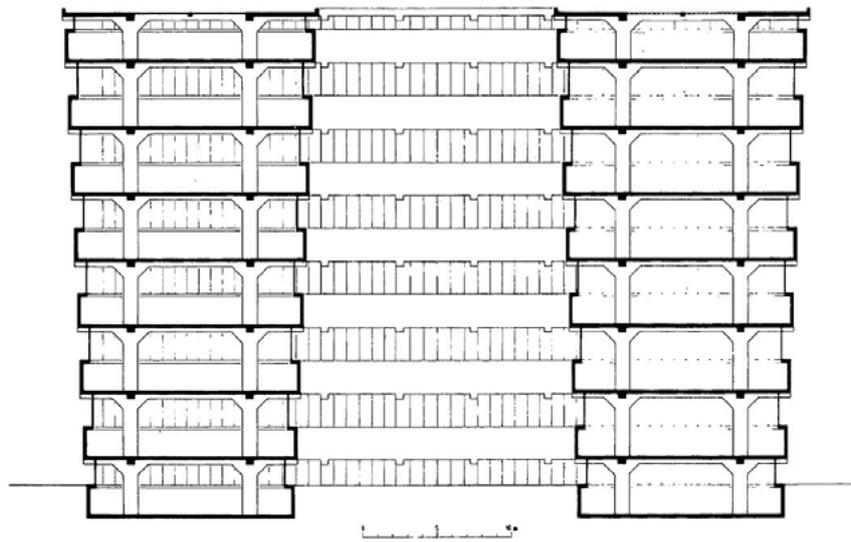
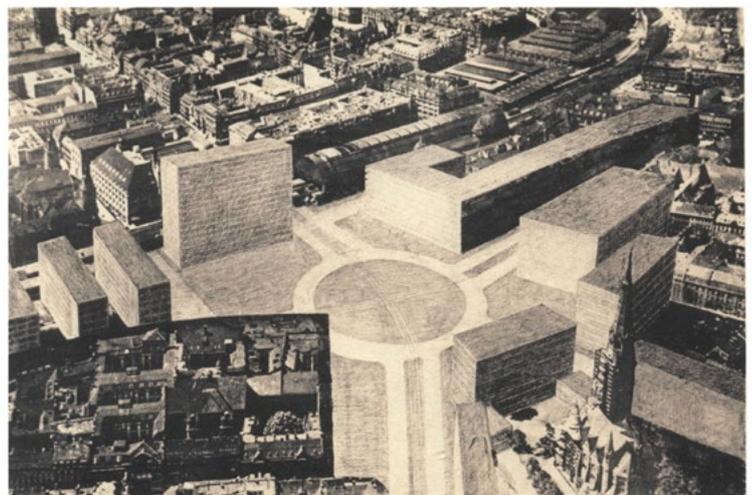


FIG. 212
*Alexanderplatz competition entry by
Mies van der Rohe (1928). Image from
Antonio Monestiroli "L'architettura
della realtà" (1999)*



physical model scrutinizing another crucial aspect: a large atrium 17,00 meters deep carving the block's core for the whole of its height produces the most disruptive effect.³⁹ Indeed, what should not go unnoticed is that Hilberseimer, after praising the 'hovering lightness' of the Burohaus structure, published a compendium titled 'Hall Buildings' (Hallenbauten) in 1931, tracing a genealogical trajectory of this type from the paradigm of mass consumption through the display of industrial products (Crystal Palace, 1850) to the highest expression of exchange of intangible commercial relations (Amsterdam Stock Exchange, 1895). The need for a large, bright and clearly legible space has progressively extended to the whole city through the proliferation of large internal voids as undifferentiated spaces suitable for any possible function, the extension of spatial flexibility and better management of circulation.⁴⁰

However, the spatiality of the full-height atrium obtained by carving a compact block must be considered a complex and anything but neutral operation: acting almost as a subtraction of a pre-existent building, the atrium is given the power to subvert the current balance – and not only that of the internal one. In the case of Burohaus, as said, the challenge of obtaining more space without erecting a multi-storey building resulted, surprisingly, in carving out a large part of the cleverly conquered usable space. On the one hand, managerial principles and business model of the time provided for office units with a maximum depth of 16,00 meters.⁴¹ On the other hand, Burohaus atrium would have assumed an unexpected urban character which could not be grasped until Neuman's more recent studies identifying a possible location. In fact, when the prestigious competition for the urban reorganization of Alexanderplatz was announced in 1928, Mies proposed a large circular square surrounded by a series of isolated blocks, with the one close to the train station showing a striking resemblance to Burohaus: longitudinal development, same number of floors, ribbon windows, and finally the inner courtyard.⁴² There was much discussion about interventions

39 Neumann's meticulous analysis explained the presence of the internal 17-meters-deep void reported by Glaeser's interpretative plan: "The building, with a uniform width of 52 feet in each wing, encloses a 48-foot 9-inch-wide rectangular court. The length of the court is not determinable since the drawing does not show the end of the long façade, nor is the entrance placed on axis", from Glaeser (1969).

40 According to Francesco Marullo, before his *Vorschlag zur Citybebauung* [Proposal for City-Building] and even in his earlier work *Grosstadtbauten*, Ludwig Hilberseimer considered the metropolis to be the logical anonymous product of capitalist omnipotence, a bio-political apparatus of residential, commercial, cultural, and industrial settlements where its inhabitants could live, work, and reproduce themselves in the most radical social proximity and, at the same time, in the greatest isolation. See Francesco Marullo, 'Typical Plan: The Architecture of Labor and the Space of Production', PhD Diss. TU Delft University, 2014.

41 As a result, the size of the floor that each column must carry, which is 40 square meters according to Mies' description, varies, in fact, from 38 sqm to 44 sqm. See Neumann (1992).

42 See Neumann (2014).

in Berlin's congested traffic centers, thus a certain interest in the urban character that these buildings would have to assume comes from Die Kugel member Adolf Behne, rather critical of the persistent search for 'misunderstood monumentality' applied to office space:

“In reality, these are not buildings that represent something special. The idea of transforming [the skyscrapers] into a symbol of seriousness, rigor and dignity must be rejected. They are office and company buildings, an aggregation of shops, cafes, restaurants, cinemas with arcades, elevators, stairs and warehouses – so there is no reason for any form of pathos”⁴³

In this sense, the atrium created within the spatial structure of Burohaus could incorporate city life and serve as an instrument of decongestion for the most urbanized areas by making available a considerable portion of its internal space. In turn, Mies' Burohaus mainly propagandized through the abstractness of its *numbers* to convey a precise concept of flexibility and adaptability on which to base the only architecture possible in time of austerity and in the middle of a process of bureaucratisation, reveals greater ambitions embedded in its internal atrium to interpret a peculiar 'urban condition'. Actually, the Burohaus found space in a photograph that portrays from Weimar Bauhaus exhibition (1923).

Although the office building offered by Mies was 'too schematic' in the eyes of Gropius, it is exhibited in the Internationale Architekten section, organized by the then director of the school to demonstrate 'the widespread emergence of a new, abstract sensitivity'. However, what Mies' office building shared with the first major Bauhaus show went far beyond the abovementioned photograph. Evidently, it was the same austerity regime at the background of Mies' visionary projects that determined school's tactical moves inaugurated by the Bauhaus Week, as can be perceived in the words of Oskar Schlemmer (1922):

“The concept of the cathedral has temporarily faded into the background, and with it certain well-defined ideas of an artistic nature. Today the situation is such that in the best case we have to be content with thinking about the house, maybe even we can only *think* about the *simplest* type of house [...] Perhaps faced with the current situation of economic difficulty, our task is to be the pioneers of simplicity, that is to look for the simple form for every

43 Adolf Behne, in Neumann (1992).

FIG. 213
*Weimar Bauhaus exhibition (1923) showing
Mies visionary projects and Gropius' entry for
Chicago Tribune competition*

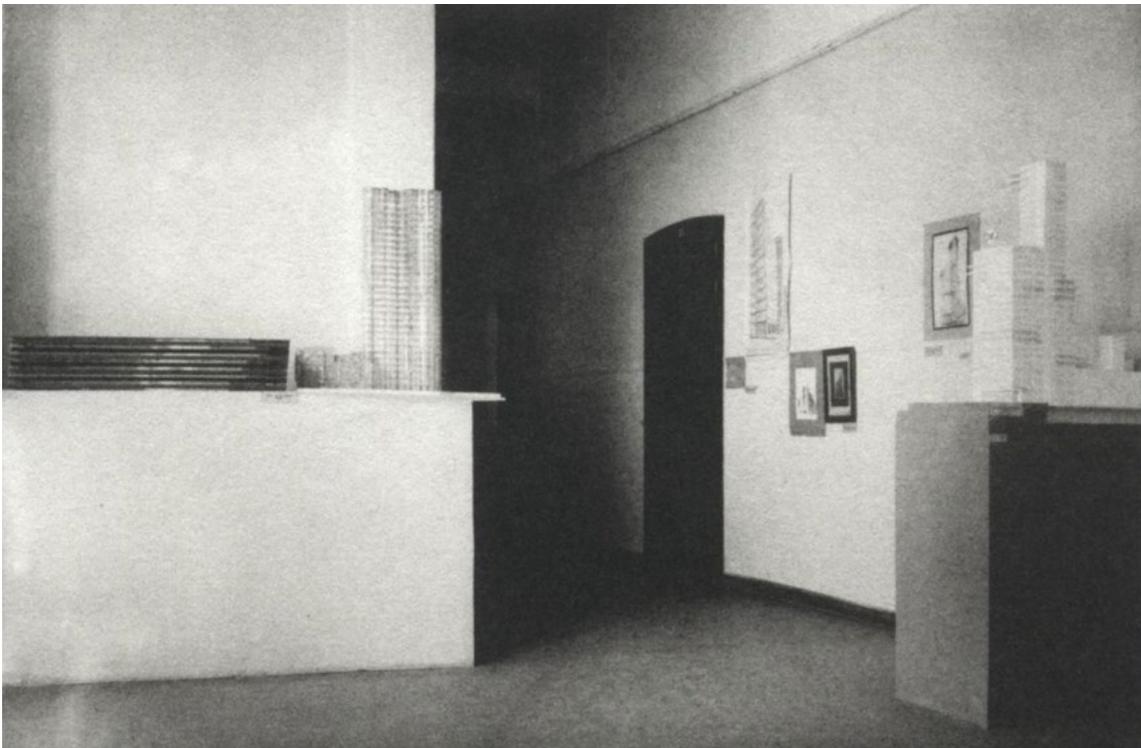


FIG. 214

Haus am Horn by Georg Muche in collaboration with Bauhaus students and masters (1923). Image from 'Das Versuchshaus des Bauhauses', Muche (1925)

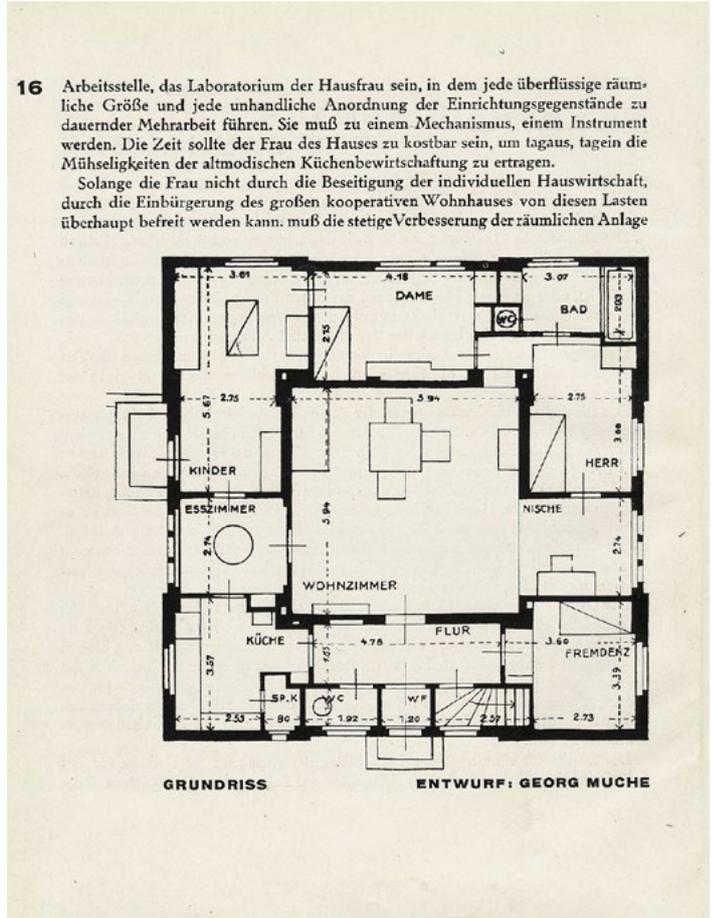


FIG. 215
Haus am Horn construction phases.
Image from 'Das Versuchshaus des Bauhauses', Muche (1925)

necessity of life, which is both decent and solid”⁴⁴

The future of the school, deeply conditioned by the dramatic financial situation, depended in fact on the success of the show addressed both to the institutional bodies of the local government for an extension of public funds, as well as to secure the external support from private and individuals.⁴⁵ While the posters prepared by teachers and students announced the sale of all the goods on display, the strategy conducted by Gropius went far beyond a simple commercial expedient with Oskar Schlemmer preoccupations, only one year after his previous statement, about the changeover from ‘the new unity between art and technology’ to the ‘miracles of abstraction’:

“Mathematics, structure and mechanization are the elements, and power and money are the dictators of these modern phenomena of steel, concrete, glass, and electricity. Velocity of rigid matter, dematerialization of matter, organization of inorganic matter, all these produce the miracle of abstraction. Based on the laws of nature, these are the achievements of mind in the conquest of nature, based on the power of capital, the work of man against man. The speed and supertension of commercialism make expediency and utility the measure of all effectiveness, and calculation seizes the transcendent world: art becomes a logarithm”⁴⁶

Gropius, for his part, had already undertaken a real estate operation through the company Bauhaus Siedlung GmbH, with the aim of planning a Bauhaus village in Weimar: a university campus on a large lot in a residential area between Am Horn street and Besselstrasse. The campus plan presented as a ‘highly flexible’ urban model, showed educational buildings and workshops mixed with affordable housing types – 19 single-family teachers homes, 52 single-family row houses, dormitories for 40 students. But it was only on the occasion of the 1923 Bauhaus exhibition that it was decided to build one of the Bauhaus Siedlung type units made accessible to visitors. The Haus am Horn was therefore optimistically launched on the market as the school’s first example of built architecture: scalable, flexible and mass produced.⁴⁷ The painter and graphic

⁴⁴ Oskar Schlemmer, ‘The Staatliche Bauhaus in Weimar’ (1923), in Hans M. Wingler, *The Bauhaus: Weimar, Dessau, Berlin, Chicago*, trans. Wolfgang Jabs and Basil Gilbert, Cambridge, MA: MIT Press, 1969.

⁴⁵ The Bauhaus was a state-funded institution. In 1922, the Thuringian government agreed to grant an additional contribution on condition that the school organized a complete and comprehensive exhibition of academic works, at a time when the German economy was dramatically deteriorating due to hyperinflation.

⁴⁶ Ibid.

⁴⁷ See Robin Schuldenfrei, *Luxury and Modernism. Architecture and the Object in Germany 1900-1933*,

designer Georg Muche (1895-1987), then master of the Bauhaus weaving workshop, had already begun work on a similar project as a private residence for him and his wife when the competition for ideas for the experimental house was announced. His winning proposal was based on a simple square diagram: 12,7x12,7 meters organized around a central empty room surrounded on all sides by a ring of smaller interconnected rooms. Other teachers and students participated in the realization of the project, including Marcel Breuer furniture for the living room and lady's room, lighting system entrusted to Lászó Moholy-Nagy, Benita Otte model of a built-in kitchen three years before the 'Frankfurt kitchen' made famous by the project by Margarete Schütte-Lihotzky (1926), Marta Erps and Gunta Stölzl weave fabrics and carpets. However, criticism recorded the ambiguous position of the housing model with respect to the economic situation of its time: it was not clear whether the house wanted to represent a realistic solution for the typical housing aimed at the middle class, or if it was an idealized future condition staged in a demonstrative setting. For the critic Adolf Behne, the same who commented in favour on Mies' visionary projects for the way in which his architecture adhered to the need for austere essentiality, seemed evident that Haus am Horn was out of reach, 'in no way pure and convincing, but again an aesthetic of papery affair'.⁴⁸

Even today, Haus am Horn is frequented by critics who bring it back to the school's ardent desire to operate within the restrictions of capitalism, with the exhibition of luxury products and industrial innovation materials obtained through mass production processes.⁴⁹ As for the first aspect (products), corporate sponsorship – a fundamental strategy for obtaining the items just introduced on the market – meant that it was these *external* technological products of the German industry that gave the house a seductive and modern patina, rather than the real collaboration of the school with industry.⁵⁰ In fact, while the products of the companies were immediately available, the Bauhaus objects were not and in no way aligned with the conception of the economic system based on the consumer's desire. As for the second aspect (materials and construction systems),

Princeton University Press, 2018.

48 In Adolf Behne, *The Modern Functional Building* (1923), trans. Michael Robinson, Santa Monica, CA: Getty Research Center for the History of Art and the Humanities, 1996).

49 See Robin Schuldenfrei, 'Capital dwelling: industrial capitalism, financial crisis, and the Bauhaus's Haus am Horn', in Peggy Deamer (ed), *Architecture and Capitalism. 1845 to the present*, New York: Routledge, 2014.

50 In its offer with technologically advanced services, the house was truly innovative: electric pulleys, water heaters, vacuum cleaners, toasters, electric coffee makers, irons, hairdryers, curling irons and electric cigarette lighters, all supplied by the AEG. Therefore, the flyer available at the house alerted visitors that the site master plan for the Bauhaus development was completed, noted that the government lacked the necessary financial resources, and called on interested parties to support the project. See Schuldenfrei (2014).

despite the execution of the work was carried out by Adolf Meyer and Werner March from Gropius' office, none of the advanced construction methods already indicated by Gropius in his previous experiments with modular residential units have been adopted.⁵¹

In a rather conventional way, Haus am Horn is made with a double wall of Jurko blocks of lightened concrete, Berrahohlsteindecke as one of the many systems adopting triangular section of reinforced concrete blocks, and Triolin which replaced the overpriced Linoleum. Curiously, among the other proposals in the competition, that of the young student Farkas Molnár (1897-1945) named The Red Cube (Der rote Würfel) adopted a prefabrication method to the same radial distribution principle conceived by Muche.⁵² But if it is true that neither the products nor the technological methods make the House am Horn distinctly experimental, something more can be said about its internal spatial structure, accentuated by the upward extrusion corresponding to the central empty space: the clerestory-lit living room produces an underestimated effect that goes beyond a *papery affair*, instead amplified by the emerging volume exploring the potential of a domestic atrium. Muche affirmed that his experiment consisted, above all, in the attempt to define a model for contemporary living:

“In each room, function is important, e.g. the kitchen is the most practical and simple of kitchens. Each room has its own definite character which suits its purpose [...] The dining room should only be a dining room, and not a living room or workspace at the same time”.⁵³

The principles of economy and expediency needed to cope with the uncertainty of the time, seems to pass through a careful and measured planning of domestic

51 With his colleague Fred Forbát (1897-1972) Gropius develops what was called the Honeycomb System (Wabenbau) taking up some ideas on modular blocks dating back to 1911. Secondly, the Big Construction Kit (Baukasten im Großen) developed together with Adolf Meyer (1881-1929) had the purpose of producing serial house whose standardization was to be achieved with a minimum number of formworks. See Atli Magnus Seelow, 'The Construction Kit and the Assembly Line. Walter Gropius' concepts for Rationalizing Architecture', in "Arts", Vol. 7 (4), p. 1-29.

52 In the school's architectural explorations, by late 1922 the leitmotif had become the disciplining cube. The influence of geometric abstraction, taught in the preliminary course and by Vasily Kandinsky, gave a new rigor and impetus to the existing practice of square partitioning in the timber Blockhaus tradition. See Barry Bergdoll, 'Bauhaus multiplied: paradoxes of architecture and design in and after the Bauhaus', in Barry Bergdoll and Leah Dickerman (eds), *Bauhaus 1919-1933: Workshops for Modernity*, New York: The Museum of Modern Art, 2009.

53 Muche (1925), 'Das Versuchshaus des Bauhauses', in Adolf Meyer. Ein Versuchshaus des Bauhauses in Weimar. Edited by Walter Gropius and László Moholy-Nagy. Bauhausbücher 3. Munich: A. Langen, pp. 15-23.

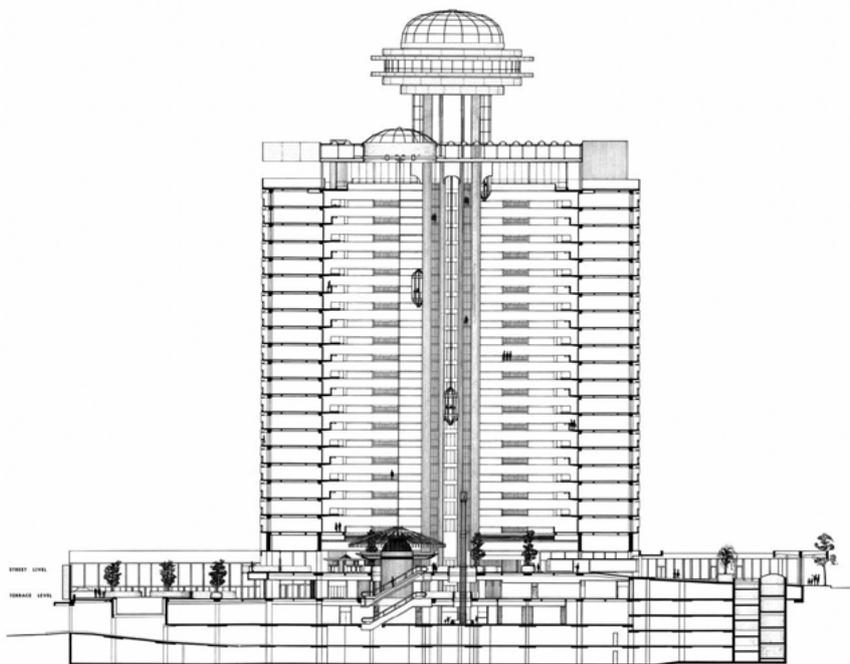


FIG. 216
*Section of John Portman Hyatt Regency Atlanta (1967) showing the full-height internal atrium
in open contrast with its uniform and impenetrable external envelope*

life. In one case, spatial relationships along the peripheral sequence of rooms perpetuate new rituals of *private* life, affecting the productive aspects of domestic economy. Among all, the one between the kitchen and the children's room produces one of the most radical results in this sense. Alma Siedhoff-Buscher, student of the carpentry workshop, develops a modular and multipurpose system consisting of varied and freely assembled cubes, organizing a real educational space within the house.

The combinations are intuitive and almost infinite, to the point that the same environment was reproduced for a short time by the Bauhaus workshops for the nursery school classrooms. But the introduction of a setting 'provided for children to play while learning' in direct spatial relationship with the kitchen, pursues the modernization of family structure in which the mother, and no longer the servants, was placed in the conditions of monitor the activity of the children while simultaneously taking care of the preparation of meals. In purely managerial terms, the Haus am Horn introduced a high level of efficiency in the field of domestic economy through a renewed ideal of *production* based on the simultaneity of two hitherto irreconcilable activities, such as education and livelihood. In the other case, however, what we can see at work is an alternative system of non-linear, unscheduled, non-disciplined and therefore apparently non-productive spatial relationships.

These relations are literally instigated by the intrusion of the 'empty volume' positioned in the center of the diagram, 1/3 of the total surface. In particular, the spatial relationship between the dining room 'only set up for a relatively short stay' and the study created in the niche open to the atrium triggers the instinct to navigate the domestic space, liberated from the hegemony of economy and expediency governing the rest of the house. Therefore, if it is true that Haus am Horn simple diagram responds to the requirements of the time by reducing the *waste* of circulation thanks to the elimination of corridors replaced with an ordered sequence of specialized rooms, the choice to sublimate the communal life within an empty space accentuated by its vertical extrusion sounds, at least, disruptive. This subtle instigation to practice alternative spatial relationships navigating the domestic interior, is best explained in Mucbe's words on the concept of *cooperative house* suggesting that his experiments were not aimed at the *typical* family:

"in which each person and each family can rent the number and type of rooms (empty or furnished, with or without a kitchen) that they need, in which the management according to the wishes of

the residents by a special group of workers trained for this purpose corresponds to the highest degree to the structure of today's economic life".⁵⁴

Apparently, domestic life takes on a more generic connotation and Haus am Horn domestic atrium represents a moment of transition: Breuer's *lattenstuhl* exhibited on that occasion actually anticipated the aesthetic of flexible furniture 'designed in space with light and airy lines' and symbol of the new 'living without constraints' that will culminate in the versatile, flexible, adaptable Bachelor's Wardrobe by Josef Pohl (1929)⁵⁵ significantly shaped on the image of the 'new human type'. Therefore, in its undeniable complicity with industrial economic power, Haus am Horn counteracted production rituals affecting materiality of domestic life. Within this conflict, atrium enters here as an architectural device that amplifies spatial relationships, apparently non-productive, giving a domestic derivation to that idea of immaterial production commonly relegated to postmodernism and its sins of sensationalization. In 1974, Henri Lefebvre expressed his thoughts on the concept of abstraction while in John Portman was designing Los Angeles Bonaventure Hotel:

"Abstraction passes for 'absence' – as distinct from the concrete 'presence' of objects, of things. Nothing could be more false. For Abstraction's modus operandi is devastation, destruction (even if such destruction may sometimes herald creation). Signs have something lethal about them – not by virtue of 'latent' or so-called unconscious forces, but on the contrary, by virtue of the forced introduction of abstraction into nature"⁵⁶

Ten years later, it was the same French philosopher who accompanied Frederic Jameson on his famous incursion into Bonaventure Hotel. The way in which the American critic revolutionized literary studies at Duke University and repositioned architecture in relation to the logic of late capitalism, opened the field to a series of troubling questions including 'the incapacity of our minds, at least at present, to map the great global multinational and decentred communication

54 Mucbe (1925), p.16.

55 A masterpiece of versatility and convenience, this simple wardrobe in plywood comes from Czech designer Josef Pohl in 1929. Its salient feature is mobility, thanks to its wheels, which allow the rectangular structure to be moved in any direction. Inside, space is organized efficiently and with a focus on minimalism: a compartment for shoes, horizontal shelves, and space for hanging garments. Due to its practicality and reduced size, Pohl's wardrobe is often referred to as the "Bachelor's Wardrobe".

56 Henri Lefebvre, *The Production of Space*, 1974.

network in which we find ourselves caught as individual subjects’, materialized in the spatiality of internal atriums conceived by 1970s commercial architecture with the abovementioned incursion representing one of the most immersive interpretations:

“This latest mutation in space – postmodern hyperspace – has finally succeeded in transcending the capacities of the individual human body to locate itself, to organise its immediate surroundings perceptually, and cognitively to map its position in a mappable external world”⁵⁷

Jameson’s spatial analysis of atrium has fallen at a complicated time of cultural repositioning of architecture in which the ability of a building to ‘function properly’ had taken on multiple meanings.⁵⁸ John Portman inaugurated the figure of the ‘architect-developer’ in the early 1960s, affirming the quality of his architecture lays in the spatial relationship between inside and outside with the aim of decongesting the city, turned into a pleasant and safe place to work and socialize. And in fact, Portman completed Hyatt Regency Atlanta in 1967, as one of the separate blocks which make up the Peachtree Center (1961-2009), a multifunctional complex – offices, retail and parking lots – with each block’s internal space interconnected via sky-bridges.⁵⁹

If it is true that Bonaventure is generally considered the quintessence of postmodern hyperspace, the Hyatt Regency Atlanta should be considered the quintessence of the atrium itself. Formally, the hotel was perceived from the

57 Fredric Jameson, *Postmodernism, or, the Cultural Logic of Late Capitalism*, Durham: Duke University Press, 1991), p. 44. While the American critic revolutionized literary studies at Duke University in a personal attempt to spatialize its contents, a real ‘spatial turn’ seemed to have already been triggered in cultural criticism. Certainly, the significance Jameson attached to his disorientation disseminated the idea that the spatial manifestation of the atrium embodied better than anything else the material and immaterial effects of postmodernism. See Fredric Jameson and Michael Speaks, ‘Envelopes and Enclaves: The Space of Post-Civil Society (An Architectural Conversation)’, *Assemblage*, no. 17 (Apr., 1992), pp. 30-37.

58 Mike Davis in particular was openly critical, arguing that these types of interventions were the product of speculative investments that simply shifted their interest from large-scale investments to the urban role exercised by ‘built forms’ by reinforcing the pervasiveness of the system but increasing the effects of its failure. In Mike Davis, ‘Urban Renaissance and the Spirit of Postmodernism’, *New Left Review* 151 (1985), p.110. Postmodernism has systematically suppressed the ability to think utopian thought. Within what he calls his surrogate public space, Reinhold Martin asked for new forms of projection, maps leading to an exit from such spaces. See Reinhold Martin, *Utopia’s Ghost: Architecture and Postmodernism, Again*, Minneapolis: University of Minnesota Press, 2010) and also Reinhold Martin, ‘Money and Meaning: The Case of John Portman’, in “Hunch” no. 12, 2009.

59 In the 1960s and 1970s, the *Interiors* magazine devoted more space than any other specialized magazine to Portman’s projects, useful for claiming in turn the urban role of interior space. Olga Gueft directed the magazine in those years and was the first to comment on the Peachtree Center in terms of ‘interior urban interconnection from a large-scale atrium to the intimacy of a booth in a bar or restaurant’. See Rice (2016).

street as a regular, conventional and compact block. Entering the building, one still has the strange feeling of not having entered at all, but of living in a different type of urban exterior, in which, for better or for worse, the streets are not the organizing principle: a square plan extruding a clearly legible 'empty volume' for a total height of 67 meters (22 floors) makes the atrium organize the totality of the space. What we see at work here is the external image losing its supremacy in communicating a sense of urbanity, usurped by the building's internal space: continuity of the paved surface, interior elevations pattern and exposed elevators running the full-height of the empty atrium are all elements that contribute to make the external-internal transition so ambiguous, with furnishings arrangement actively participating in the internal geography: a sculpture emerging from the podium and a circular canopy hovering a few meters above the ground go on stage overlooked by all the hotel rooms neatly arranged according to a pinwheel scheme.⁶⁰

The urban effect is produced, of course, by the functional mix that articulate housing unit, gardens, 'public plaza'. For all these reasons, the Hyatt Regency Atlanta not only became a spatial model, but also an investment pattern to be replicated – as one would expect from those who believed in the idea of architect-developer. In fact, it will be the book *The Architect as Developer* (1976) edited together with urban planner Jonathan Barnett, to describe the 'sudden appearance' of Portman building's atrium:

"I didn't want the hotel to be just another set of bedrooms. The typical central-city hotel has always been a cramped thing with a narrow entranceway, dull and dreary lobby for registration. Elevators over in a corner, a closed elevator cab, a dimly lighted corridor; a nondescript doorway, and a hotel room with a bed, a chair, and a hole in the outside wall. That was the central city hotel. I wanted to do something in total opposition to all this. I wanted to explode the hotel; to open it up; to create a grandeur of space, almost a resort, in the centre of the city. The whole idea was to open everything up; take the hotel from its closed, tight position, and explode it".⁶¹

Surprisingly, architectural considerations rather than business opportunism resonate in Portman's words articulated in perfect continuity with the modern discourse on light, color, materials and nature, coming to speak of 'architecture as

60 Spatial descriptions are meticulously reported in Charles Rice, 'Stalking John Portman', in "AA Files, no. 64 (2012), pp. 21-29.

61 John Portman and Jonathan Barnett, *The Architect as Developer*, New York: McGraw Hill, 1976, p 28.

social art'. Basically, Portman speaks and thinks modern despite his architecture would be relegated to the sins of postmodernity. Edward Henry, his collaborator who undertakes doctoral research on the relationship between Portman Associates and Portman Properties (1985), argues that the atrium was not conceived as a sensational, unique and unrepeatable product. On the contrary, there was great interest in converting its spatiality into a prototype to be adapted from time to time to real situations. For Portman, acting as an investor in the plots of the dominant economic system simply meant that he could more easily achieve his goals as an architect with 'order and variety achieved simultaneously'.⁶² After completing the Chicago Hyatt (O'Hare Airport) in 1971, the Fort Worth National Bank Building in 1974, most of the Embarcadero Center including the office towers and the Hyatt Regency San Francisco in 1976, the Detroit Renaissance Center was developed by literally adapting the spatial models from previous projects:

“A proclivity towards geometry, systematisation, repetitiveness of spatial elements and other design formulas may spring, and in fact can be demonstrated to spring, from the architect/developer's strong orientation towards business management systems, the minimisation of risks, portfolio diversification and other factors [...] the ambiguity in this analysis is that most critics and the public have ascertained Portman designed buildings to be bizarre and unusual”.⁶³

Paradoxically, despite the unquestionable success of his investment model materialized in the sensationalisation of buildings atrium, his propensity for capitalization aimed more than anything else at the reproducibility of the urban effect with maximum economy and expediency:

“The floor plans of the hotels I designed for Chicago [Hyatt O'Hare Airport] and Los Angeles [Bonaventure Hotel] can be compared not for their superficial resemblance, which are misleading, but for their system of order”.⁶⁴

62 John Portman and Jonathan Barnett, (1976), p.65.

63 Edward Henry, 'Portman, Architect and Entrepreneur: The Opportunities, Advantages and Disadvantages of his Design-Development Process', PhD diss., University of Pennsylvania, 1985. The basic concept of the Hyatt Regency Atlanta atrium was adapted for the Hyatt Hyatt in San Francisco, which has a shape that approaches a three-dimensional trapezoid. Also in San Francisco, the Embarcadero Center office buildings replicate those of the Peachtree Center in their offset plate composition, a solution developed in the Peachtree Center for one of the buildings that spanned property lines, and therefore had to be functionally separable into plates. to adapt to changes in rental or ownership conditions.

64 John Portman and Jonathan Barnett, (1976).

Somehow, this was the defence mechanism which even the successful investment model conceived by Portman activated against the fluctuating, unpredictable and uncertain economic trend that was no longer reduced to national borders but, paraphrasing Jameson, made it difficult to 'map' every single operation into the 'great global multinational and decentred communication network'.⁶⁵ From the most recent analysis by Charles Rice (2016), atrium identified a precise urban condition obtained at the intersection of geometry and function through a particular spatial effect, nourished by the awareness of 'inhabiting the outside of an internal space'. Furthermore, according to Rice, at the origin of this system there is an experiment on the domestic scale: Entelechy I, the villa built by Portman in 1964 in which the interior and exterior were not clearly designated, and the 24 hollow (inhabited) columns uniformly distributed in the intersections of an abstract grid reproduced an 'urban condition' offered by the possibility of navigating guided by an ordered formal organization.⁶⁶

In the 1970s, urban scale hallways and interiors became the paradigm of commercial and institutional buildings, as well as schools and university campuses where urban effect seemed to be reduced to the simple deployment of furniture components expertly organized within 'extensive architectural structures'. Due to this simplification, the atrium lost an important attribute, since the interior initially functioned as a counterpart to the urban landscape that was most often abandoned and left to itself at the time. That is why, atriums conceived as buildings in their own with their own facades, aimed to transform the city from the inside re-establishing an architectural presence and a total environment for the individual who could, for better or for worse, practice some form of urban behaviour.

65 Portman's operations had increased during the recessions of the 1970s, followed by a major restructuring of its corporate plant to meet the requirements of austerities required by what is now described as a context of 'permanent precariousness'. In Rice (2012).

66 Portman's Entelechy I is described in Rice (2016). The relationship between the 24 hollow (inhabited) columns uniformly distributed in the intersections of the abstract grid on which the two 'open plan' levels of the house unfold, shows how a precise urban condition was reproduced guided by an orderly formal organization.

FIG. 217
Exterior view of Hyatt Regency Atlanta (1967)
showing its uniform, compact and impenetrable building mass



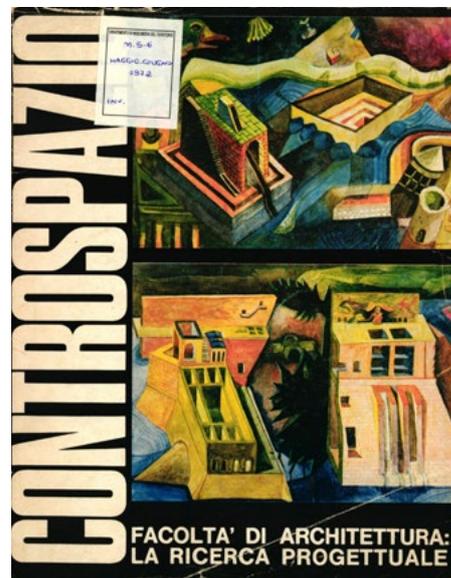


FIG. 218
 The special issue of "Controspazio" (no.5/6, 1972) collects students works and research produced in the academic field of Italian schools of architecture (above), while the Italian magazine "Zodiac" directed by Guido Canella dedicates a special issue to Latin America (no.8, 1992)

5.4 *Back to Italian periferia.*
Territorial pedagogization and Guido Canella's 'fuori scala'

Creare una nuova cultura non significa solo fare individualmente delle scoperte 'originali', significa anche e specialmente diffondere criticamente delle verità già scoperte, 'socializzarle' per così dire e pertanto farle diventare base di azioni vitali, elemento di coordinamento e di ordine intellettuale e morale.⁶⁷

Antonio Gramsci, 1891

In Italy, there was a discussion going on about the principle of 'pedagogization' of Italian periphery and those areas marginalized by urban planning, claiming the role of architecture to reinvigorate the articulation between territorial scale and architectural space aimed at producing positive effects towards a new urban dimension. The controversial season of 'centri direzionali', dominated by Ernesto Nathan Rogers' protégés since the early 1960s, emphasized physical form over the technocratic approach of regulations and codes that was emerging in that period. More than any other, Guido Canella became 'the architect of hinterland' known for exploring the urban connotations of architectural devices integrated with the metropolitan infrastructural system of what will be presented as Italian 'città territorio'.⁶⁸

Despite the fact that long-standing "Casabella" mostly propagated the discourse,⁶⁹ also *little magazines* such as "Controspazio" (1972) acted as laboratory of ideas on the problem of the new urban dimension with a special issue reporting on education in Italian schools of architecture by showing students' works titled 'disegno territoriale dell'agro' and 'fascia periferica' (University of Rome), or

67 Quoted by Guido Canella and his students in "Controspazio", no.5-6, 1972.

68 Bruno Reichlin, 'Guido Canella, l'architetto dell'hinterland', in Bordogna Enrico, Canella Gentucca and Manganaro Elvio (eds). *Guido Canella 1931-2009*. Milano: Franco Angeli, 2014, pp 438-443. "Hinterland" is also the name of the magazine founded and directed by Canella (1977-85) with the idea of undertaking an editorial project 'able of opening new operational gazes to citizens and architects, public administrators and artists', also inspired by Leonidov's constructivist graphics for "SA". Between 1989-99 Canella would also edit a new series for the historic Italian magazine "Zodiac".

69 For a discussion of the Italian postwar architectural and urbanistic debate reported on architectural magazines see Piccinato L., Vieri Quilici V. and Tafuri, M., 'La città-territorio: verso una nuova dimensione', in "Casabella-Continuità" no. 270 (1962). In the previous "Casabella-Continuità" no. 264 (1962) entitled 'Centri Direzionali Italiani', writings appear by Ernesto Nathan Rogers, Aldo Rossi, Manfredo Tafuri, Carlo Aymonino, while in "Casabella-Continuità" no. 275 (1963) see Guido Canella 'Vecchie e nuove ipotesi per i centri direzionali'.

‘progetto di edificio pubblico’ (University of Naples), among others.

Canella’s students graduation works from Politecnico di Milano find space in this issue,⁷⁰ with some of them that were asked to design a higher education system in Calabria region as part of a research project on the theme of university conducted by Canella and D’Angiolini between 1967–69, a few years before the Italian Ministry of Education launched the international design competition in July 1972.⁷¹ In line with the polycentric configuration of a region that had long suffered from geographical isolation and economic decline, Canella’s students proposed an alternative concept of university based on the disarticulation of institution materialized in two poles: a central structure named ‘campo base’, just located near infrastructural nodes to serve teachers training for the whole region, while a decentralized structure enables nomadic dispersion instilling university in those sectors influenced by radical transformations, such as industry, public administration and lower levels of school educational system. Following the incipit of not conceiving a university for a context, but rather the creation of a context for the university, Università della Calabria becomes a pretext for exploring the general organization of a territory’s ‘struttura insediativa’, and for instigating transformations by developing a ‘tipo insediativo’ with its own internal logic:

“Ogni proposta tipologica sottende più o meno consapevolmente una propria strategia di intervento: implicazioni *prime*, che inducono effetti condizionanti su una data situazione di fatto (anche nel caso di una supposta massima ‘flessibilità’ interna); implicazioni *secondo* che mutuano necessariamente dall’assetto territorio in termini di gestione o facilitazione delle interazioni (anche nel caso di una dichiarata ‘neutralità’ verso i problemi di scala territoriale)”.⁷²

70 See “Controspazio” n.5/6, 1972: ‘L’Università della Calabria’ (1970), students Alessandro Cristofellis and Giorgio Fiorese, ‘Milano/San Vittore. Un polo di applicazione del sistema dell’istruzione e dell’assistenza’ (1970), students Rino Balconi, Sergio Brenna, Claudio Confalonieri.

71 Students’ works presented here hide a subtle controversy against the weakness of design competition brief in provoking radical transformations on the issue of regional scale. It is worth mentioning here that Canella participated in the explosive late-1960s debate on university with his influential article ‘Passato e prospettive dell’anticità universitaria’, in “L’architecture d’aujourd’hui” no. 137, 1968, pp.16-19, also reported in Guido Canella and Lucio Stellario D’Angiolini, *Università. Ragione, contesto, tipo*, Bari: Dedalo libri, 1975, together with ‘In margine al concetto di “anticità universitaria” (lecture, 28 March 1969, pp. 99-110). The concept of ‘anti-città’ that echoed other influential voices who had expressed on the same theme as in Joseph Rykwert’s ‘Universities as Institutional Archetypes of our Age’ (Zodiac no. 18, 1968), claimed an opposing dialectic between two different worlds rather than a simulation mechanism, without compromising the need for permeability between the university population and citizens. ‘Università e città’ is instead the editorial of “Zodiac” no. 7, March-August 1992, which Canella dedicates to the theme of the University.

72 See Canella and D’Angiolini (1975, p.236)

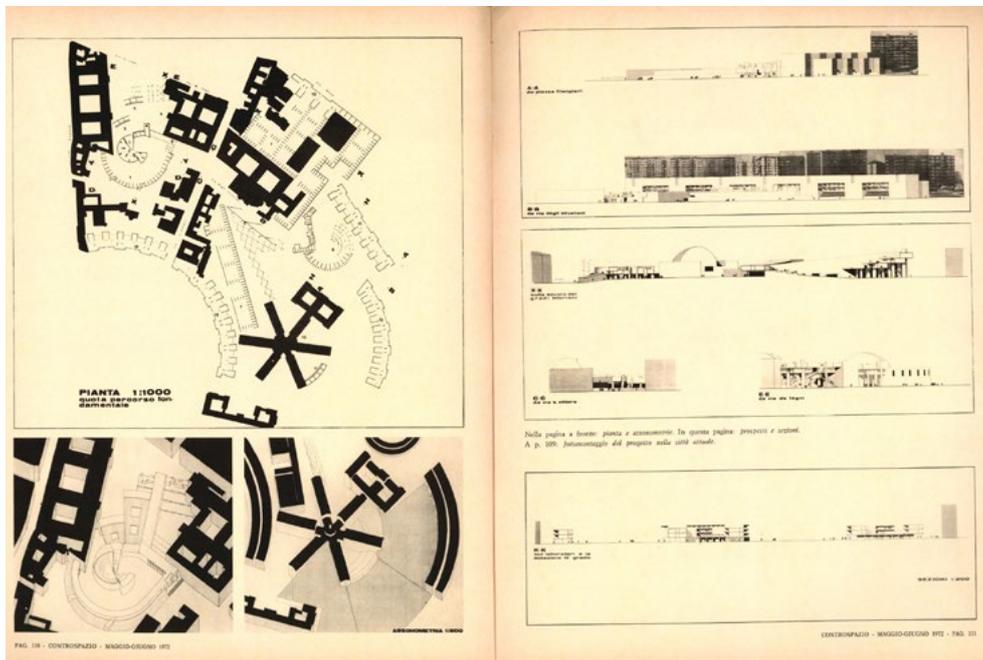
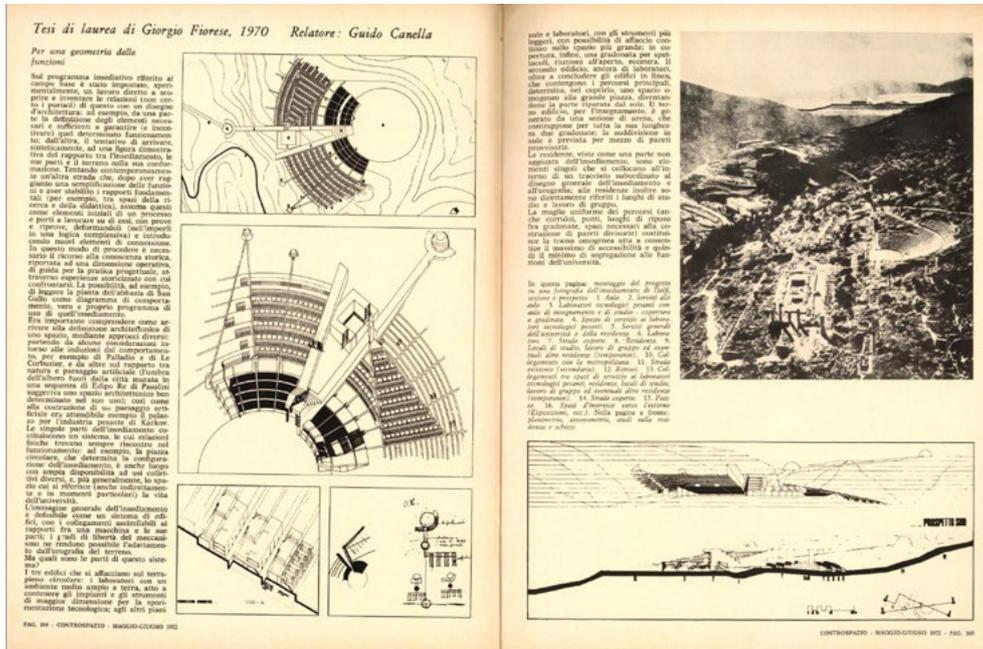


FIG. 219
'L'Univesità della Calabria' (1970) by students Alessandro Cristofellis and Giorgio Fiorese together with 'Milano/San Vittore. Un polo di applicazione del sistema dell'istruzione e dell'assistenza' (1970) by students Rino Balconi, Sergio Brenna, Claudio Confalonieri are among the final thesis works coordinated by Guido Canella at Politecnico di Milano. Image from "Controspazio" (no.5/6, 1972)

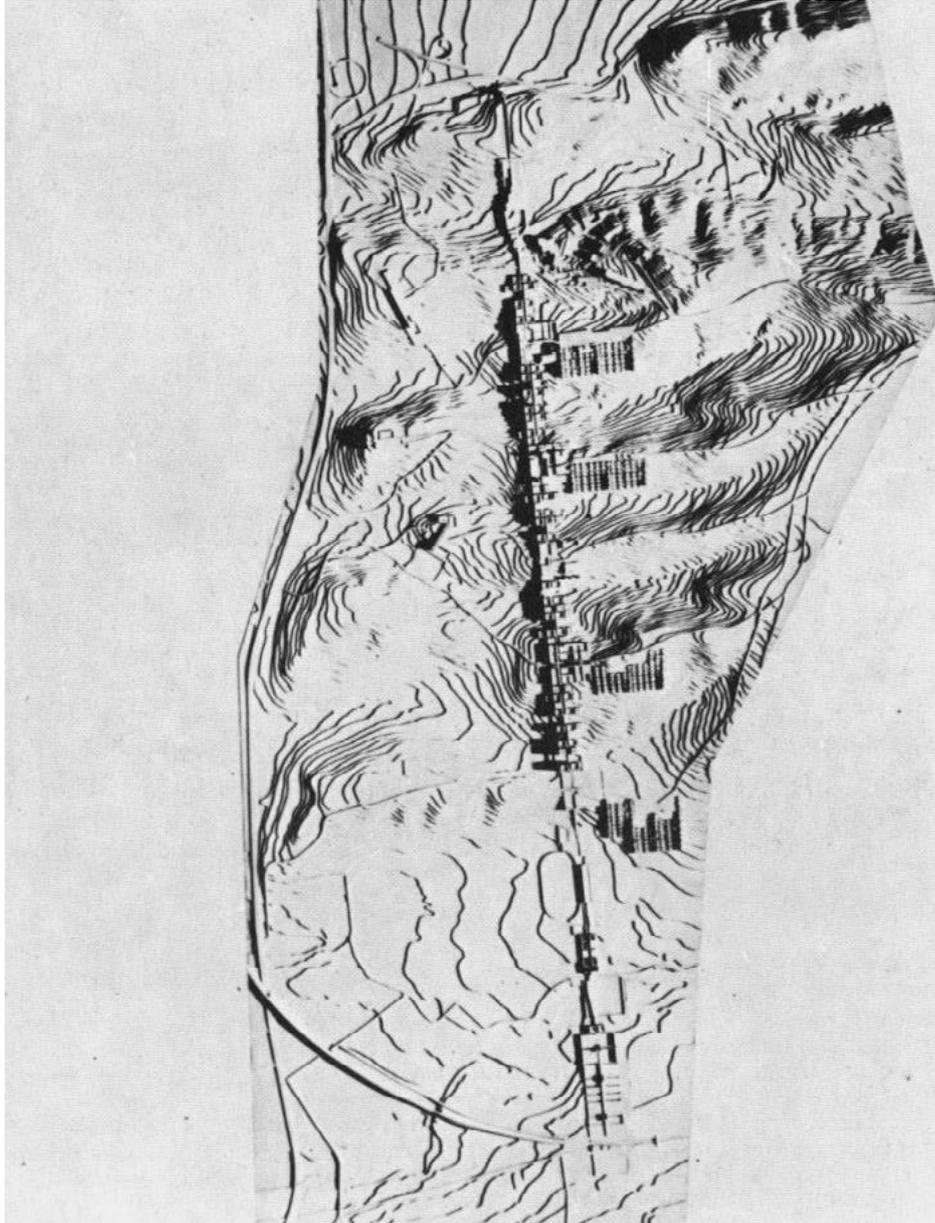


FIG. 220

Università della Clabria (1972-74) first prize to Vittorio Gregotti group (Emilio Battisti, Hiromichi Matsui, Pierluigi Nicolin, Franco Purini, Carlo Rusconi Clerici, Bruno Viganò). The linear settlement is characterized by the repetition of cubic modules and the constant height of the elevated territorial path with respect to the ground level constant variation. Image from Rebecchini (1981).

In 1974, two years after “Controspazio” special issue on architectural education, Vittorio Gregotti and his group won first prize in the design competition for Università della Calabria with a territorial physical structure appearing as the literal materialization of a settlement principle, whose articulation can be derived from the sequence of cross-sections-along-one-axis spatial situations varying according to the ever-changing clashes between the university structure and territory conformations.⁷³

A team guided by Canella participated in the same competition, articulating the ideas explored in previous researches following the strategic principle of disarticulation to conceive the university settlement as an integral part of the productive activities operating in the territory,⁷⁴ instigated by a typological choice that tends to evoke the spatiality of ‘grandi architetture’, those able to escape the determinism implied by a specific function to integrate a more general program with freely usable covered and uncovered spaces, squares, classrooms, porticos and bleachers.⁷⁵ In this sense, it is worth mentioning the *complex of laboratory and classroom* designed for Università della Calabria and dislocated in Valle dei Crati industrial area, where research activities find the basic equipment (specialized workshops) immediately integrated with informal environments for changing needs, moments of study, relationship, information and operational elaborations. This internal

73 Since the early 1960s, Gregotti had been developing his original theoretical framework focused on the relation between architecture and the geographical scale, which became the central topic of his seminal book *Il Territorio dell'architettura*, Milano: Feltrinelli 1966, thus Calabria's 3,200 meters urbanising corridor can be understood as a variation on the theme explored by Gregotti in the university competitions of those years (Palermo, Florence, Cagliari among others), marking with its primary axis the territorial/topographic dimension of Crati valley and individual cubic modules (25,5x25,5 meter plan) linked to the axial spine. See Francesco Zuddas, ‘The Idea of Universitas’, in *AA Files* no.75, 2017. The stimulus to overcome the canonical campus-city contrast, whose urban quality is inextricable from its architectures, is renewed in the lesson of the inhabited portico of the student housing in Chieti designed by Giorgio Grassi and Antonio Monestiroli (1976-79) which was further developed by Monestiroli in the context of the Milanese periphery reconceived around the concept of *centro altrove*, or a polycentric system where the university reaffirms its architectural ambition attributing urban connotations to the new campus of Bovisa Politecnico di Milano in 1990s.

74 Canella's team participated in the competition working within a room a few hundred meters from Politecnico di Milano, as he had been suspended from his academic roles by Minister of Public Education between 1971-74 along with Paolo Portoghesi, Aldo Rossi, Franco Albini, Lodovico Belgiojoso, Piero Bottoni, Carlo De Carli and Vittoriano Viganò. For a broader discussion on this episode placed in the context of student contestations see the catalogue of the exhibition ‘La Rivoluzione Culturale’ (Milan, 23 Nov 2009 - 8 Jan 2010) available at <http://www.gizmoweb.org/portfolio/la-rivoluzione-culturale>. See also Marco Biraghi, ‘Università: La Facoltà di Architettura del Politecnico di Milano (1963-74)’, in *Italia 60/70. Una Stagione dell'Architettura*, edited by Marco Biraghi et al (Padova: Il poligrafo, 2010).

75 The notion of ‘grandi architetture’ comes from ‘Passato e prospettive dell'anti-città universitaria’ (1968). Canella used to call ‘mausoleums’ those autonomous buildings which express a new metropolitan geography, explicitly referring to the proto-tertiary skyscraper system designed by El Lisickij along the main radial routes of Moscow (1925), or the new typical school for 1,000 students in Leningrad (1926) designed by Atelier A. Nikolski. See Luca Monica (ed.), *Un ruolo per l'architettura. Guido Canella*, Napoli: CLEAN, 2011.

landscape is due to the typological invention of a giant barrel vault-like architecture internally articulated with five levels gradually grooved inwards.⁷⁶ The pedagogical question pervades Canella's thought, at least as the much-talked-about architectural figuration best exemplified in his 'fuori scala' interventions whose dense image is endowed with a typologically and volumetrically pronounced internal life.

The shift from architectural language to the urban dimension of architecture as the privileged territory to inform design operations, is an important step in Canella's research that is not limited to professional competitions of those years. The 'conscious vocation of the city' came from Giuseppe Samonà – Canella worked as an assistant between 1960-63 at IAUV – and Lucio Stellario D'Angiolini from whom he grasped a multidisciplinary approach interested in macro-urban aspects that envisage the same figure of 'arquitecto-urbanista' that, on the other side of the world, had been attributed to Enrico Tedeschi for his role within public institutions of Mendoza from the end of 1950s (see Chapter 4).⁷⁷

Even if Ernesto Rogers' influence might be not overestimated as suggested by Bordogna,⁷⁸ Canella's academic research covers a long span operationally involved in the pedagogization of peripheries which intersected a teaching collaboration with his mentor in 1962-63 focused on the school type – reported in the volume *L'Utopia della Realtà* (1965) – that is where Canella's experimentation on the so-called 'prototipi didattici' originates. Whilst *prototype* and other type-notions were already carefully handled in Italian architectural discourse (shared by Rossi and Aymonino), Canella's 'critica tipologica'⁷⁹ is distinguished for promoting and activating new models of collective behaviour obtained from the juxtaposition and interconnection

76 In describing the settlement type (Canella and D'Angiolini 1975, p.428), it is pointed out that some of the equipment installed (from the computer center to the materials testing laboratory) are probably the first agents of technological advancement introduced in the whole territory, that is something to take into consideration to understand how the project for a new Ciudad Universitaria has evolved in Buenos Aires.

77 The use of 'giornale murale' is a clear example of the multidisciplinary and discursive approach explored in the field of architectural pedagogy, where essay excerpts, precedents and propositions coming from the wide range of culture are juxtaposed with cartography and data analysis from specific regions. In this sense, Rogers' discursive 'meta-progettualità' is recalled by Canella: "mentre ero ancora studente, [Rogers] insegnava al corso di Caratteri stilistici dei monumenti in un modo del tutto anticonformista, tenendo lezioni sui grandi maestri che aveva direttamente conosciuto. Nel 1962 quando finalmente passò a insegnare Elementi di composizione, coltivava negli allievi la predisposizione all'immedesimazione nel tema di progetto [...] scuola, teatro, carcere...", in Enrico Prandi (ed.), *Sessantadue domande a Guido Canella*, Napoli: CLEAN, 2005.

78 Despite collaborations with Ernesto Nathan Rogers date back to 1957, Canella arrived in "Casabella-Continuità" only in 1962. See Enrico Bordogna, *Guido Canella. Opere e progetti*, Milano: Electa, 2001, p.12.

79 See Manfredo Tafuri, 'La critica operativa', in *Teorie e storia dell'architettura*, Bari: Laterza 1968.

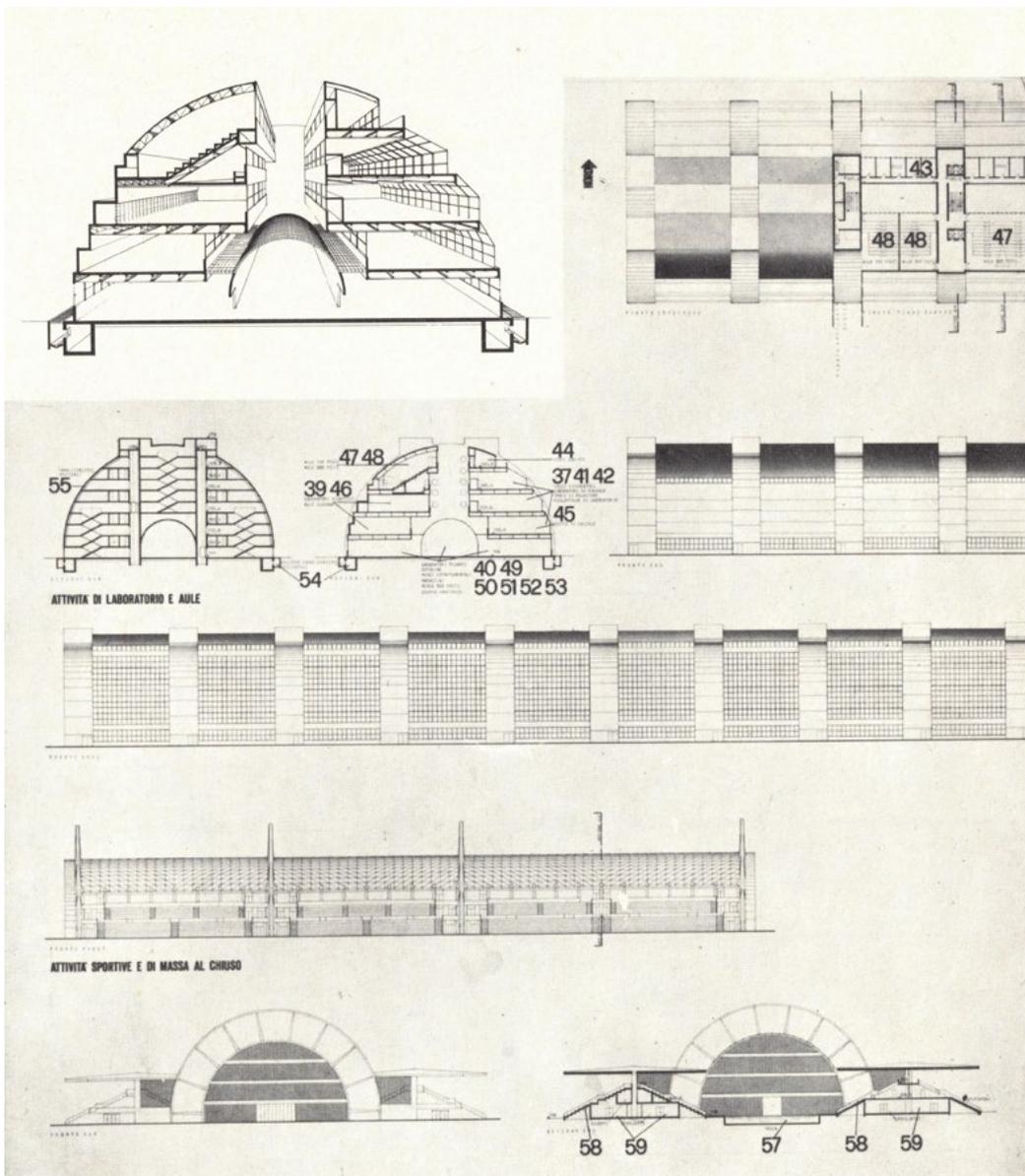
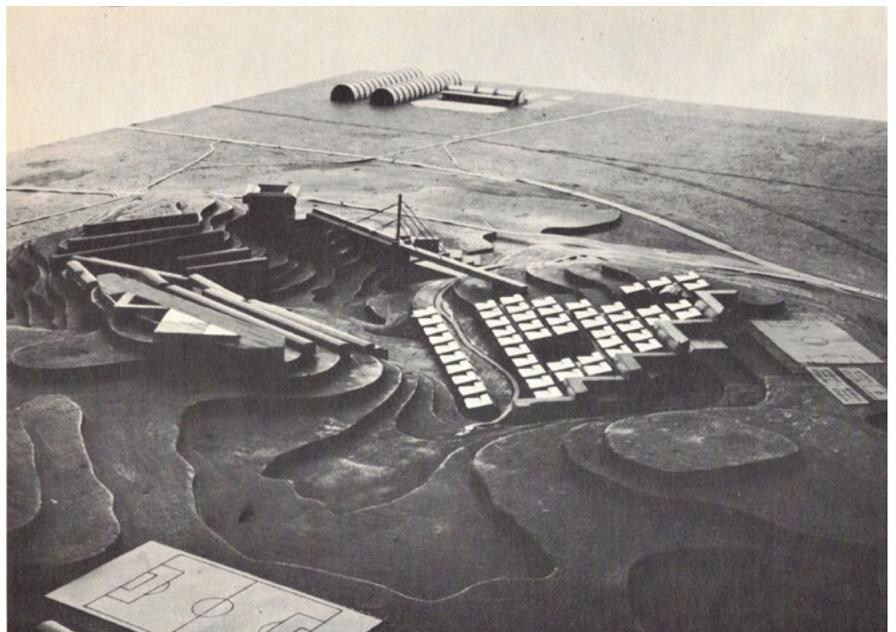


FIG. 221
Università della Calabria (1973)
 proposal coordinated by Guido
 Canella and Lucio Stellario
 D'Angiolini. View of the model of the
 territorial university system (right)
 and drawings of the architectural
 typologies adopted for the "Complex of
 laboratory activities and classrooms"
 located in the Crati valley. Images
 from Canella and D'Angiolini
 (1975).



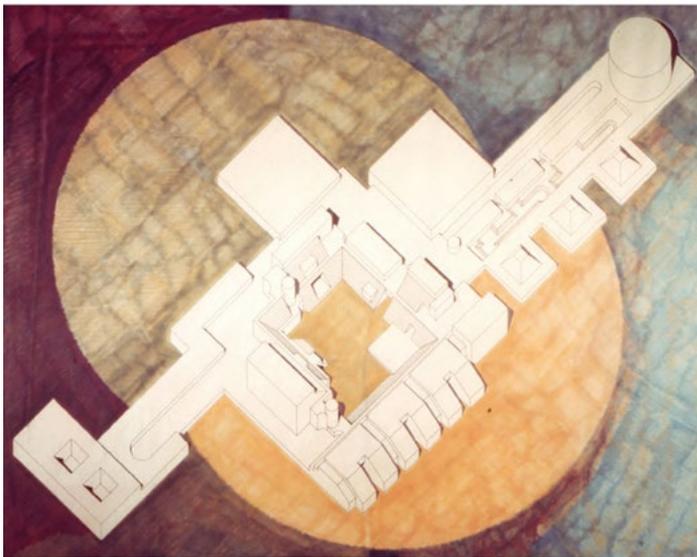
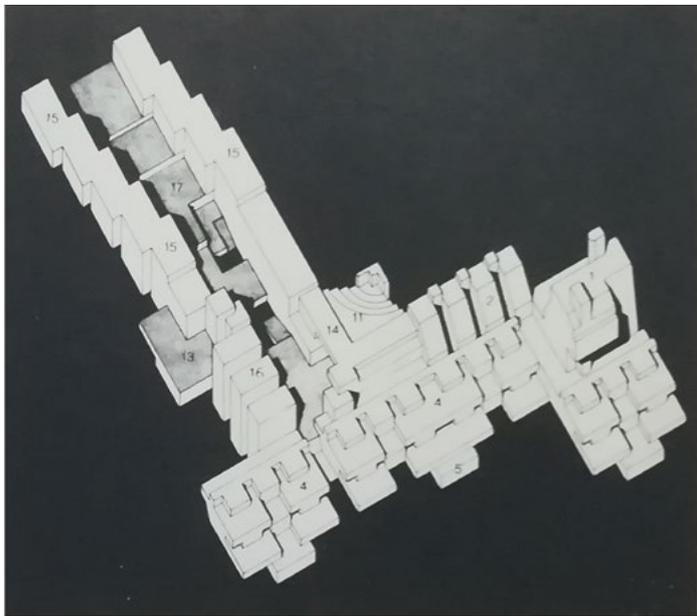
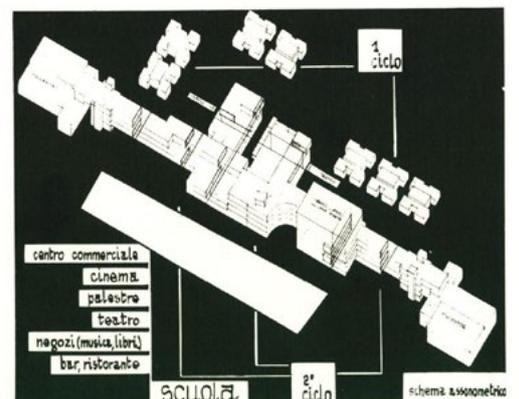
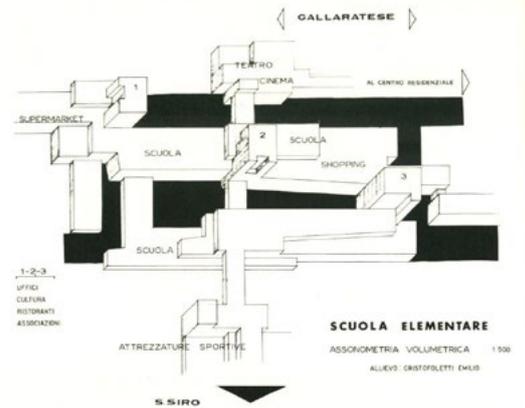


FIG. 222
 The pedagogical method of 'prototipi didattici' emerged since Canella's early teaching experiences at Politecnico di Milano, as an assistant of Rogers' design studio on the topic of the theatre. These tight sequence of axonometrics drawings will be used both for students works on the topic of Università della Clabria (top left) and even in the previous didactical exercises around the topic of the primary school explored in "L'Utopia della Realtà" (below)

Assonometrie dei servizi della fascia secondaria: rispettivamente di S. Cristoforo (sopra) e di V. Paci (sotto)



of public functions resulting in an unexplored urban condition: neither countryside nor city, hinterland became a contested territory where these behaviours could be pedagogically practiced stimulated new forms for new organisms derived from a radical reconsideration of typological categorisations: public institutions regain their importance, recombined with contemporary recreational rituals related to shopping, culture, or entertainment as the complexity of urban relationships calls for 'functional system' rather than 'functions' ('sistema educativo, sistema dei consumi, sistema dei trasporti, sistema teatrale' among others) to be investigated both in its internal organization and in relation with the others. This is what constitutes 'prototipi didattici': relationship instigators of militant civiness infiltrating hinterland production systems.

However, what should not go unnoticed is Canella's firm opposition to any ephemeral and temporary result,⁸⁰ as well as to the concurrent fascination with architecturally neutral solutions where everything happens. In fact, the reiterated pedagogical practice of collective behaviours that Canella hoped for cannot be exercised within the abstract and generic 'multifunctional container'. Hence, the tight sequence of students' axonometric drawings generally associated with 'prototipi didattici' emerges here with a marked exemplary character of a settlement strategy, that is a social initiation to functional congestion, as applied to a number of site-specific conditions, educated by the reasons of form and its multiple articulations.⁸¹ In this sense, theatricality becomes the dominant and pervasive character in Canella's design studio briefs, as well as in the large part of his buildings, where his typological investigations look at the above mentioned functional system as an aspect of life and movement within architecture.⁸²

80 It is worth mentioning here an observation by Carlo Aymonino: "lui [Canella] che ha sempre dichiarato di aborrire l'effimero e il temporaneo pubblica, nel numero seminale dedicato al Sudamerica ("Zodiac" no. 8 del 1992), il lavoro della cilena Cooperativa Amereida, massima espressione della poetica del fragile, dell'auto-costruito, dello spontaneo", in Bordogna Enrico, Canella Gentucca and Manganaro Elvio (eds), *Guido Canella 1931-2009*, Milano: Franco Angeli, 2014, p.70. Even if, as explained in the previous chapters (Chapter 2), the radical Chilean experience of Ritoque originated in a more complex system of institutional reforms that have affected Universidad Católica de Valparaíso since 1952 with the leading role of Carlos Bresciani, co-founder of Santiago architectural firm BVCH. On the other hand, as Armando Dal Fabbro recalls, it is from the experience of some travel to Buenos Aires and Córdoba that he could appreciate Canella's unique love for Latin American culture (Ibid. p. 280) culminated in the above mentioned 1992 "Zodiac" issue titled 'Laboratorio Latinoamérica'.

81 These axonometric drawings are also collected in Katuyuki Suzuki (ed.), *Guido Canella*, Bologna: Zanichelli, 1983, and Luca Monica (2011) and later re-edited for the exhibition "Un'idea di Teatro" curated by Francesco Moschini in Rome in 1980. The greatest attention goes to the term 'didactic' which signified instrumentally accepting a certain degree of approximation providing 'semi-finished' products for students who were going to find, for the first time, the 'sigil' of their architectural principles.

82 Luca Monica (2011), p. 71.

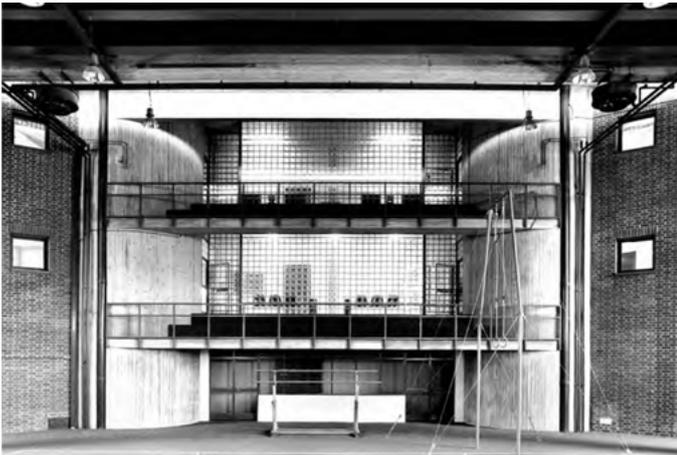
On the one hand, the most eloquent work in this sense is Pieve Emanuele Civic Center (Milan, 1971) where the theater returns in all the elements – town hall, school, cultural services, sports equipment – including the terraced square that visually reinvigorates the urban image; while the internal complexity compensates the social divide of a typical hinterland settlement not only through the integration of functions, but in making them interchangeable (refectory into a public canteen, school library into municipal library, council hall into theatrical hall) and multiply contaminations between internal and external users. On the other hand, the same experiment in ‘pedagogically innovative and civically emancipated’ public life,⁸³ is staged in a variant contained in its plastic expressions, which is Palazzo di Giustizia in Ancona – not surprisingly described by Aymonino as the first great “American” interior: a recovery project within the historic fabric of the city, in truth, where the spatiality of the full-height atrium compares the scale of changing contemporary needs while maintaining, at the same time, the control on the form without which only the ‘sterile dissolution of institutions’ can be obtained just in favour of profit mechanisms.⁸⁴

83 Enrico Bordogna (2001), p. 21.

84 This concept is clearly explained in 1972 “Controspazio” issue (p.109), thus associated with students’ works: “Il discioglimento delle istituzioni, non sterilmente in se stesse, ma in un regime di circolarità costituirebbe il primo momento di un ambito il cui funzionamento, affidato per certe parti ad un comportamento militante, sottraendosi in questo modo al regime esclusivo del profitto, potrebbe immettere in un circuito nuovo e «pedagogico» tutte le forze tradizionalmente emarginate, sulla cui esclusione si basa il mantenimento delle istituzioni separate”. In this sense, the reference Canella makes to the concept of the ‘utopia della realtà’ learned from Rogers (see Chapter 1) sounds relevant: “la vera utopia sta nella progressiva trasformazione della realtà. Il vero architetto non può non avere a che fare con la realtà per cercare di modificarla. Talvolta, mi avrai sentito dire che l’architettura, purtroppo non può che risultare *riformista*, non potendo riuscire rivoluzionaria...” (in Enrico Prandi, 2005 p.15), and also reiterated by Paolo Portoghesi: “Questo obiettivo della continuità critica che è alla base della sperimentazione aiuta a capire quanto è avvenuto a Milano: la città in cui la polemica per l’architettura razionale è stata più viva e più vera ma anche la città in cui la critica dall’interno del movimento moderno è stata, soprattutto per il lavoro di Erenesto Rogers, più coraggiosa e radicale...”, in ‘Perché Milano. Une saison en enfer’, “Controspazio”, n. 1, giugno 1973, pp. 7-8.

FIG. 223

The pedagogically innovative and civically emancipated public life was one of the crucial issues in the project of the Italian periferia as an integral part of the city, exemplified in some of Canella's works such as Pieve Emanuele Civic Center (1971) or the recovery project of Palazzo di Giustizia di Ancona (1975-1989). Images from Bordogna, Canella and Manganaro (2014).



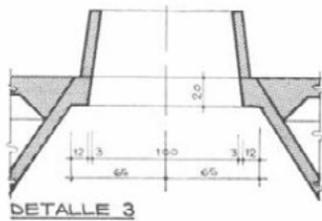
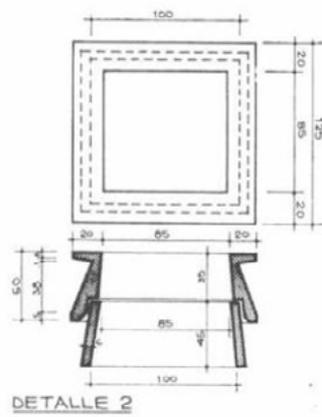


FIG. 224
 Construction details of the single
 concrete module used to build
 Buenos Aires atrium coffered roof.
 Image from "Nuestra Arquitectura"
 (1967)

5.5 *The synthesis of essential*

Every experienced builder knows very well that not all the boxes or primary geometrical forms are consequently architecturally simple.

Simplicity of pure forms cannot be achieved without a clear idea of the whole conception.

A box implies, as we have seen in many drawing processes, first starting with it as a void, and then trying to put into it all the elements required by the programme or, in some cases, splitting the programme into several boxes. For a building need not only be a simple box and perhaps it will not be a box at all.

A building is an inner space in relationship to, or conforming with, an outer space. A building must be planned from inside out and from outside in, in a double and reflected process.

A building is a shelter created to perform a function. It is essentially a space. Roofs, walls, openings, and floors are the means to shape this space. Proportions, generosity and relationship between the different elements, are the means to make it agreeable and pleasant to the travelling eye.

A building must be justified by itself, not by theories.

Above all art is intuition and art is supreme freedom. But some people believe that intuition must be cultivated and freedom conquered.⁸⁵

Horacio Caminos, 1952

When Rector Frondizi invited the Argentine group to submit a proposal for Ciudad Universitaria de Buenos Aires in 1959, Horacio Caminos was about to finish his first teaching experience in the United States at the School of Design in Raleigh, North Carolina, where he was hired in 1952 together with Eduardo Catalano, former colleague at the time of educational and professional adventure of Tucumán.⁸⁶ In the late 1950s, a national survey ranked the NCSU School of

⁸⁵ Horacio Caminos, 'Around the Simple Box', in "The AA Journal", no. 766 (1952), p.73-74.

⁸⁶ On his return from London, Horacio Caminos (1914-1990) did not appreciate the Peronist turn that Tucumán had taken, thus he decided to leave the university and move to the USA with his family, and his colleague Eduardo Catalano (from a conversation between the author of this thesis and Horacio's son Carlos Caminos). Together with Catalano, they won first prize in a national competition organized by the 'Carrier Corporation' for the design of a single-family house based on their air conditioning system, with prominent architects such as Pietro Belluschi and Richard Neutra among the jurors and another competition for

Design in the top ten most advanced educational programs, along with Harvard, Princeton and Yale,⁸⁷ with School of Design (SoD) as the first in the United States to include social sciences as a requirement of architectural education.⁸⁸ The School of Design was founded in 1948 by Henry Kamphoefner, educated within Beaux Arts tradition at the University of Illinois but highly determined to promote a change in the school's educational system, so Lewis Mumford was invited to develop the new curriculum of architecture in the same days as the MoMA symposium in which Mumford, under the gaze of Hitchcock, Gropius, Breuer and other supporters of orthodox Modernism, openly criticized "What is Happening to Modern Architecture", that is formalist tendencies which only considered buildings 'self-sufficient entity [and] an aesthetic abstraction'.⁸⁹

Thus, on the recommendation of Mumford himself, dean Kamphoefner renewed the small faculty around humanistic and 'regional' values entrusting Matthew Nowicki with the role of president of architecture program, largely structured around visiting lectures series and thematic workshop led by Buckminster Fuller, George Matsumoto, Roy Gussow, Pier Luigi Nervi, Felix Candela. In the course of its development, but even after Nowicki's untimely death, the educational project carried out in Raleigh became particularly known for "The Student Publications of School of Design",⁹⁰ periodicals edited by school's students and coordinated by Horacio Caminos for several years where peripheral voices to those of the CIAM leaders enriched the debate on post-war modern discourse. Among the issues, Volume 2 (1951) includes a contribution by George Matsumoto entitled "The Flexible Building" which, despite its

an elementary school published in "Architectural Forum", March 1956). Eduardo Catalano (1917-2010) already had connections with the United States, as he received scholarships to pursue studies in the United States he relocated to attend the University of Pennsylvania and Harvard University, where he graduated in 1944 and 1945 respectively under two masters of modernist architecture, Walter Gropius and Marcel Breuer.

87 In the academic year 1952-1953, the Raleigh School of Design at North Carolina State College was the only American school to be invited to exhibit students' works at the University of the Arts Festival of Edinburgh, and in 1954 one of only six design schools to be invited to exhibit students' works at New York's MoMA. Two years later the school was one of the seven to participate in the traveling exhibition in Western Europe and in Latin America.

88 A large component of the curriculum was devoted to humanities, history and regional studies, a sequence that formed, in Nowicki's words, 'the backbone of the school's philosophy'. This included lectures titled "Contemporary Civilization", "Contemporary Science and Society", as well as courses like "Human Behavior" and "Urban Sociology". The school's activities aroused such interest that Frank Lloyd Wright, Eduardo Torroja, Jose Luis Sert, Mies van der Rohe, Walter Gropius, Charles Eames and Eero Saarinen went to lectures in Raleigh.

89 The 1948 MoMA symposium "What is Happening to Modern Architecture?" culminated a 20-year-long debate between the two competing historiographies for modern architecture: Mumford was indebted to 'organic' principles, and guided by ecological and cultural concerns, whereas Hitchcock favoured the machine metaphor, its formal, style-oriented, and symbolic criteria.

90 "The Student Publication" began as a tribute to Matthew Nowicki after his untimely death in 1950 at the age of 40.

AROUND THE "SIMPLE BOXES"

by Horacio Caminos

AFTER MANY YEARS of fighting against clichés, it seems that the architecture of today is on the way to becoming a new formalism. The new aesthetic principles, however, are not supported by good results; instead, values seem upside down, and the "simple box" formula has become the successful slogan that sustains unsuccessful projects and buildings.

The principle is certainly old, and many architects before us have tried to make simple boxes though the results have been completely different.

Every experienced builder knows very well that not all the boxes or primary geometrical forms are consequently architecturally simple. From the constructional point of view, most simple forms are, indeed, very complicated to achieve, and some, almost impossible. We have seen many boxes with just a skin simplicity, but inside they were complicated, tortured, ugly and above all, unfunctional.

Simplicity is a relative word and in architecture means not merely simplicity of forms, but simplicity is the answer given to the different and related problems considered as a whole. Although it is true that forms are the language or the final architectural expression they are as well the final consequence, the expression of something, of an intention that is not purely aesthetic, because a building must fulfil other important requirements. Forms cannot stand alone without content. Simplicity of pure form cannot be achieved without a clear idea of the whole conception.

A box implies, as we have seen in many drawing processes, first starting with it as a void, and then trying to put into it all the elements required by the programme or, in some cases, splitting the programme into several boxes. For a building need not only be a simple box and perhaps it will not be a box at all.

A building is an inner space in relationship to, or conforming with, an outer space. A building must be planned from inside out and from outside in, in a double and reflected process. The outside limits are the visual limits of the open space that must be considered together with the material limits of the site. Sometimes the visual limits are interesting and we use them, at other times we are forced to avoid them.

This reflected double process banishes the starting idea of buildings as isolated boxes, whether they will be surrounded by trees, grass, pavement or other boxes. Probably the result of this process in some

cases, would be something like a box.

You may have seen lately awful buildings whose main features consist of facades with an abstract pattern of voids and fills (or fills and voids), and with walls of many different materials painted with many different colours. Designers with certain ability or superficiality, know that this kind of approach is very easy to achieve after some essays. But easy or difficult, abstract or concrete, it doesn't matter if the results are good. Unfortunately, many people feel that they are not.

A building is not really a collection of samples of windows and fills, materials and colours. It must be something more than plastic extravagance, especially if they are unfortunate. It is understandable that the people don't like the so-called modern architecture, because the aesthetic speculations that would otherwise remain on paper are not enough to pardon the big calamities.

A building is not purely a collection of fashionable tricks and they are certainly unnecessary to produce good architecture. They are anecdotic details that probably satisfy the lack of imagination of the designer to meet the real problems.

Good and pleasant architecture can be produced in spite of bad taste or formal details. St. Pancras Station is one of many outstanding examples. Everybody knows that the hall is really superb. But this is not the only point. The point is that the station, the front building, terrace and ramp are also very good for their proportions, scale, space simplicity and dignity in spite of the "gothic" facade.

It is symptomatic that the former industrial buildings developed by engineers were aesthetically satisfying until the architects began to exercise their aesthetic theories.

Sometimes it is more profitable to explore the old living buildings around us than to persevere through the unsuccessful banalities of the magazines, except when they remind us of such bygone epochs as Paxton and his Crystal Palace for the 1851 Exhibition, a lesson which has been forgotten nowadays.

It is essential to answer all the particular problems and satisfy the different human and technical requirements without losing the view of the total conception and the control of the project as a whole.

A building is a unity, but a unity integrated with the site and surrounding area.

A building is a shelter created to perform a function. It is essentially a space. Roof, walls, openings, and floors are the means to shape this space. Pro-

73

FIG. 225
"Around the simple box" by Horacio Caminos
published in issue 766 of "The Architectural
Association Journal" (1952)

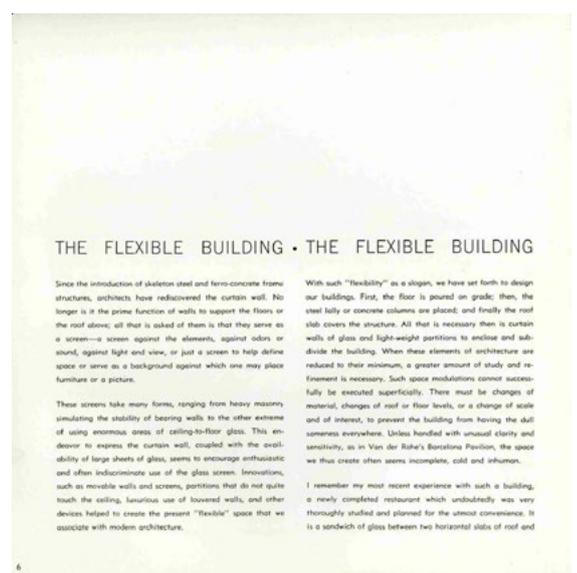
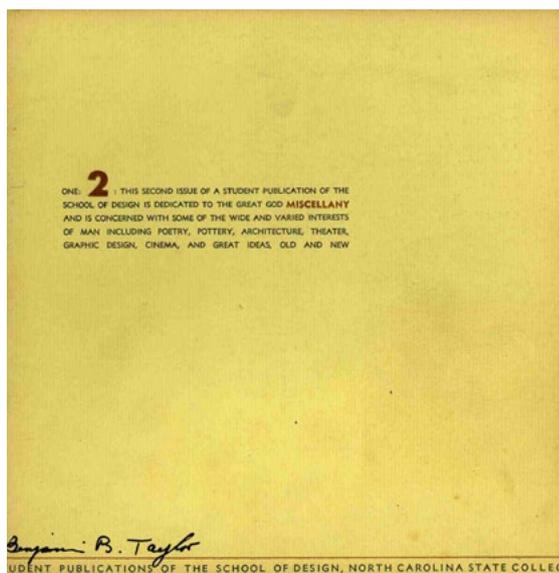


FIG. 226
"The flexible building" by George Matsumoto published
in issue 2 of "The Student Publications of School of
Design" (1951) of North Carolina University

conciseness, does not conceal perplexities towards the unstoppable pervasiveness of this concept:

“With such ‘flexibility’ as a slogan, we have set forth to design our buildings. First, the floor is poured on grade; then, the steel lally or concrete columns are placed; and finally the roof slab covers the structure. All that is necessary then is curtain walls of glass and light-weight partitions to enclose and subdivide the building. When these elements of architecture are reduced to their minimum, a greater amount of study and refinement is necessary. Such space modulations cannot success – fully be executed superficially. There must be changes of material, changes of roof or floor levels, or a change of scale and of interest, to prevent the building from having the dull sameness everywhere. Unless handled with unusual clarity and sensitivity, as in Van der Rohe’s Barcelona Pavilion, the space we thus create often seems incomplete, cold and inhuman [...]

Why can’t there be a change in floor or roof levels, a solid wall somewhere to reassure us of the shelter it provides us? And why can’t there be an intimate division to help re-establish the human scale or some area where one knows that he belongs instead of being an exhibition piece in the middle of one big unhappy space? Admittedly, there is much to be said for flexible space, but one cannot help wondering how truly flexible this space is [...]

The modern architects have been conspicuously lax in their consideration of a basic type of change in building. Blinded by the cold clarity of the present they have too often brazenly ignored the future. It is time we stopped fooling ourselves about ‘flexible’ space and started some serious thinking and work towards that end”.⁹¹

These argumentations demonstrate the possibilities given to peripheral exponent of architectural modernism to discuss renovation from within educational institutions attracting a plurality of personalities and voices, rather than influential great masters, that really resonates with the experiment inaugurated in Tucumán, that is the first episode in this research (see Chapter 1). The circulation of ideas

91 A member of Kamphoefner’s original crew, California-born architect George Matsumoto studied architecture at the University of California, Berkeley, and Washington University in St. Louis before training under Eliel Saarinen at the Cranbrook Academy of Art. Starting his career at the offices of Saarinen and Swanson and Skidmore, Owings, and Merrill (SOM), Matsumoto was only 26 years old when he accepted Kamphoefner’s invitation to join the School of Design in Raleigh.

extended its map, with the prototypical figure of the architect-educator who had taken shape in Tucumán within the IAU's collective and the bureaucratic apparatus of the university experiencing a totally new condition: provisional, temporary, changing and de-territorialized – that is distant from the context of origin.

However, what should not go unnoticed is that in this precarious condition the architect-educator continues to operate from within institutions, like in the case of Caminos and Catalano, whose work and living experiences would be increasingly characterized by temporariness and change from the moment they leave Tucumán. Before they were both involved in SOD's new educational project, in fact, Caminos and Catalano moved to London with financial assistance from the British Council to teach at the Architectural Association (1951-52). His brief experience places Caminos at the Architectural Association at the pick of pedagogical discussion around architectural modernism, considering that Ernesto Nathan Rogers with whom he shared the Tucumán experience and IAU's educational project was frequenting Bedford Square since the 1st CIAM Summer School organized in 1949.⁹² The most significant trace of Caminos' passage to the Architectural Association is in a short paper published by "The AA Journal" claiming a 'spatial question' too often overlooked by the tendency to build 'simple boxes':

"A building is a shelter created to perform a function. It is essentially a space. Roofs, walls, openings, and floors are the means to shape this space. Proportions, generosity and relationship between the different elements, are the means to make it agreeable and pleasant to the travelling eye. Functional requirements are the means to make it efficient and comfortable for man. Unity, simplicity and clarity are the means to synthesise and exalt its general quality"⁹³

92 What seems interesting to notice here is that John F.C. Turner was a student at the AA where he graduated in 1954. As already mentioned in Chapter 1, he was among the participants of CIAM Summer Schools organized by Rogers in Venice, where he received the invitation to move to Peru (1957). In that occasion, John F.C. Turner consolidated his position around the concept of informal settlement and the 'freedom to build', an approach that will converge at MIT where, together with Horacio Caminos, who moved there in 1965, they established The Urban Settlement Design in Developing Countries (USDP), a program funded by the Ford Foundation. The program has been influential both through commissioned projects and research publications, with graduate students occupying leading positions in international, national and local agencies with responsible roles in territorial policy. After *Urban Dwelling Environments studio. An Elementary Survey of Settlements for the Study of Design Determinants*, Cambridge: MIT Press, 1969, at the request of the World Bank, in 1976 Caminos and Reinhard Goethert, his former student and staff member of the USDP, published *Urbanization Primer*, Cambridge: MIT Press, 1978.

93 Horacio Caminos (1952).

Admittedly, what resonates in Caminos' words are the same perplexities on the risk of a 'pervasive simplification' expressed by his future colleague at the School of Design George Matsumoto. But what should most attract attention, is that Camino's reflections precede by several years Frondizi's invitation to intervene in the project for the new Ciudad Universitaria de Buenos Aires that, as said, fatally resulted into the barest repetition of one single typical box.

More specifically, the first architectural solution for the educational block has been published in Francisco Bullrich *Arquitectura Contemporanea in Argentina* (1963),⁹⁴ accompanied with a series of photographs depicting the campus project physical model at the stage of the early ambitious proposal articulated in a variegated sequence of volumes. The only drawing is the block's elevation, which it seems to maintain a certain degree of complexity, articulation and plastic expressiveness on the architectural scale. However, this solution is never reported in specialized magazines that divulged Buenos Aires campus project, especially in the above mentioned case of "Nuestra Arquitectura" celebrating the block under construction for its 'regularity, typical of a *classic* building: orderly, calm, rational' with a fleeting hint in the last lines on 'the plasticity of the concrete [that] *also* transmits a great expressive force'. It is rather observed that 'from a distance, [the pavilion] appears as a *floating* structure',⁹⁵ just like in the perception of *hovering lightness* that Hilberseimer recognized when looking at Mies' Burohaus.

In Buenos Aires, this perception was probably accentuated by the fact that the building was still unfinished, and the horizontal were the only structures completed following the benefits of the 80% repetitive system. However, there is something more behind this perception that well describes the context of uncertainty that have caused the progressive simplification of UBA's campus plan to the barest form in which university can exist, that is the formal moves adopted by Caminos and Catalano to shape that floating mass. Even if the plastic complexity of the first architectural solution could very probably no longer be pursued, the two architects operate to subvert the hegemony of system and its abstractness from within its rules, by repositioning a 'spatial question' at the center of the new educational project taking place at Universidad de Buenos Aires.

The first *move* is about the mediation between the block and the ground. In fact, what can be observed is an overhang of 5,00 meters along the entire block's perimeter starting from the second floor which reduces the ground

94 Francisco Bullrich, *Arquitectura Contemporanea in Argentina: panorama de la arquitectura argentina 1950-63*, Buenos Aires: Nueva Vision, 1963.

95 "Nuestra Arquitectura" (1967).

FIG. 227

*Ciudad Universitaria de Buenos Aires (model), first version with Horacio Caminos and Eduardo Catalano in charge of the project.
Image from Bullrich (1963)*

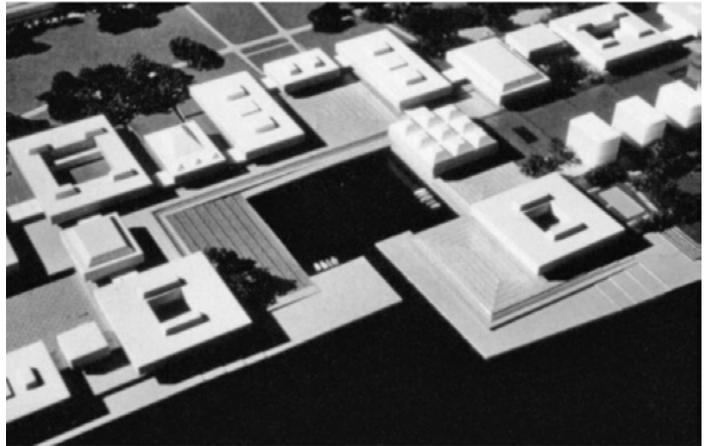


FIG. 228

*Ciudad Universitaria de Buenos Aires (drawing), first version of university blocks with Horacio Caminos and Eduardo Catalano in charge of the project.
Image from Bullrich (1963)*

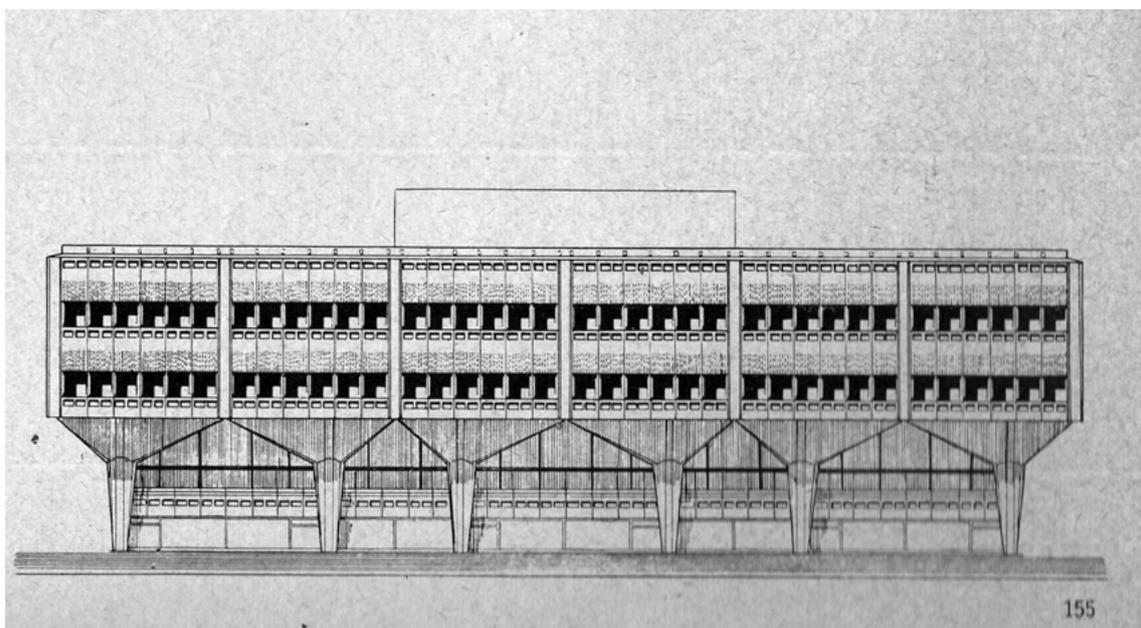


FIG. 229

*Ciudad Universitaria de Buenos Aires (section),
final version of the typical block by Horacio Caminos
and Eduardo Catalano showing the full-height atrium
as the prototypical common space of the entire campus.
Image from "Costrucciones" (1969)*

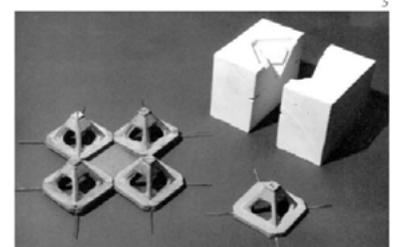
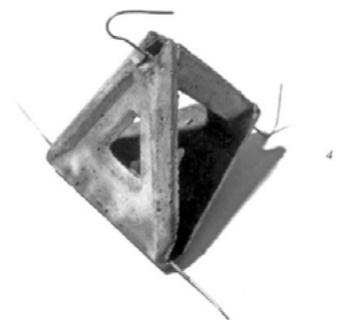
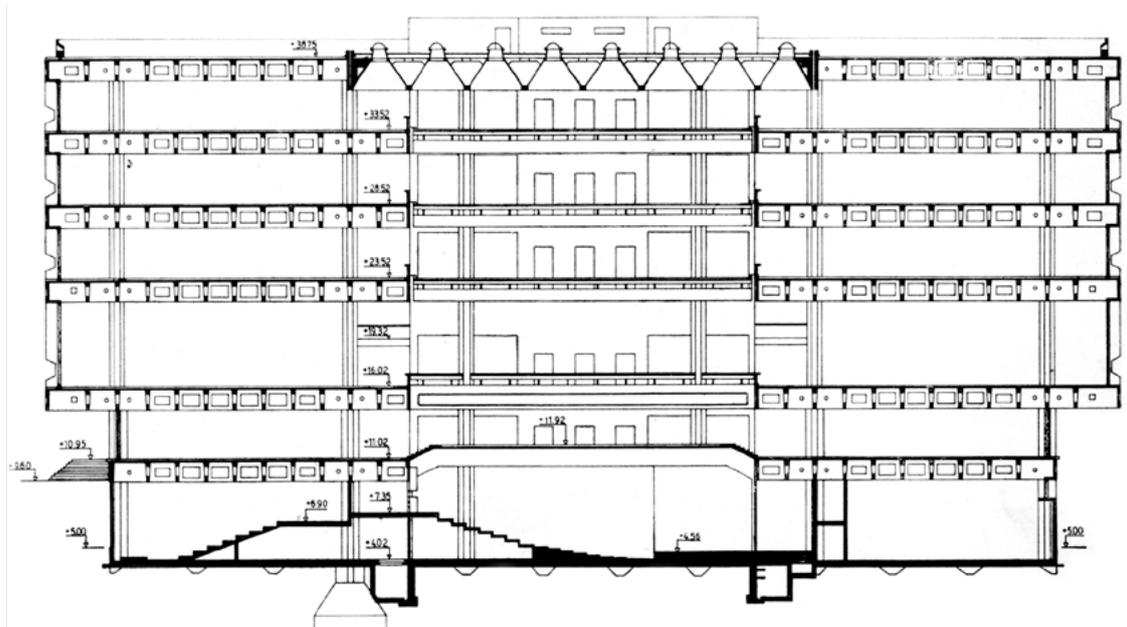


FIG. 230

*Students works from Horacio Caminos' design studio
in the United States. Courtesy of Carlos Caminos*

floor and first floor footprint. Compared with the first proposal published by Francisco Bullrich, strongly characterized by the plastic expressiveness of a giant portico which formally expressed its supporting role towards such an overhang, we can clearly understand the process of simplification that conditioned the project at this stage, with the elimination of any structural support considerably accentuating the *fluctuation effect*. The portico from the first solution generally associated with informal rituals of aggregation in architecture for education, is only evoked by the 5,00 meters-deep excavation running around the ground floor and exclusively marked by the continuation of the coffered ceiling between inside and outside.

In this sense, that of externally erode a compact mass rather than the result of a prodigious overhang, the ground floor perimeter ring acquires its own spatiality: a not clearly defined territory which has lost its protective character to embody the sense of imprecise and blurred boundaries between university institution and the rest of the world with a precise urban condition at the basis of UBA's educational project. Compared to the abstractness of the campus plan in its final version, devoid of any articulation to discipline, orient and guide collective life, the typical block can only outline an area of influence, with uncertainty and unpredictability made materially explicit by the exposed intrados of coffered modules – without any finishing work – openly denouncing the hegemony of system and its repetitiveness. But more than that, it is in the second *move* that the most disruptive spatial implications can be found.

In fact, the internal space is literally converted into a privileged territory for the institutional project promoted by the new Universidad de Buenos Aires, to best develop interdisciplinary, relational and informal exchange skills at the basis of an authentic 'universidad de investigación'. The technical description from "Nuestra Arquitectura" speaks of a *patio* positioned in the central piece of the managerial diagram, which 'responds to the idea of proposing a *common space* for students, following the layout of the historic urban headquarters of FCEN (even if the central courtyard of the latter was open)'.⁹⁶ This last clarification, in reality, is not trivial demonstrating once again the absence of a satisfactory analysis on this project. Indeed, the definition of *patio* does not seem the most appropriate, since the central piece of 36x32 meters rather corresponds with a huge empty room: a full-height atrium (about 20,00 meters) covered on top literally carves the typical block from the inside. This space is completely free, since all support elements are

96 "Nuestra Arquitectura" (1967), p.40.

placed in the atrium's perimeter. Not occasionally, it is in this central piece that all the elements that escape the pervasive repetitiveness of the entire system are concentrated:

“Coverage [of the atrium] composed of pyramidal trunks with a larger base of 4 meters side and 2,10 meters high up to the skylight located on the smaller base of 1 meter side [...] the basement is covered with pre-stressed beams 1,30 meters high (exceptionally, these beams will be hidden by a reinforced ceiling due to acoustic requirements) [...] The bleachers were also made with special wooden formworks (with particular attention to the beam-column joints)”.⁹⁷

In addition, those that in the article are called ‘estructuras especiales’ are expertly distributed along a vertical stratification that greatly amplifies the atrium effect: four levels of bleachers overlook the central podium slightly raised from the ground level, under which the auditorium is positioned on the basement. But once again, the spatial effect produced through the internal erosion of a compact block seem to be the result of much earlier thinking. Following the instructions dictated by Horacio Caminos to go beyond the conception of a *simple box* (“The AA Journal”, 1952) we read:

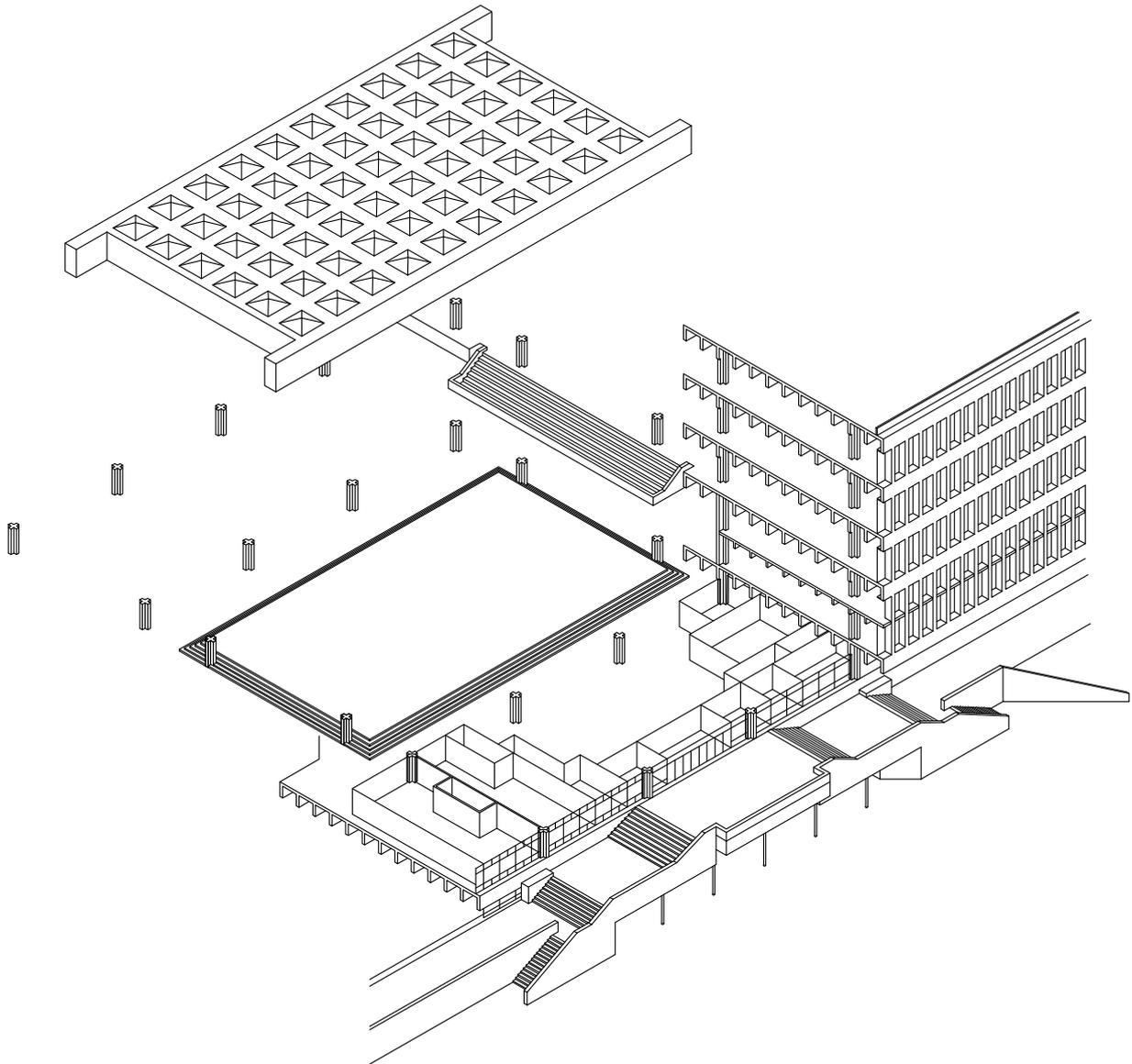
“A building is an inner space in relationship to, or conforming with, an outer space [...] Proportions, generosity and relationship between the different elements, are the means to make it agreeable and pleasant to the travelling eye”.⁹⁸

In fact, the educational project promoted by rector Frondizi was essentially based on the fabrication of a new subject that must learn to navigate interior spaces: a full-time worker transplanted from the dense city fabric will be incorporated within the bureaucratic apparatus of the university institution with his educational role – until then assimilated to a generic social service – turned into that of a professional researcher. In order to be accepted, however, this new subject should compensate his lack of social engagement by demonstrating his ability to generate productive networks of informal relationships multiplied within a completely new environment reproducing a not better defined urban condition. The provision of the most advanced

97 Ibid., p.40.

98 Horacio Caminos (1952), p.74.

FIG. 231
Axonometric of Buenos Aires university typical block.
(redrawn by the author)



technological equipment in the initial stages (Pabellón I conceived as a large container to house computer Clamentina), has been followed by campus plan proposals increasingly influenced by unpredictability and uncertainty leading to the progressive simplification of the final configuration: a typical block repeated on an abstract surface. However, while Argentine architects Caminos and Catalano developed their proposals from the United States experiencing the most precarious version of the architect-educator prototypical figure they had inaugurated in Tucuman, the inner space of the typical block became the privileged territory for practicing the UBA's educational project.⁹⁹

Against this backdrop, Caminos and Catalano respected the promise of subverting the rules of the *simple box* despite its economic conformation: in their synthesis of essential, atrium enters as an architectural expedient that interrupts the hegemony of an abstract organizational system. If it is true that the progressive simplification up to the barest form in which university can exist has shown the impossibility of governing the urban scale of the campus by reducing it to the parsimonious repetition of a single standard block, the block's cavity literally internalize urban complexity that could no longer been staged outside. Thus the internal atrium is converted into the most reliable center of gravity to instigate formal and informal activities of a heterogeneous community, transplanted from the city, which found space to simultaneously perform academic and public, educational and recreational, adhesion and of dissent. Finally, the internal space of architecture usurps the 'urban condition' that the campus has always sought. As a demonstration of this, the technical-structural analysis conducted by "Nuestra Arquitectura" reveals a surprisingly *uneconomic* choice: the oversizing of the structural elements with respect to the

99 In 1981, Horacio Caminos collected his thoughts on education in a manuscript. The title quoted H.G. Wells: "Education or Catastrophe: Critical Choices in the Process of Learning", while the introduction admits these reflections come from personal experiences in architecture and urban design: professional practice, research, and teaching for a period of about fifty years. They are personal observations, reflections or pragmatic indications perhaps useful for students, teachers, professionals and people involved interested in education, developed in the course of various assignments carried out in different contexts and interdisciplinary groups that included specialists, administrators, politicians, end users in South and Central America, the Caribbean, Europe, Africa, Asia and the United States (from a conversation with Horacio's son, Carlos Caminos): "Man's performance is contradictory. We are conquering many fields with a depth and breadth never attained before. But we are also fumbling in other crucial fields with disastrous consequences for human beings and our environment... We ignore that in the present social, economic and political systems, education implies the responsibility of the few towards the many. We are wrapped up in disciplines that lack social purpose and understanding of human behavior, and we deliver only rhetoric and fail to provide a service to the community... Education should be responsive to life... These observations on Education are at the college and professional levels. Although they have originated from design disciplines, they extend to all spheres of work... They take a broad, fresh look at education beyond the classroom, wherever life is and where the challenges are...". The manuscript was partially translated into Spanish as *Educacion o Catastrofe: Decisiones criticas en el proceso de aprender*, Buenos Aires: EMECE, 1989.

original requirements would have allowed a subsequent vertical development of the typical block – recalling here Mies' Burohaus constructive tactics. This choice, only countered because of the proximity to the airport, repositions one of the most debated questions around university campus design – and of modernization projects in general: change and growth. On this basis, rather than resorting to a *conventional* extension plan, Universidad de Buenos Aires seems to have invested ambition in the potential of its architectural devices waiting for future stimuli – given by a number of students – to enable the rest of the building reaching its full occupation, that is what happened with the informal occupation of Pabellón II destined to the FADU still under construction in 1971.

Ultimately, what the settled community experiences in that occasion responds to a radically different logic of growth: density, and its progressive increase, cannot escape from a typically urban argument with building's interior designated for practicing new collective behaviours, in this episode associated with education and transmission of knowledge, whose spatial consistency even in the case of atriums could represent a field of experimentation for architecture rather than falling into the charm of interior associated with ingenious distribution of furnishings throughout a neutral space.



FIG. 232

Detail of the raised floor in the central position in continuity with the system of external paths that gravitate around the sequence of typical blocks.
(photo by the author)



EPILOGUE

Universities have images too

Quotations are taken from James Breslin 'The Harvard Murals', in Mark Rothko: A Biography (Chicago: University of Chicago Press, 1998):445-457.

The reaffirmation of CIAM's aims and their circulation across the new extended geography in the aftermath of WWII was not an easy task for modernist leaders. Luis Sert's first work looking at the vast American territory did not meet the hoped-for success, with his *Can our cities survive?* (1942) which would hardly have propitiated the formation of a cohesive United States CIAM delegation. On the contrary, as Tom Wolfe would ironically pointed out years later, the mission of the "White Gods" materialised into university rooms with long-standing or newly created institutions that relied on the experience of Gropius, Breuer, Mies van der Rohe, Moholy-Nagy and Sigfried Giedion and others in the field of education, which has also become a cornerstone of the modern post-war discourse. In that same context, Luis Sert too would land a prominent role as dean of the Harvard Graduate School of Design from 1953 to 1969, starting the first degree program in urban design. In a fictitious conversation between imaginary commentators published by "Architectural Forum" in 1963,¹ Sert is given the statement "a university campus is a laboratory for urban design". And it was during his deanship that, in October 1962, Mark Rothko had a meeting in his loft studio on First Avenue, New York, with Harvard University authorities to discuss his commission consisting of a set of murals for a dining room.

If it is true that Rothko had long reviled the academic world that "like the Bronfman family, was giving him a dining room to work with, not a chic commercial dining room as in the Seagram, true, but not exactly a workingman's cafeteria either"

it is equally true that Rothko considered this commission as a way to go beyond the fluctuations of the market governed by galleries and return to an earlier system of patronage. From their point of view, Harvard authorities supported Rothko's aims in order to

"attach some of the prestige of the art to the institution and make the university look progressive. Universities have images too.

Looking to decorate a dining room for high-toned social and business exchanges, directors wanted a mural-scale work that would impress but not dominate, while Rothko wanted to push viewers inward and imagined his mural rooms as creating a space which freed viewers from the pressures and distractions of modern life".

And indeed, from now on the artist and his institutional patron were engaged in a power struggle for control of this space, since Rothko will be supposed to work in the realm of the Holyoke Center top-floor, the main administration building of Harvard University then under construction. This was designed by Luis Sert with architects Hunson Jackson and Ronald Gourley, occupying a full city block in the heart of Harvard Square as the first high-rise building on campus, controversially received for its relationships with historic Cambridge. Another article from "Architectural Forum" in 1964 described the intrusion of a new dimension in campus design due to many universities desperate to expand but with little room to do that within the city fabric.² Not occasionally, Sert was involved in these problems by exploring the vertical development of university architecture in the case of the well-known Peabody Terrace for a large married-student housing complex. Indeed, some of the emerging design issues are anticipated in the project of the long, narrow, rectangular dining room with its North and South walls containing large horizontal windows offering panoramic views of the Harvard campus, Cambridge, the Charles River, and Boston. In the struggle to dominate this space

1. *The fictitious conversation was about the controversial reception of Le Corbusier's first and only work in the U.S., that is the Carpenter Center at Harvard University, in "Architectural Forum" (October 1963):105-9.*

2. *'The Universities: Tall New Symbols of Their Significance', in "Architectural Forum" (June 1964):114-23.*

“These windows posed a different set of challenges to Rothko’s ambitions since they offered a strong visual alternative to any paintings in the room, admitting a strong light inside the room instead of a ‘subdued’ one, which would also have preserved his vulnerable paintings from damage. In this specific physical context, Rothko’s response was that of dissolving the painting/room relationship, just as his paintings had dissolved the figure/ground relationship even if, in doing so, he defeats Sert’s architecture. In the first place, he covers just about all of the wall space with his paintings, which repeat, in order to transform, the two remaining architectural features of the room, its doors and windows. Against the commanding panoramic view towards the external urban environment, Rothko encompasses the visitor with his five 2,5 meters high monumental paintings making the boundaries of Sert’s box more ambiguous. The door and window-like openings in all the panels do not offer grand vistas of heavenly or urban space, but they draw the viewer toward a realm outside the literal room, at the same time that they push forward and intrude into the room.”



*FIG. 233
Elizabeth H. Jones ©
Archival photo of the
installation of Panel Five
at the Holyoke Center in
January 1963.*

The site visit to obtain the expected result had put Rothko’s creative genius to the test of a new set of negotiations

“implicating him in an elaborate complex of people, institutions, events assistants, architects, designers, museum directors, university presidents, bureaucrats, budgets, accountants, workmen. A Renaissance patron might stipulate size, subject, and time of completion for a commission. A modern corporation, being impersonal, can be more liberal”.

However, about three years after their final installation, the murals were in appalling shape irretrievably damaged by the direct sunlight that had worried Rothko from the very beginning. Because after all, the institution

“was less interested in transforming a room into a work of art than in creating an ambience of quality for its university officials and guests informal meetings. The institutional context within which Harvard murals finally ceased to exist, since four of Rothko’s five paintings suffered man-made damage. It’s as if Rothko had saved his works from the anonymity of the marketplace only to lose them to a bureaucracy where art was not even much valued as a commodity”,

but as an ancillary service to the interests of his new impersonal patron until 1979, when they were rolled, put into the university storage, and rarely seen by the public.⁴

4. In 2015, a sophisticated digital camera-projector system and a customized software allowed them to be restored and brought back to life.

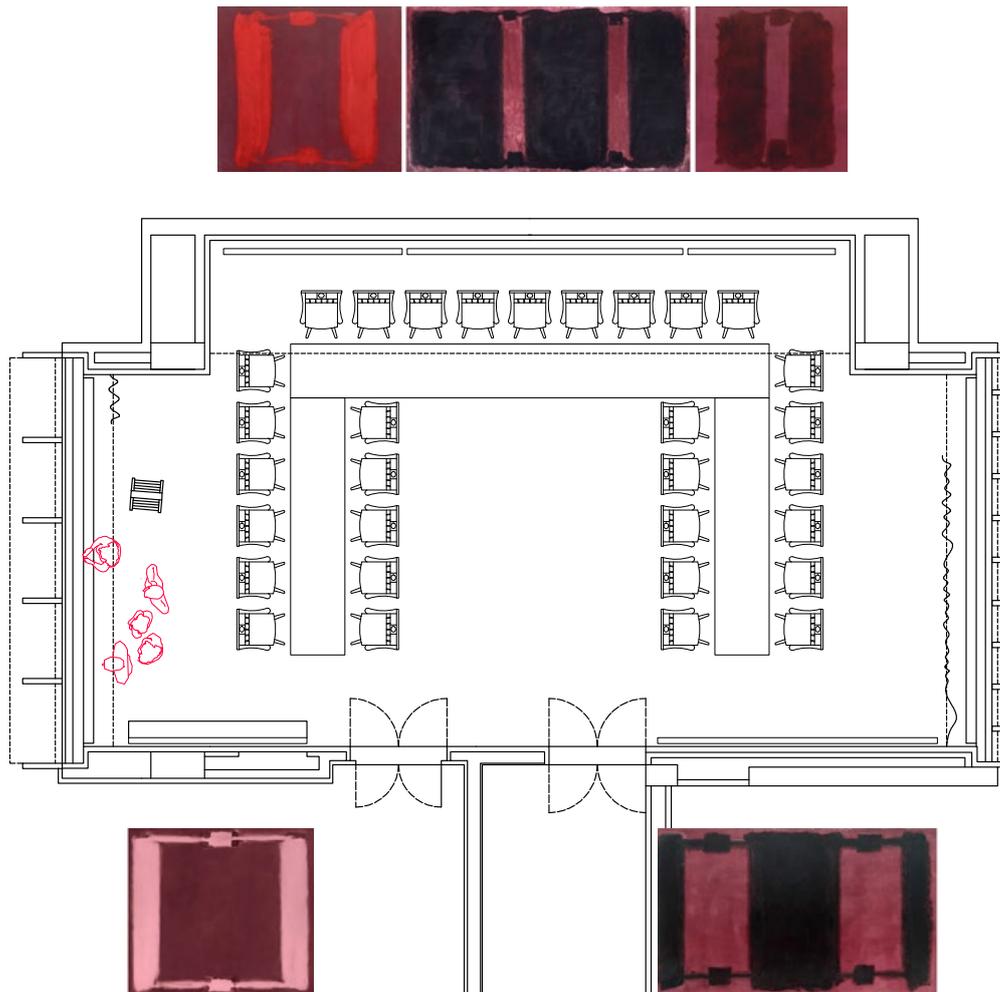


FIG. 234
Holyoke Center dining room.
Redrawn by the author

CONCLUSION

Beyond knowledge factories.

Towards a critique of learnification in architecture

We really don't know what we are doing about the design of space at all. On the other hand, all this was part of a much more pervasive weariness, part of a growing condemnation of Modernism and a turning away from what now appeared as its technologist and constructional determinism. Like most architectural movements, even the seemingly most profoundly committed and the most theoretically based, 'indeterminism' came to an end, too.¹

The most consistent reality of architectural thought in the last 20 years is its astonishing degree of unreality. The aftermath of May 68 was ironically marked by the return of an authoritarian system harsher and more removed from the realities of a lived-in world than the bureaucracy it replaced.²

The metaphors that have accompanied the continuous reworking of the ideal campus have always engaged in a mediation between its rhetorical construct and reality. The complete recapitulation of these metaphors - from the 'quad' to the 'academical village' and from the 'anti-city' to the various forms of 'univers-city' - was the central object of many studies and insights that precede this research.

This thesis instead looks at a precise moment in which all the instincts of protection and self-isolation associated with the figure of the campus had already been overcome in the name of an educational project aimed at maximize integration with the reality of the outside world, structured on a sequence of six case studies conceived in a peripheral and apparently distant context, relatively little-explored in the general debate on university educational space.

Despite this, looking at what happens at the margins rather than the center of a picture has mobilized different perspectives and stimulated a critical reflection on the reciprocal implications between spatial and educational issues.

Le metafore che hanno accompagnato la continua rielaborazione della figura ideale del *campus* hanno sempre ingaggiato una mediazione tra il suo costruito retorico e la realtà. La completa ricapitolazione di queste metafore – dal 'quad' al 'academical village' e dalla 'anti-città' alle varie forme di 'univers-city' – è stata l'oggetto centrale di molti studi e approfondimenti che precedono questa ricerca, utilizzati come riferimento. La tesi guarda quindi a un momento preciso, in cui tutti gli istinti di protezione e auto-isolamento associati alla figura del *campus* erano già stati superati in nome di un progetto educativo orientato alla massima integrazione con la realtà del mondo esterno, strutturata su una sequenza di sei casi studio concepiti in un contesto apparentemente periferico e lontano nel tempo e relativamente poco esplorati nel dibattito generale sul progetto dello spazio educativo universitario.

Nonostante questo, lo spostamento dello sguardo dal centro della scena ai suoi margini ha mobilitato prospettive differenti e stimolato una riflessione critica sulle reciproche implicazioni tra la questione spaziale e quella educativa. Più nello specifico, la tesi ha interrogato questi casi sulla possibilità di intendere l'educazione come progetto, in particolare quando questo si identifica in un progetto educativo che assume l'informalità come paradigma innovativo nella produzione del sapere. Senza pretendere di attribuire a questi casi un carattere di esemplarità, la tesi ha adottato una metodologia supportata dall'analisi di materiali d'archivio, disegni originali in parte inediti e contributi teorici intrecciati alle complesse biografie dei protagonisti per dimostrare, piuttosto, la costruzione di un discorso che andava oltre il singolo episodio

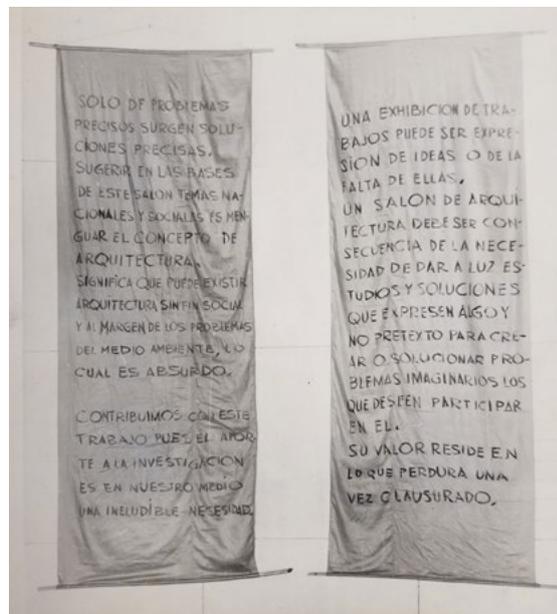
Particularly, the thesis questioned these cases on the possibility of intending education as a project, in particular when this is identified in a project that assumes informality as the innovative paradigm in the production of knowledge. Without claiming to raise these cases as exemplary models nor the first of their kind, the thesis adopted a methodology supported by the analysis of archival materials, original and partly unpublished drawings and theoretical contributions intertwined with the complex biographies of their authors to demonstrate, rather, the construction of a discourse that went beyond the single design episode. Not only because each of these episodes was obviously anchored to a specific local context inextricable from each project. But is the specific context of university institution, in which the architects-educators were introduced by actively participating with their own proposals, to suggested the construction of a common discourse towards a new project of education. Therefore, the main contribution lies rather in having presented them together in a unique sequence based on their interconnections, and having identified in the non-linear, intertwined and complex circulation of ideas the real plot of a hidden discourse that became a project. That is to say, a project of informal education dispersed in the nodes of an alternative map, traced on a countergeography where latent utopias never claimed so far were conceived, designed and built by peripheral exponents of the modern post-war architectural discourse under renovation. A map intensified and articulated if we consider that, at the same time, CIAM leaders trusted in increasing mobility to convey new ideas towards an extended geography that included Latin America and found an important vehicle in Italian architects-educators.

Hence, there is a first level with respect to which the design episodes are juxtaposed, namely the willingness to participate in the process of critical renovation of modern postulates. While not a revolutionary modernist – an ideologically unsustainable term in the post-war period – the architect-educator is rather interested in the internal critical revision of the discourse to adapt modern principles to the unpredictable changes of 1950s real-world, looking for ways to generate novelty while maintaining a link with its history without ever overtly inducing their defeat. Thus, the internal criticism occurs within the limits of a peripheral context

progettuale. Non solo perché ognuno di questi episodi era evidentemente ancorato a uno specifico contesto locale, con un sistema politico e sociale inscindibile da ciascun progetto. Ma per via del contesto istituzionale dell'università, nel quale gli architetti-educatori erano introdotti partecipando attivamente con le proprie proposte, che suggeriva la costruzione di un discorso comune verso un nuovo progetto educativo.

Pertanto, il contributo principale della tesi certamente informato dall'approfondimento sui singoli caso, risiede piuttosto nell'averli presentati insieme accostati in una sequenza inedita basata sulle loro interconnessioni, e aver individuato nella circolazione di idee non lineare, intrecciata e complessa la trama di un discorso sottotraccia che diventava progetto. Vale a dire, un progetto di educazione informale disperso nei nodi interconnessi di una mappa alternativa, tracciata su una contogeografia dove utopie latenti finora mai rivendicate venivano concepite, disegnate e in molti casi costruite da esponenti periferici del discorso architettonico moderno in corso di rinnovamento. Una mappa che si intensifica e si articola se si considera che allo stesso tempo i leader CIAM confidavano nella crescente mobilità per far circolare le nuove idee verso una geografia estesa che comprendeva l'America Latina e trovava negli architetti-educatori italiani un importante veicolo.

Esiste quindi un primo piano rispetto al quale gli episodi progettuali sono accostati, ovvero la volontà di partecipazione al processo di revisione critica dei postulati moderni iniziato nell'immediato dopoguerra. Pur non essendo un modernista rivoluzionario – un termine ideologicamente insostenibile nel dopoguerra – l'architetto-educatore è interessato a una revisione critica interna al discorso per adattare i principi moderni alla nuova realtà mutevole del secondo dopoguerra, alla ricerca di modi per generare novità mantenendo un legame con la storia senza mai appoggiare apertamente una loro messa in crisi. Così, la critica



which becomes, precisely for this reason, a privileged territory for experimenting on the architectural and urban form, transforming that specific context into a real laboratory of ideas on educational spaces, and offering a singular contribution to the history of post-war Modernism. Furthermore, this kind of experimentation not only favours the circulation of ideas between the interconnected nodes of that specific context which has its epicenter in Chile and Argentina, but also expands towards the less conventional direction, that is the one that sees some ideas travel from Latin America to Europe – with particular interest in the development of university projects in Italy which will reach its peak in the early 1970s in the intellectual environments stimulated by the Ernesto Nathan Rogers *experiences*. It is in this perspective that a broad concept of informality was critically explored. Even if, it must be admitted, there is no such frequent use of the term *informality* in the original documentation relating to the selected South American projects. If anything, the term informality applied to education and learning practices will simultaneously enter the vocabulary of pedagogues and radical thinkers who worked in some regions of Latin America at the time, such as Ivan Illich who will make explicit his idea of 'deschooled society' by invoking a new approach 'to incidental or informal education' typically associated with anti-institutional connotations.

In fact, here emerges one of the crucial objectives of this research, that is, not just investigating a precise moment in which education was intended as a project. But questioning how the development of this project took place in a contested territory between bureaucratic and anti-bureaucratic structures, where the concept of informality fleetingly recalled in Illich's words, actually consisted of the most articulated, complex and ambitious object of this contention.

interna al discorso architettonico moderno avviene nei limiti di un contesto periferico che diventa, proprio per questo, territorio privilegiato per sperimentare sulla forma architettonica e urbana trasformando il contesto specifico delineato in un vero e proprio laboratorio di idee sullo spazio educativo offrendo un singolare contributo alla storia del Modernismo del dopoguerra. La sperimentazione su un territorio privilegiato, inoltre, favorisce non solo la circolazione di idee tra i nodi interconnessi del contesto specifico descritto che ha il suo epicentro in Cile e Argentina, ma si espande anche nella sua direzione meno convenzionale, ovvero quella che vede alcune idee viaggiare dall'America Latina verso l'Europa – con particolare interesse per lo sviluppo del progetto educativo e universitario in Italia che avrà il suo apice nei primi anni '70 dopo essere maturato negli ambienti stimolati dalle esperienze di Rogers. È in questa prospettiva che veniva criticamente esplorato un concetto ampio di informalità. Anche se, bisogna ammettere, non si ritrova un utilizzo così disinvolto del termine *informalità* nella documentazione originale relativa ai progetti sudamericani selezionati. Semmai, il termine *informalità* applicato all'educazione e alle pratiche di apprendimento entrerà contestualmente nel vocabolario di pedagogisti e pensatori radicali che operavano in alcune regioni dell'America Latina, come Ivan Illich che esplicherà la sua idea di 'deschooled society' invocando un nuovo approccio 'to incidental or informal education' attribuendogli una connotazione tipicamente anti-istituzionale.

Da qui emerge infatti uno degli obiettivi cruciali di questa ricerca, ovvero non solo investigare un momento preciso in cui l'educazione era interpretata come progetto. Ma comprendere come l'elaborazione e la conduzione di questo progetto avvenisse in un territorio contestato tra strutture burocratiche e anti-burocratiche, dove il concetto di informalità richiamato fugacemente nelle parole di Illich, consisteva in realtà nell'oggetto più articolato, complesso e ambito di questa contesa.



Therefore, the circulation of ideas not only had a geographical significance, but also concerned the concept of informality in its uncertain manipulation and indecisive appropriation between these two realms that would soon be constructed in sharp contrast. If informality introduced as a paradigm openly opposed to the authoritarian and hierarchical systems of educational institutions – and not only those – has a precise location, especially in the decades following the period to which the selected cases belong, the latter define a very particular case in which informality was incorporated within the institution as an undermining principle and operated through its own bureaucratic apparatus to trigger advancements in its educational project. In fact, the sequence of cases incorporate, not without contradictions, the exercise of relational, dialogic and collaborative practices within their own bureaucratic apparatus in order to reconfigure their organizational structure in terms of internal flexibility and external integration. Therefore each episode participates in the process of appropriation of a broad concept of flexibility, adaptability, collaboration, interdisciplinarity, openness both within its bureaucratic organization and the pedagogical methods in order to institutionally establish a renewed educational project based on relational, experiential, occasional, immaterial components of education to reach a greater impact on the transformation of reality.

This happens by the hands of the architect-educator as a prototypical figure outlined in this thesis. In general, a peripheral exponent of the post-war architectural debate and thus equally distant from the CIAM leaders influential role in propagandizing modern discourse, as from the revolutionary personalities

FIG. 236
The collective of architects-educators of IAU (Instituto de Arquitectura y Urbanismo) pose in front of the skeleton of the monumental Vivienda Universitaria de Tucumán (early-1950s).

Pertanto, la circolazione di idee non aveva solo una connotazione geografica, ma riguardava anche il concetto di informalità nella sua incerta manipolazione e indecisa appropriazione tra questi due ambiti che si sarebbero presto costruiti in netta contrapposizione. Se l'informalità introdotta come concetto apertamente contrapposto ai sistemi autoritari e gerarchici delle istituzioni educative – e non solo – ha una sua precisa collocazione soprattutto nei decenni successivi rispetto al periodo a cui appartengono i casi selezionati, questi ultimi definiscono un caso molto particolare in cui l'informalità era incorporata all'interno dell'istituzione come principio scardinatore e operava attraverso il suo stesso apparato burocratico per innescare un avanzamento del suo progetto educativo. La sequenza di casi si è infatti concentrata su progetti educativi promossi dall'istituzione che tendevano a incorporare, non senza contraddizioni, l'esercizio di pratiche relazionali, dialogiche e collaborative dentro il proprio apparato burocratico per operare una riconfigurazione della propria struttura organizzativa in termini di flessibilità interna e integrazione con l'esterno.

Quindi ogni episodio partecipa al processo di appropriazione di un concetto ampio di informalità flessibilità, adattabilità, collaborazione, interdisciplinarietà, apertura sia dentro il proprio apparato burocratico che nei metodi pedagogici al fine di stabilire istituzionalmente un rinnovato progetto educativo basato sulla componente relazionale, esperienziale, occasionale e immateriale dell'apprendimento e incidere in misura maggiore sulla trasformazione della realtà. Questo processo, avviene per mano dell'architetto-educatore come figura

frequentemente associata con deinstitutionalization or self-isolation – such as Taller Total or Ciudad Abierta de Valparaíso. An eccentric exponent even with respect to the two trends commented by Hitchcock in his 1947 article, in search of coexistence between the individual creative freedom of *genius* and the liberating capacities of spatial solutions offered by the architecture of *bureaucracy* to their occupants. Thus, the architect-educator himself, never denies the creative impulse of genius but rather convey its application within the perimeter of university bureaucracy that was reshaping its flexible and integrated organizational structure. The prototypical characters of this figure can be recognized thanks to the complex biographies of the authors of the projects which, in fact, are not limited to the plots of the single case study. Rather, the thesis looks in perspective at the progressive adaptations and evolution of this figure working within the bureaucratic apparatus of the university between complicity and resistance.

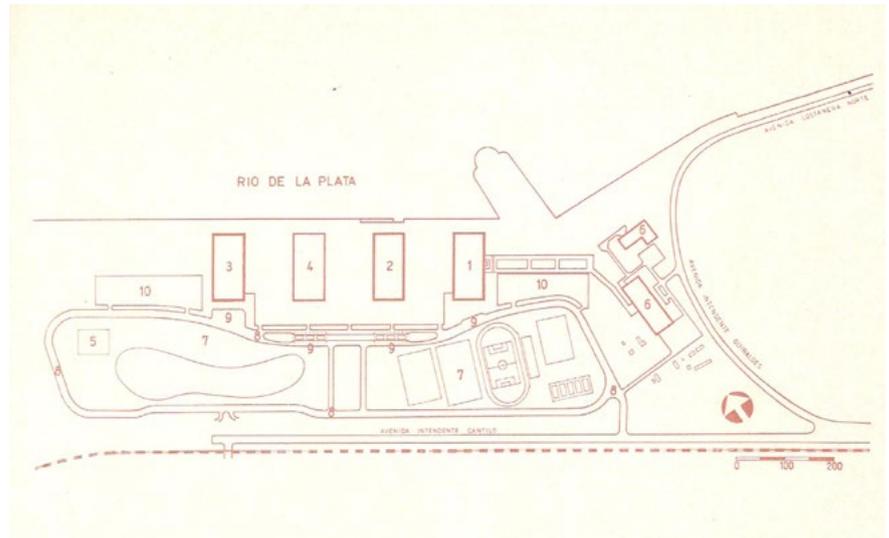
The architect-educator who participates in the IAU (Instituto de Arquitectura y Urbanismo) responsible for the monumental project of the new Ciudad Universitaria de Tucumán (Chapter 1), takes part recognizes in a large collective organization with institutional scopes gathering Argentine and Italian members and integrated with other Institutes. Their profile is shaped around the reaffirmation of modern principles and aims with a certain degree of complicity with the **political** power that economically supported the ambitions of the entire educational project, allowing many members of the IAU to affirm themselves after its bankruptcy and consequent abandonment – as happens both in the case of Rogers returning to Italy and that of Tedeschi who settled in Argentina. The most interesting aspect in this episode is how the principle of 'extensión' emerged in protest circles at the end of the 1910s has been later institutionalized by the newly born Institute in mid-1940s. Among the protagonists of the Chilean scene at that same time, Emilio Duhart and BVCH office embody two variants of the architect-educator most compromised with the **profession**, that will favour the commission for two university campuses different from that of the institution in which they work (Chapter 2). In the specific case of the BVCH, the adoption of flexible, collaborative and horizontal mode of work in order to increase

FIG. 237
Enrico Tedeschi's FAUM
building in Mendoza (1960),
with its educational space
gradually compacted into an
empty vertical volume literally
open to the city. Typical
plan showing the envelope's
elements varying with height.
(Redrawn by the author)

prototipica tratteggiata in questa tesi. In generale, un esponente periferico del dibattito architettonico del dopoguerra e quindi collocato alternativamente sia rispetto ai leader del Movimento Moderno impegnati nella propaganda del rinnovato discorso CIAM, sia rispetto alle personalità rivoluzionarie che iniziavano a promuovere movimenti di deistituzionalizzazione o auto-isolamento dalla realtà – come nel caso del Taller Total di Córdoba o della Ciudad Abierta di Valparaíso. In qualche modo, un esponente eccentrico anche rispetto alle due tendenze configurate da Hitchcock nel suo articolo del 1947, alla ricerca di forme di coesistenza tra la libertà individuale del *genio* creativo e le capacità liberatorie di soluzioni spaziali offerte dall'architettura della *burocrazia*. Così, l'architetto-educatore anche lui tra quegli stessi occupanti, non rinnega mai l'impulso creativo del *genio* ma cerca piuttosto una sua applicazione dentro il perimetro di una *architettura della burocrazia* universitaria che stava rendendo la sua struttura organizzativa flessibile e integrata. Il carattere prototipico di questa figura, lo si può riconoscere grazie agli approfondimenti sulle complesse biografie degli autori dei progetti che, infatti, non si limitano a far risaltare le trame del singolo caso studio. Bensì, la tesi guarda in prospettiva ai progressivi adattamenti e all'evoluzione di questa figura che circoscrive il suo operato all'interno dell'apparato burocratico dell'università interpretando un complesso rapporto di complicità e resistenza.

L'architetto-educatore che partecipa allo IAU (Instituto de Arquitectura y Urbanismo) responsabile del progetto monumentale per la Universidad de Tucuman (Capitolo 1), si riconosce in

the organizational efficiency of their large office oscillate between the professional and pedagogical spheres. This until their modes of work are definitively incorporated into the institutional bureaucratic apparatus when the office partners will progressively come out of their anonymous acronym to cover individual roles within the university and other state bodies leaving the office to a slow dissolution. Moving on to Chapter 3, Germán Brandes personifies perhaps the more conventional variant of the architect-educator with his biography less marked by mobility and relations with the 'Western canon', despite his original proposal was surprisingly updated on the most radical lines of research conducted by the European *youngers*. His career mostly corresponds to that of an **employee** of the Universidad Católica stepped up after winning the internal competition for the new university campus in San Joaquín while he was already teaching at 2nd year design studio, and it will continue for years due to the repeated project adjustments carried out alongside the university Construction Commission. Enrico Tedeschi is the architect-educator who boasts the most solid position within the debate as a re-founder of historical studies in Argentina consolidated in Tucumán, but the articulation of his role assuming managerial and **entrepreneurial** tasks in Mendoza design episode (Chapter 4) establishes one of the most interesting moments in the evolution of this prototypical figure adapted to the urban ambitions of the university institution which culminates with the project of the typical block at Universidad de Buenos Aires designed by Horacio Caminos and Eduardo Catalano (Chapter 5). With the two Argentine architects renewing temporary research-and-teaching contracts in the United States and their design proposal for the new campus elaborated *at distance*, then transmitted and disseminated by the technical offices of the university, Caminos and Catalano inaugurate the de-territorialized, **cosmopolitan** and precarious condition to which this figure will be destined in his future. However, the question in this thesis is addressed to the work of architecture in this process. A first conclusion in this sense is provided by the proposed sequence of cases, which shows the coexistence of spatial experimentations that are anything but neutral or univocal in respect of the new paradigm of informal education.



Rather, they appear as multiple, daring and even divergent solutions that demonstrate precise architectural ambitions entrusted to the project, thus resisting the increasingly pervasive tendency to associate this new paradigm with the dissolution of every spatial structure. The content of these ambitions is identified in specific design themes investigated in each chapter: **monument, ground, megastructure, envelope, atrium**. This made it possible to disentangle case studies from their context to reposition those design experiences within a broader architectural discourse in dialogue with other sub-episodes – previous, contemporary or subsequent to the main case – which have contributed to the construction of each design theme.

A second conclusion derives from the fact that the selected cases are not simply arranged in sequence, rather they trace a design trajectory showing the university project shifting its spatial paradigm from the explicit relationship with the scale of the city to that of an internalized architecture. Through the targeted analysis of the projects, this shift can be recognized with the first episode related to the Universidad de Tucumán (Chapter 1) abandoning the ambitions towards the ideal figure of the (university) city to be progressively reinvested on the architectural scale. It can almost be argued that starting from the university monument image on top of Cerro San Javier, the introduction of the relational component at the basis of a new educational project of internal flexibility and external integration has been progressively interpreted by reducing the campus extensive dimension to an increasingly compact, stratified, verticalized architectural dimension until it is internally eroded as happens in the large atrium of the Universidad de Buenos Aires (Chapter 5),

una grande organizzazione collettiva con respiro internazionale che riunisce membri argentini e italiani, integrata con gli altri Istituti. La sua identità si riconosce soprattutto nell'affermazione di principi, sostenuti con un certo grado di complicità con il potere **politico** che sosteneva economicamente le ambizioni dell'intero progetto educativo permettendo a molti membri dello IAU di affermarsi successivamente a questa esperienza anche dopo il suo incombente fallimento – come accadrà anche nel caso di Rogers di ritorno in Italia e in quello di Tedeschi stabilitosi in Argentina. L'aspetto più interessante in questo episodio è come il principio di 'extensión' nato in ambienti di protesta alla fine degli anni '10 sia stato *istituzionalizzato* del neonato Istituto. Tra i protagonisti della scena cilena in quello stesso momento, Emilio Duhart e l'ufficio BVCH, impersonano le due varianti più compromesse con la patita **professionale** che favorirà l'incarico per due campus universitari diversi da quello dell'istituzione in cui insegnano (Capitolo 2). Nel caso specifico dei BVCH, l'adozione di modi di lavoro collaborativi e flessibili per incrementare l'efficienza organizzativa dell'ufficio si spostava dalla sfera professionale e quella pedagogica. Questi saranno successivamente incorporati nell'apparato burocratico istituzionale quando i partner dell'ufficio usciranno progressivamente dall'anonimato del loro acronimo per ricoprire ruoli individuali di rilievo dentro l'università e altri organi dello stato, destinando lo studio a una lenta dissoluzione. Passando al Capitolo 3, Germán Brandes impersona forse la variante più convenzionale dell'architetto-educatore con una biografia meno marcata da mobilità e relazioni con l'esterno. La sua carriera sarà incentrata sul ruolo

not surprisingly the last episode of this trajectory . Therefore, the monument, the liberated ground, the megastructure, the envelope and the atrium are not only design themes arranged in a neutral sequence. Rather, this trajectory has the precise purpose of making explicit the negotiation mechanism with reality implemented by means of a spatial project, a mechanism which even today aims for welcoming the public life of the city in flexible, adjustable, continuous, open and interchangeable academic spaces. In this sense, the intelligence of these projects was to reinvent the educational project inspired by a system of extremely variable relations and purely abstract forces by experimenting on the architectural and urban form, the only one able to resist even when the unpredictability of the system becomes stronger and pervasive. On the architectural and *urban* form, because despite the process of progressive reduction of their design ambitions to the architectural scale demonstrated by the trajectory described above, to give up the idea of reproducing the campus as an ideal city does not mean to give up the ambitions for an urban project.

In fact, the third and final conclusion is about the renegotiation of the urban role of architecture. This aspect can be understood in the context of this thesis by looking at a last *silent* episode that remained on the margin of this story. As said, the Ciudad Universitaria of Buenos Aires participates in the design trajectory analysed in this thesis as an exemplary case of the process of gradual simplification of the campus reduced to the architectural dimension of its typical block. In this sense, the internal atrium of the typical block represents the culmination of the design trajectory: the relational component inherent to the pproject of informal education which initially aimed to condition the settlement scale of the university campus, has gradually pervaded its architecture until its most internal space is usurped. The critical design analysis conducted in Chapter 5 focused on the narration of that project by the specialized magazines of the time, which acclaimed the abstractness of the technical-management system that governed the construction method depicting the UBA typical block as the only possible solution in the hands of architecture to respond to a growing economic instability, thus reflected in the repetition of four identical blocks equidistant from each other and arranged on the most abstract of the grounds. The two Argentine architects Horacio Caminos and Eduardo Catalano who developed

di **dipendente** della Universidad Católica vincendo il concorso interno per il nuovo campus, mentre insegna giovanissimo nel laboratorio del secondo anno, che occuperà interamente la sua carriera per via dei continui aggiustamenti al progetto condotti al fianco della Commissione Edilizia dell'università. Nonostante questo, la sua proposta originale si presentava sorprendente aggiornata sulle linee di ricerca più radicali condotte dagli altri *giovani* del momento. Enrico Tedeschi è l'architetto-educatore che vanta una posizione più solida nel dibattito costruita come rifondatore degli studi storici in Argentina consolidata a Tucumán, ma l'espansione del suo ruolo in termini manageriali e **imprenditoriali** nell'episodio progettuale di Mendoza (Capitolo 4) stabilisce uno dei momenti più interessanti nell'evoluzione di questa figura prototipica adattata alle ambizioni *urbane* della nuova istituzione universitaria che culmina con il progetto del blocco tipo della Universidad de Buenos Aires, concepito da Horacio Caminos e Eduardo Catalano (Capitolo 5). Con i due architetti argentini che rinnovano contratti di ricerca/insegnamento temporanei negli Stati Uniti e la loro proposta progettuale elaborata a distanza, poi trasmessa e divulgata dagli uffici tecnici dell'università, Caminos e Catalano inaugurano la condizione de-territorializzata, **cosmopolita** e di persistente precarietà a cui sarà destinata nel suo futuro questa figura.

Tuttavia, la domanda della tesi è rivolta principalmente all'operato dell'architettura in questo processo. Una prima conclusione in questo senso è fornita dalla sequenza di casi proposta, che mostra la coesistenza di sperimentazioni spaziali tutt'altro che neutrali o univoche nei confronti del nuovo paradigma educativo. Si tratta piuttosto di soluzioni molteplici, audaci e persino divergenti che dimostrano precise ambizioni architettoniche affidate al progetto, resistendo così alla tendenza sempre più pervasiva di associare questo nuovo paradigma alla dissoluzione di ogni struttura spaziale. Il contenuto di queste ambizioni è individuato in un tema progettuale specifico approfondito



FIG. 239
*University Blocks close-up (model).
Ciudad Univaersitaria de Tucumán.*

this proposal, however, had already played a leading role in the design of university campuses dating back to the experience of Tucumán about ten years earlier, in the late 1940s. As discussed in Chapter 1, the Ciudad Universitaria de Tucumán had instead attracted a fair amount of attention in the Western debate: the gigantic roof of the Centro Comunal designed in collaboration with Pier Luigi Nervi and the monumental Vivienda Universitaria immediately found space in the pages of “Architectural Review” (1951) and of the Italian magazine “Urbanistica” (1952), also later rediscovered by Reyner Banham between the ‘beginners and begetters’ of megastructures (1976). On the contrary, architectural criticism gave much less resonance to the large didactic blocks of Tucumán which, on closer inspection, show surprising similarities with the internally carved block that will later be adopted as a prototypical educational space in the Buenos Aires designed by the same Caminos and Catalano. A concise caption in Tucumán’s article published by “Architectural Review” (1951) reads:

“These large blocks, about 300 feet by 600, will house a group of related faculties and institutions. Structure is again concrete and provides three main types of floor: open floors interrupted only by vertical columns; bridge floors, to carry the open floors, with diagonal structural members and permanent partitions; and mezzanines under the bridge floors and flanking the double head-room of the floor below. The open floors are intended to provide large areas of clear floor-space [...] The central well is partly roofed in at seventh floor level”.³

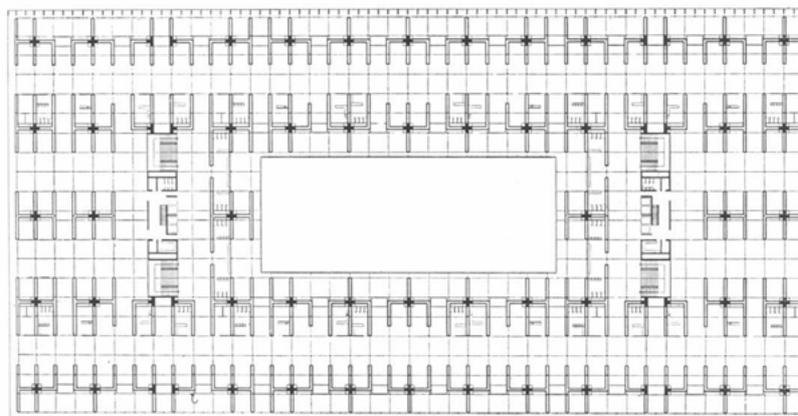
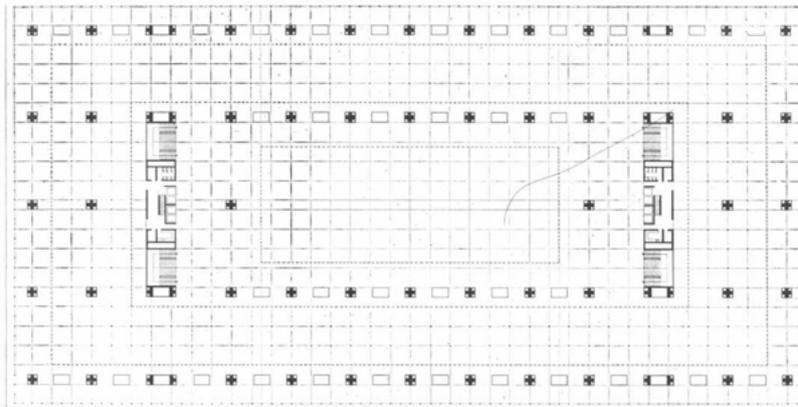
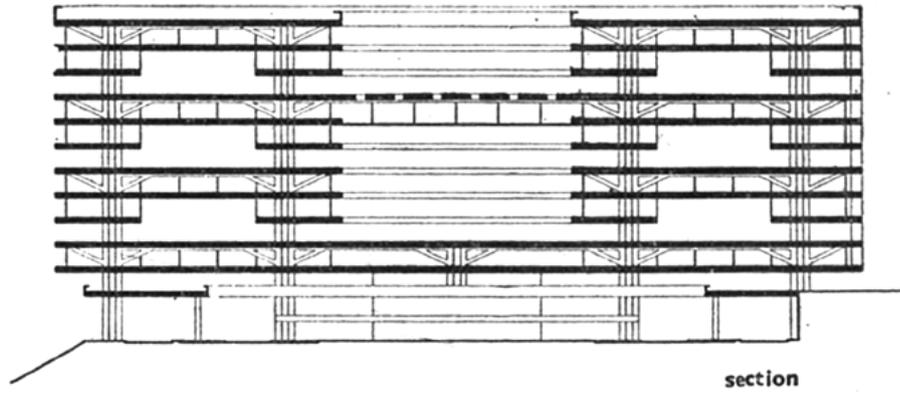
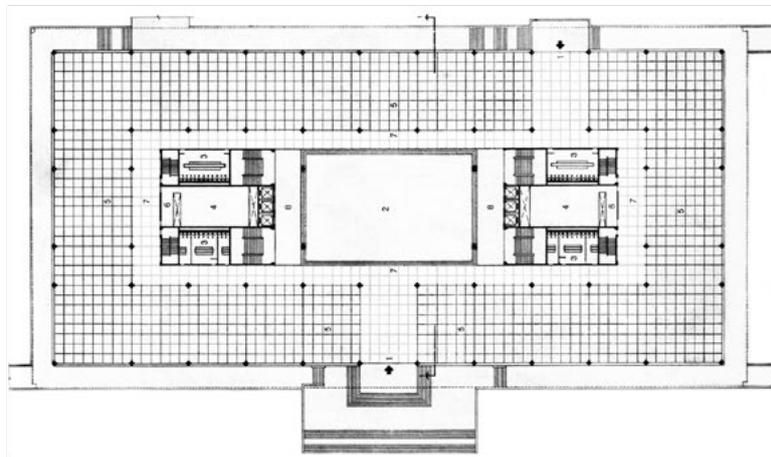
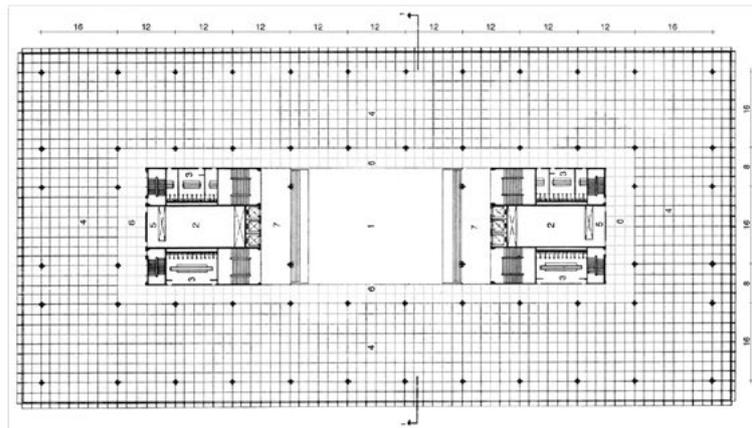
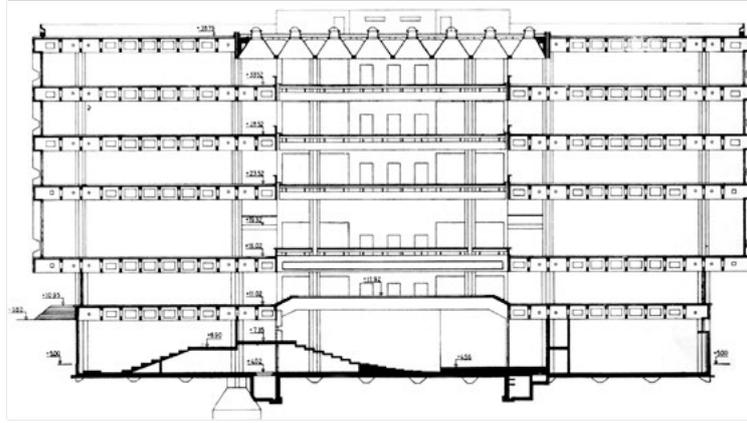


FIG. 240
Typical block Tucumán (1947)
From "Architectural Review" no. 671, 1952 (left)
Typical block Buenos Aires (1960)
From "Revista Construcciones", no. 2019, 1969 (right)



To which should be added a brief but eloquent notation by the authors from the previous article, in the original language, published by “Nuestra Arquitectura” (1950):

“La flexibilidad y la adaptación interna estarán aseguradas por la forma”.⁴

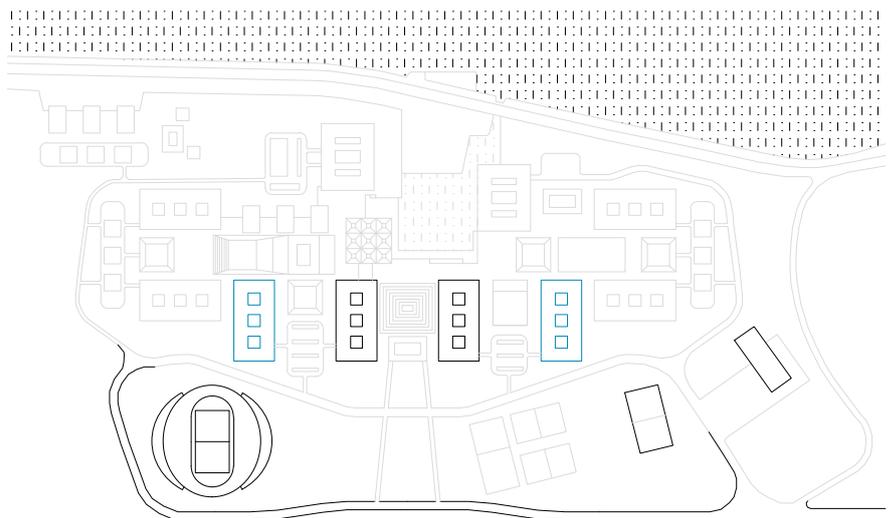
in ciascuno dei capitoli: *monumento, suolo, megastruttura, involucro, atrio interno*.

Questo ha permesso di svincolare i casi studio dal loro contesto di appartenenza e riposizionarli nell’ambito di un discorso architettonico più ampio su quel tema progettuale in dialogo con altri episodi – precedenti, contemporanei o successivi al caso principale – che hanno contribuito alla costruzione di quel discorso.

Una seconda conclusione deriva dal fatto che i casi selezionati corrispondenti a un preciso tema progettuale non sono semplicemente disposti in sequenza, ma tracciano piuttosto una traiettoria progettuale che vede il progetto universitario spostare il suo paradigma spaziale da una esplicita relazione con la scala della città a quello di un’architettura interiorizzata. Attraverso l’analisi accurata dei progetti si può riconoscere uno spostamento delle ambizioni progettuali che dopo il primo episodio relativo alla Universidad de Tucumán (Capitolo 1) abbandonano la figura ideale della *città* (universitaria) per essere progressivamente reinvestite sulla scala architettonica. Si può quasi sostenere che a partire dall’immagine monumentale dell’istituzione universitaria posta in cima al Cerro San Javier, l’introduzione della componente relazionale che stimolava un nuovo progetto educativo basato su flessibilità interna e massima integrazione con l’esterno, sia stato interpretato riducendo progressivamente la sua dimensione estesa rivolgendolo alla sperimentazione spaziale a una dimensione architettonica sempre più compatta, stratificata, verticalizzata fino ad essere erosa internamente come accade nell’atrio interno della Universidad de Buenos Aires (Capitolo 5), non a caso ultimo episodio di questa traiettoria. Pertanto, il *monumento*, il *suolo liberato*, la *megastruttura*, l’*involucro* e l’*atrio interno* non sono semplici temi progettuali disposti in una sequenza indifferente. Bensì, la traiettoria tracciata ha il preciso scopo di esplicitare il meccanismo di negoziazione con il mondo esterno attuato attraverso il progetto, che accoglie

Essentially, the architectural discourse on the reaffirmation of the aims of the CIAM resumed in Bridgwater in 1947 and stimulated by the search for a ‘modern urban space’ (McLeod, 2013) for defence against the accusations of dogmatism that appeared in modern ‘technologist and constructional determinism’, was already using the pretext of education to experiment with alternative solutions in the peripheral region of Tucumán within the same university campus that, net of its foreseeable failure, was already functioning as a laboratory of spatial hypotheses: a construction site of partially constructed and imagined architectures even before the map of interconnected episodes rediscovered in this thesis started to branch out. Thus, when Horacio Caminos and Eduardo Catalano ten years later become the architects in charge of Buenos Aires university campus, the hypothesis of that internally carved block for its full-height has certainly migrated to a different, unstable and unpredictable context, with the internal space that became the privileged territory to be explored when the outside world seemed to no longer be under the control of the architect. However, in contrast to that world of abstraction consisting of a neutral surface on which four generic blocks can only be rested, the design ambition survives in the renegotiation of the urban role of architecture: a path along a single axis would ideally connect the sequence of the four internal atriums looking beyond the prodigious effects of a spectacularised internal world.

Therefore, if it is true that the term *abstraction* evokes an aesthetic of formal moderation and reduction to the essential often associated with the modernism set of simplifications, it is equally true that the progressive reduction to the architectural dimension described in the design trajectory traced in this thesis has not worked in favour of the



la vita pubblica della città negli spazi accademici flessibili, continui, aperti e intercambiabili.

L'intelligenza di questi progetti è stata quella di reinventare il progetto educativo ispirato a un sistema di relazioni variabili e forze puramente astratte sperimentando proprio sulla forma architettonica e urbana, l'unica in grado di resistere anche quando l'imprevedibilità del sistema diventa più forte e pervasivo. Sulla forma architettonica e *urbana*, perché nonostante il processo di progressiva riduzione delle ambizioni progettuali alla scala architettonica dimostrato dalla traiettoria descritta, rinunciare a riprodurre il campus come ideale di città non significa rinunciare alle ambizioni di un progetto urbano.

In terza e ultima conclusione, infatti, si tratta di operare sulla rinegoziazione del ruolo urbano dell'architettura. Aspetto che può essere compreso nell'ambito di questa tesi guardando a un ultimo episodio rimasto ai margini della traiettoria descritta. La Ciudad Universitaria di Buenos Aires partecipa alla sequenza dei progetti universitari analizzati in questa tesi come caso esemplare del graduale processo di semplificazione della figura del campus, ridotto alla dimensione architettonica del suo blocco tipo. In questo senso, l'atrio interno del blocco tipo rappresenta il culmine della traiettoria progettuale: la componente relazionale del nuovo progetto di educazione informale che inizialmente mirava a condizionare la scala insediativa del campus universitario, ha progressivamente pervaso le sue architetture fino a all'usurpazione del loro spazio interno. L'analisi critica progettuale condotta nel Capitolo 5 si è soffermata soprattutto sulla narrazione di quel progetto da parte delle riviste specializzate dell'epoca, che acclamavano l'astrattezza del sistema tecnico-gestionale che governava il metodo costruttivo

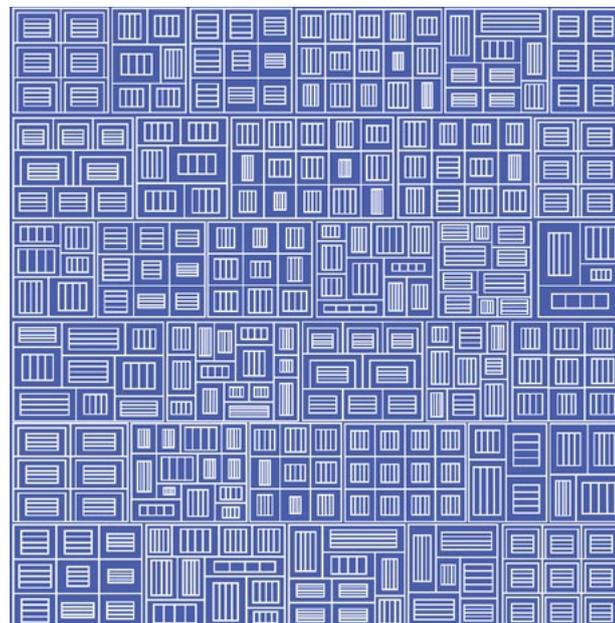


FIG. 241
Peter Halley, 2018. *Preparatory sketch.*
Galerie Xippas, Paris.

proliferation of generic structures, rather trying to counter them. If it is true that *to abstract*, which derives from the Latin *trahere*, means extracting something essential from the totality of which something is part, it is equally true that the effort of architecture must be to identify the spatial structure that contrasts 'those huge arenas of abstract warfare which have completely detached themselves from any relationship with the material world', in the words of Peter Halley, preventing the campus from aspiring to become one of those arenas turned into 'a site of pure abstraction' in the name of a presumed pedagogical mandate.⁵

In part, this mandate begins to be questioned as the 'silent explosion of learning' (John Field, 2000) by observing the fact that more and more people are engaged in diversified learning modalities, particularly non-formal and informal ones. Without having adequately considered, Gert Biesta points out, some consequences derived from the rise of the 'new language of learning' which has now completely replaced the term *education* based on the ethos of a natural and inevitable process:

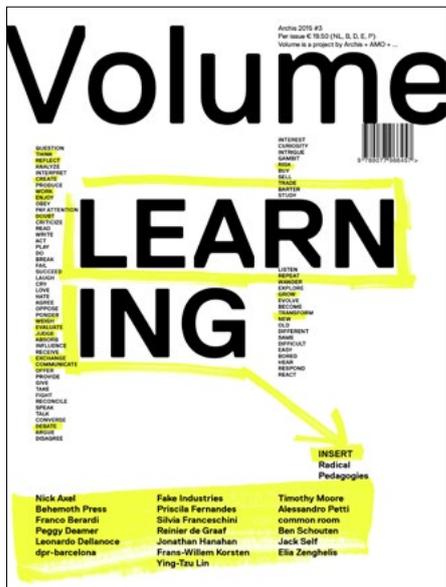
"My attempt to denaturalize the idea of learning – that is, to take it out of the domain of inevitability and necessity – can be understood as an attempt to take the strength out of the idea of learning, not only in order to show that it is a more complicated and contentious notion than many would believe but also to show that learning is not something that has power over us – something to which we should subject ourselves – but rather something that we should have power over".⁶

FIG. 242
Sequence of typical blocks in the final version of Buenos Aires university campus (in blue the pavilions that have not yet been built).
Redrawn by the author



FIG. 243
Ciudad Universitaria de Tucumán.
Construction site (early-1950s).
MIT Libraries Distinctive Collections





To counter what appears to be a process of ‘pure abstraction’ dominated by the neutral and indeterminate figure of the *learner*, Biesta proposes to rediscover ‘the beautiful risk of education’ and to rediscover, if anything, its dimension of ‘weakness’.⁷ Thus suggesting the most interesting angle from which to observe the work of the architect-educator who chose to take the risk of the architectural and urban form in exploring the concept of informal education by means of multiple, daring and even divergent solutions.

On the one hand, one is led to think that informality has lost its original radical nature in the contemporary world. Spaces that can be traced back to a codified set of ‘relationship instigators’ at the scale of interior furnishings punctuating the everyday life of the most neutral *homo serendipitous* almost as if to predict, paradoxically, every slightest leap of informality, appear to be a diversion to the increasingly neutralization of the educational space.⁸ On the other hand, more than a mere critique against the paradigm of informality this thesis proposes a lateral angle of observation by looking at projects elaborated within the university bureaucracy between civic ambitions and economic when a not yet explicit concept of informality worked with a lesser degree of *radicality* arbitrarily applied to it.

The institutional intent to spatialize new pedagogical methods found its roots in the architect-educator’s ability to conduct a silent research conducted from within the bureaucratic apparatus by exercising, not without contradictions, a complex appropriation of the relational and immaterial components of education. In this complexity lived the conviction that ‘university must be defended, as well as transformed’,⁹ and the same was true for architectural and urban ambitions going beyond the mere translation into space of inputs coming from an alleged pedagogical mandate, but participating in the construction of a real educational project conceived as an agent of transformation of the city rather than persist in the imitation of its no well-defined image.

dipingendo il blocco tipo della UBA come unica soluzione possibile nelle mani dell’architettura per rispondere a una situazione di crescente instabilità economica, rispecchiata nella ripetizione di quattro blocchi identici, equidistanti tra loro e disposti su un suolo astratto. Per la verità, i due architetti argentini Horacio Caminos e Eduardo Catalano che elaborarono questa proposta avevano già avuto un ruolo di primo piano nella progettazione dei campus universitari risalente all’esperienza di Tucumán circa dieci anni prima, alla fine degli anni ‘40.

Come discusso nel Capitolo 1, questa esperienza aveva invece attirato una discreta attenzione nel dibattito occidentale: la gigantesca copertura del Centro Comunal progettata in collaborazione con Pier Luigi Nervi e la monumentale Vivenda Universitaria trovarono subito spazio tra le pagine di “Architectural Review” (1951) e della rivista italiana “Urbanistica” (1952), riscoperti anche in seguito da Reyner Banham come iniziatori delle megastrette (1976). Al contrario, la critica architettonica aveva dato molta meno risonanza ai grandi padiglioni didattici della Ciudad Universitaria de Tucumán che, a un esame più attento, mostrano sorprendenti analogie con il blocco scavato internamente che sarà adottato in seguito come spazio educativo

FIG. 245
Front cover of the architectural magazine “Volume” no.45 (September 2015), including critical essays on ‘learning’ and a 32-page insert by the Radical Pedagogies project: “While education is currently under financial and ideological pressure, learning is flourishing”.

prototipico nel progetto per Buenos Aires dagli stessi Caminos e Catalano. In una concisa didascalia dell'articolo su Tucumán pubblicato su "Architectural Review" (1951) si legge:

"These large blocks, about 300 feet by 600, will house a group of related faculties and institutions. Structure is again concrete and provides three main types of floor: open floors interrupted only by vertical columns; bridge floors, to carry the open floors, with diagonal structural members and permanent partitions; and mezzanines under the bridge floors and flanking the double head-room of the floor below. The open floors are intended to provide large areas of clear floor-space [...] The central well is partly roofed in at seventh floor level".³

A cui va aggiunta una notazione degli autori presente nel precedente articolo, in lingua originale, sulle pagine di "Nuestra Arquitectura" (1950):

"La flexibilidad y la adaptación interna estarán aseguradas por la forma".⁴

In sostanza, il discorso architettonico sulla riaffermazione dei principi del CIAM ripreso a Bridgwater nel 1947 stimolato dalla ricerca di un 'modern urban space' (McLeod, 2013) per difendersi dalle accuse di dogmatismo che appariva nel suo 'technologist and constructional determinism', usava il campo dell'educazione per sperimentare nella regione periferica di Tucumán soluzioni alternative all'interno dello stesso campus universitario che, al netto del suo successivo abbandono, stava già funzionando come laboratorio di ipotesi spaziali, un cantiere in costruzione di architetture in parte costruite e immaginate, ancor prima che si iniziasse a delineare la mappa di esperienze interconnesse riscoperte in questa tesi. Così, quando Horacio Caminos ed Eduardo Catalano subentreranno dieci anni dopo come architetti incaricati del progetto per il campus della UBA, l'idea di quel blocco scavato internamente per tutta la sua altezza ha certamente migrato in un contesto diverso, instabile e imprevedibile, con lo spazio interno che diventava il territorio privilegiato da esplorare nel momento in cui il mondo esterno

sembrava non essere più sotto il controllo dell'architetto. Tuttavia, in contrapposizione a quel mondo di astrazione costituito da una superficie neutra su cui disporre quattro blocchi generici, l'ambizione progettuale sopravvive nella rinegoziazione del ruolo urbano dell'architettura: una percorrenza lungo un unico asse avrebbe idealmente unito la serie dei quattro atria interni guardando oltre gli effetti prodigiosi di un mondo interno spettacolarizzato.

Pertanto, se il termine *astrazione* evoca un'estetica di moderazione formale e riduzione all'essenziale spesso associata alla semplificazione propagandata dal modernismo, la progressiva riduzione alla dimensione architettonica descritta nella traiettoria progettuale tracciata in questa tesi non ha funzionato a favore della proliferazione di strutture generiche, cercando piuttosto di contrastarle con soluzioni specifiche. Se *astrarre*, che deriva dal latino *trahere*, significa estrarre qualcosa di essenziale dalla totalità di cui quel qualcosa fa parte, lo sforzo dell'architettura deve essere quello di individuare la struttura spaziale che contrasti 'those huge arenas of abstract warfare which have completely detached themselves from any relationship with the material world', nelle parole di Peter Halley, evitando che il campus ambisca a diventare una di queste arene e si converta in 'a site of pure abstraction' in nome di un nuovo mandato pedagogico.⁵

In parte, questo nuovo mandato inizia ad essere ridiscusso come 'esplosione silenziosa dell'apprendimento' (John Field, 2000) osservando il fatto che sempre più persone sono impegnate in modalità di apprendimento diversificate, in particolare quelle non-formali e informali. Senza aver adeguatamente considerato, fa notare Gert Biesta, alcune conseguenze derivate a partire dall'ascesa del 'nuovo linguaggio dell'apprendimento' che ha ormai integralmente sostituito il termine *educazione*, basandosi sull'ethos di un processo naturale e inevitabile:

"My attempt to denaturalize the idea of learning – that is, to take it out of the domain of inevitability and necessity – can be understood as an attempt to take the strength out of the idea of learning, not only in order to show that it is a more complicated and contentious

notion than many would believe but also to show that learning is not something that has power over us –something to which we should subject ourselves – but rather something that we should have power over”.⁶

Per contrastare quello che sembra un processo di ‘pura astrazione’ dominato dalla figura neutrale e indeterminata del *learner*, Biesta propone di riscoprire ‘the beautiful risk of education’ e riscoprire, semmai, una dimensione di ‘weakness’.⁷ Suggestendo così l’angolo più interessante da cui osservare il lavoro dell’architetto-educatore che sceglieva di assumersi il rischio della forma architettonica e urbana nelle sue esplorazioni progettuali sul concetto di educazione informale, con soluzioni molteplici, audaci e addirittura divergenti.

Per un verso, si è portati a pensare che l’informalità abbia perso la sua radicalità originaria nella contemporaneità. Spazi riconducibili a un set codificato di ‘istigatori di relazioni’ alla scala dell’arredo interno che scandiscono la vita del più neutrale *homo serendipitous* quasi a voler pronosticare, paradossalmente, ogni minimo sussulto di informalità, si offrono il più delle volte come diversivo a un’eloquente neutralizzazione dello spazio educativo.⁸ Più che una mera critica al paradigma dell’informalità, tuttavia, la tesi propone un angolo di osservazione laterale guardando a progetti elaborati dentro la burocrazia universitaria quando un concetto ancora non chiaramente esplicitato e a cui nessun grado di radicalità era stato arbitrariamente applicato, riformavano un progetto educativo tra ambizioni civiche e pragmatismo economico.

La volontà istituzionale di spazializzare nuovi metodi di apprendimento trovava le sue radici nella capacità dell’architetto-educatore di condurre una ricerca silenziosa condotta dall’interno dell’apparato burocratico esercitando, non senza contraddizioni, una complessa appropriazione della componente relazionale e immateriale dell’educazione. In questa complessità, vi era di certo la convinzione che ‘l’università dovesse essere difesa, così come trasformata’,⁹ al pari delle ambizioni architettoniche e urbane che andando oltre la traduzione in spazio di input provenienti da un presunto mandato pedagogico, partecipavano alla costruzione di un autentico progetto educativo concepito come agente di trasformazione della città piuttosto che continuare a inseguire una sua immagine non meglio definita.



FIG. 246

Detail from University Campus UTEC Lima (2015). Description from the website of Brandlab™ (Peruvian Brand Consultants): “We create a navigation system that facilitates the location of classrooms, offices, laboratories and meeting spaces, taking into account the open and intricate design of the building. The graphic system was based on points and lines representing the stops and connections that make the route understandable”. (Photo Brandlab)

NOTES

1. Robert Anderson of John Andrews Architects (known for designing a number of acclaimed university structures in late 1960s USA, Canada, Australia) challenged by sociologist Martin Trow asking why the old buildings were better performing in the idea of creating ‘spontaneous academic meeting spaces’. See Muthesius (2000), p.278.
2. Elia Zenghelis, ‘The Aesthetics of the Present’, in “Architectural Design” Vol. 58, no.3-4, 1988.
3. “Architectural Review”, no. 671, 1952, p.329.
4. “Nuestra Arquitectura” no.254, 1950, p.61.
5. Peter Halley ‘Notes on Abstraction’, in “Arts Magazine” Vol. 61, June/Summer 1987.
6. Among those who provide a commentary on contemporary educational discourse, professor of Public Education Gert Biesta is the one who shifts the reflection on the controversial process of learnification, exposed in recent publications such as *Beyond Learning* (2006), *The Beautiful Risk of Education* (2013) or *The Rediscovery of Teaching* (2017): “One significant change is the ongoing individualization that [...] can also be found ideologically, for example in the emphasis on the need for individuals to adapt and adjust to the demands of the global economy, in the reformulation of lifelong learning as the acquisition of a set of flexible skills and competencies, and also, of course, in the subtle but crucial semantic shift from “lifelong education” – a relational concept – to “lifelong learning” – an individualistic concept”. See Biesta (2013), p.66.
7. In Biesta’s words, “we do not need a pedagogy of cause and effect, a pedagogy that just aims to generate pre-specified “learning outcomes”. We rather need a pedagogy of the event, a pedagogy that is orientated positively toward the weakness of education. This is a pedagogy, in short, that is indeed willing to take the beautiful risk of education”. See Biesta (2013), p.140.
8. This aspect is contested by Douglas Spencer in the chapter ‘Festivals of Circulation: Neoliberal Architectures of Culture, Commerce and Education’ denouncing tridimensional smoothness aims at softening the perception of a space in which freedom is, paradoxically, an orchestrated activity. See Douglas Spencer, *The Architecture of Neoliberalism: How Contemporary Architecture became an Instrument of Control and Compliance* (New York: Bloomsbury, 2016), and also a good number of articles discussing contemporary design projects in the latest issue of “Architecture and Culture” edited by Igea Troiani and Claudia Dutson titled ‘The Neoliberal University’ (Volume 9, 2021).
9. Reinhold Martin. *Knowledge Worlds. Media, Materiality, and the Making of the Modern University* (New York: Columbia University Press, 2021).

NOTE

1. Robert Anderson di John Andrews Architects (studio conosciuto per aver progettato un numero considerevole di edifici universitari alla fine degli anni Sessanta in USA, Canada, Australia) risponde così al sociologo Martin Trow che si interroga sul perché i vecchi edifici universitari fossero più performanti nell'idea di creare 'spontaneous academic meeting spaces'. In Muthesius (2000), p.278.
2. Elia Zenghelis, 'The Aesthetics of the Present', in "Architectural Design" Vol. 58, no.3-4, 1988.
3. "Architectural Review", no. 671, 1952, p.329.
4. "Nuestra Arquitectura" no.254, 1950, p.61.
5. Peter Halley 'Notes on Abstraction', in "Arts Magazine" Vol. 61, June/Summer 1987.
6. Tra coloro impegnati nel fornire un'interpretazione critica al discorso contemporaneo sull'educazione, Gert Biesta professore di Public Education è il primo ad aver spostato l'attenzione sul controverso processo di learnification, esaminato nelle recenti pubblicazioni come *Beyond Learning* (2006), *The Beautiful Risk of Education* (2013) e *The Rediscovery of Teaching* (2017): "One significant change is the ongoing individualization that [...] can also be found ideologically, for example in the emphasis on the need for individuals to adapt and adjust to the demands of the global economy, in the reformulation of lifelong learning as the acquisition of a set of flexible skills and competencies, and also, of course, in the subtle but crucial semantic shift from "lifelong education" – a relational concept – to "lifelong learning" – an individualistic concept". Vedi Biesta (2013), p.66.
7. Con le parole di Biesta, "we do not need a pedagogy of cause and effect, a pedagogy that just aims to generate pre-specified learning outcomes. We rather need a pedagogy of the event, a pedagogy that is orientated positively toward the weakness of education. This is a pedagogy, in short, that is indeed willing to take the beautiful risk of education". Vedi Biesta (2013), p.140.
8. Questo aspetto è contestato in particolare da Douglas Spencer nel capitolo 'Festivals of Circulation: Neoliberal Architectures of Culture, Commerce and Education' dove si esaminano diversi interventi progettuali che mirano più che altro ad ammorbidire con interventi di superficie lo spazio interno degli edifici educativi convertendo la libertà di fruizione dello spazio in un'attività meticolosamente orchestrata. Vedi Douglas Spencer, *The Architecture of Neoliberalism: How Contemporary Architecture became an Instrument of Control and Compliance* (New York: Bloomsbury, 2016), insieme agli articoli che discutono spazi educativi contemporanei pubblicati nel numero monografico di "Architecture and Culture" curato da Igea Troiani e Claudia Dutson intitolato 'The Neoliberal University' (Volume 9, 2021).
9. Reinhold Martin. *Knowledge Worlds. Media, Materiality, and the Making of the Modern University* (New York: Columbia University Press, 2021).

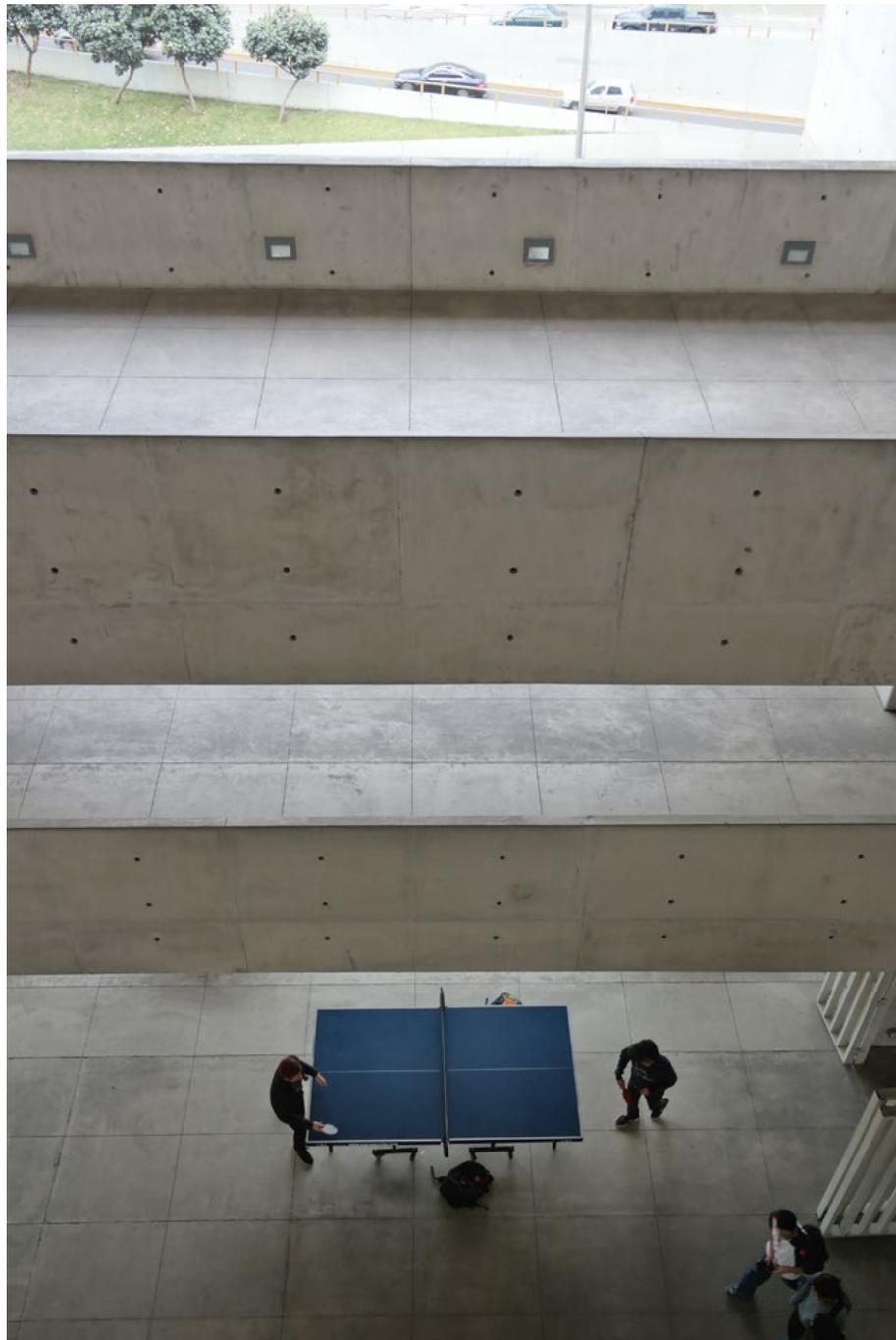


FIG. 247
*Detail from University Campus
UTEC Lima (2015). Description
from the author Grafton Architects
("Architectural Review", June 2015):
"A series of terraced academic working
areas which also provide pedestrian
circulation... The concrete structure
makes a kind of man-made, carved
mountain... it forms the matrix –
the scaffolding – within which life
happens". (Photo by the author).*





FIG. 248

University Campus UTEC Lima (2015). The verticalized intermediate space results from a complex interplay between the structural and functional elements of the building. From the main entrance hall, in a succession of spaces, balconies and stairs appear suspended between a rich variety of precast beams of different lengths and thicknesses. However, this aesthetic intensity that deprives the structure of its merely functional purpose is above all a clear architectural and urban statement which resettles education and the paradigm of informality as the privileged territory of contestation between form and social intercourse. (Photo by the author)

BIBLIOGRAPHY

General

- Ackerman, James. "Listening to Architecture". *Harvard Educational Review*, no.4 (1969): 4-10.
- Adagio, Noemi. "Mass Culture at Mid-Century. Architecture under a New Humanism" (pp.75-90), in Patricio Del Real and Helen Gyger. *Latin American Modern Architectures. Ambiguous Territories*. London: Routledge, 2013.
- Adorno, Theodor. *Aesthetic Theory*, trans. R. Hullot-Kentor. New York: Continuum, 2002.
- Agamben, Giorgio. *What is an Apparatus?*. Palo Alto: Stanford University Press, 2009.
- Aliata, Fernando and Jorge Francisco Liernur. *Diccionario de la Arquitectura en la Argentina*. Buenos Aires: Clarín Arquitectura (updated 2019).
- Ambasz, Emilio et al., *The Universitas Project: Solutions for a Post-technological Society*. New York: The Museum of Modern Art, 2006.
- Andreoli, Elisabetta and Adrian Forty (eds.), *Brazil's Modern Architecture*. London: Phaidon, 2010.
- Ansgar, Allen. "The Examined Life: On the Formation of Souls and Schooling". *American Educational Research Journal*, no. 2, (2013):216-250.
- Arango, Silvia. *Ciudad y arquitectura: Seis generaciones que construyeron la América Latina moderna*. Mexico City: Fondo de Cultura Económica and Consejo Nacional para la Cultura y las Artes, 2012.
- . "Historiografía latinoamericana reciente." *Archivos de arquitectura antillana* 9, no. 23 (January 2006): 163–69.
- Argan, Giulio Carlo. *Walter Gropius e la Bauhaus*. Turin: Einaudi, 1951.
- . *Progetto e destino*. Milan: Il Saggiatore, 1965.
- . "A proposito di spazio interno", in *Metron*, no. 28 (1948).
- Arendt, Hannah. *The Human Condition*. Chicago: Chicago University Press, 1958.
- Argan, Giulio Carlo. *Walter Gropius y la Bauhaus*. Buenos Aires: Nueva Vision, 1957.
- Argan, Giulio Carlo. "On the Typology of Architecture." *Architectural Design* (December 1963).
- Argenti, Maria. "Architetture per l'università". *Rassegna di Architettura e Urbanistica*, no.156 (2018).
- Atcon, Rudolph. *La Universidad Latinoamericana*. Bogotá: ECO, 1961.
- Aureli, Pier Vittorio. "Form and Labor: Toward a History of Abstraction in Architecture" pp. 103–107, in Peggy Deamer (ed), *The Architect as Worker: Immaterial Labor, the Creative Class and the Politics of Design*, London: Bloomsbury Academic, 2015.
- . *The Project of Autonomy. Politics and Architecture within and against Capitalism*. New York: Princeton Architectural Press, 2008.
- . "Labor and Architecture: Revisiting Cedric Price's Potteries Thinkbelt". *Log*, no. 23 (2011): 97-118.
- . "City as Political Form. Four Archetypes of Urban Transformation." *Architectural Design* 81, no.1 (February 2011): 32–37.
- Avermaete, Tom. *Another Modern: The Post-War Architecture And Urbanism of Candilis-Josic-Woods*. Rotterdam: Nai Uitgevers Publisher, 2005.
- Avermaete, Tom and Anne Massey (eds). *Hotel Lobbies and Lounges: The Architecture of Professional Hospitality*. London: Routledge, 2012.
- Baird, George. "Free University, Berlin". *AA Files*, no. 40 (1999): 65-71.
- Ballent, Anahi. *El diálogo de las antípodas: Los CIAM y América Latina*. Buenos Aires: Secretaría de Investigaciones en Ciencia y Técnica FADU, 1995.
- Banham, Reyner. *The New Brutalism: Ethic or Aesthetic?*. New York: The Reinhold Pub. Corp., 1966.
- . *Theory and design in the first machine age*. New York: Praeger, 1960.
- . *Megastructure. Urban Futures of the Recent Past*, Londres: Thames and Hudson, 1976.

- . “Neoliberty. The Italian retreat from Modern Architecture”. *The Architectural Review* no. 747 (1959): 231-235.
- . *The Architecture of the Well-tempered Environment*, Chicago: University of Chicago Press, 1969.
- . *A Critic Writes: Essays by Reyner Banham*. Los Angeles, CA: University of California Press, 1999.
- . *The Aspen papers. Twenty Years of Design Theory from the International Design Conference in Aspen*. London: Pall Mall, 1974.
- Barbieri, Giuseppe; Del Bo, Adalberto and Manzo Carlo et al. *Il campus universitario di Chieti*. Milano: Electa, 1997.
- Barker, Chris and Eric Sigge. “Illustrated Throughout: Reconsidering the Role of Photography in the Survey of Modern Architecture”. *Hunch*, no.12 (2009): 6-19.
- Bender, Thomas. “Locality and Worldliness”. *American Council of Learned Societies Occasional Paper*, no.40 (1997).
- Berenson, Bernard. *Aesthetics, ethics and history in the arts of visual representation*. Florence: Electa, 1948).
- Bergdoll, Barry; Comas, C. Eduardo; Francisco, J. Liernur and Patricio del Real. *Latin America in Construction: Architecture 1955–1980*. New York: MoMA Publications, 2015.
- Berrizbeitia, Anita and Marchant, Romy H., “Latin American Geographies: A Glance over an Immense Landscape”. *Harvard Design Magazine*, no.34 (2011): 8-21.
- Biesta, G. J. J. *Beyond learning: Democratic education for a human future*. Boulder, CO: Paradigm Publishers, 2006.
- . *The Beautiful Risk of Education*. London: Routledge, 2013.
- . *The Redecovering of Teaching*. London: Routledge, 2017.
- Biraghi, Marco. “Università: La Facoltà di Architettura del Politecnico di Milano (1963-74)”, in Marco Biraghi et al. *Italia 60/70. Una Stagione dell'Architettura*. Padova: Il poligrafo, 2010.
- Blundell, P. Jones. “The Development of the School Building and the Articulation of Territory”, in Pamela Woolner (ed.) *School Design Together*, London: Routledge, 2015.
- Boano, Camillo and Giorgio Talocci. “Inoperative design ‘Not doing’ and the experience of the Community Architects Network”. *CITY. Analysis of Urban Change, Theory, Action*, Vol. 21, no.7 (2017).
- Bonfanti, Ezio. “La cultura architettonica a Milano: strumenti e istituzioni”, in Luca Scacchetti (ed.), *Ezio Bonfanti: Scritti di architettura*, Milan: Clup, 1981.
- Bonifazio, Patrizia; Sergio Pace, Michela Rosso and Paolo Scrivano (eds.), *Tra guerra e pace. Società, cultura e architettura nel secondo dopoguerra*. Milano: Franco Angeli, 1998.
- Bonifazio, Patrizia and Paolo Scrivano. *Olivetti Builds. Modern Architecture in Ivrea*. Milan: Skira, 2001.
- Bordogna, Enrico. *Guido Canella. Opere e progetti*. Milan: Electa, 2001.
- Bordogna, Enrico; Gentucca Canella and Elvio Manganaro (eds), *Guido Canella 1931-2009*. Milan: Franco Angeli, 2014.
- Breslin, James. “The Harvard Murals”, in *Mark Rothko: A Biography*. Chicago: University of Chicago Press, 1998, pp. 445-457.
- Brillembourg, Carlos. *Latin American Architecture, 1929–1960: Contemporary Reflections*. New York: Monacelli Press, 2004.
- Browne, Enrique. *Otra arquitectura en América Latina*. Naucalpan, Mexico: Gustavo Gili, 1988.
- Bullrich, Francisco. *Arquitectura Argentina Contemporánea*. Buenos Aires: Nueva Visión, 1963.
- . *Arquitectura latinoamericana, 1930–1970*. Buenos Aires: Editorial Sudamericana, 1969.
- . *New Directions in Latin American Architecture*. New York: George Braziller, 1969.
- Burklin, Thorsten and Jurgen Reichardt (eds), *Albert Kahn's Industrial Architecture: Form Follows Performance*. Basel: Birkhäuser Architecture, 2019.
- Caminos, Horacio, John F. C. Turner and John A. Steffian (eds), *Urban Dwelling Environments An Elementary Survey of Settlements for the Study of Design Determinants*. Cambridge Mass.: MIT Press, 1969.

- Canella, Guido. "Passé et avenir de l'anti-ville universitaire". *L'Architecture d'aujourd'hui*, no. 137 (1968):16-19, trad. it. "Passato e prospettive dell'anticità universitaria", in Guido Canella and Lucio Stellario d'Angiolini. *Università. Ragione, contesto, tipo*. Bari: Dedalo, 1975, pp. 35-50.
- . "Vecchie e nuove ipotesi per i centri direzionali". *Casabella-Continuità* no. 275, 1963.
- Canella, Guido and Lucio Stellario d'Angiolini. *Università. Ragione, contesto, tipo*. Bari: Dedalo, 1975.
- Candilis, George; Alex Josic and Shadrach Woods. "Project for the Free University of Berlin". *Ekistics* 18, no.108 (1964).
- Čapková, Helena. "Iwao and Michiko Yamawaki and the Formation of Japanese Modernist Design". *Journal of Design History*, vol. 27, no.4 (2014).
- Capozzi, Renato; Camillo Orfeo and Federica Visconti. *Maestri e Scuole di Architettura in Italia*. Napoli: CLEAN, 2012.
- Carpo, Mario and Frédérique Lemerie (eds), *Perspective, projections, projet: techniques de la représentation architecturale*. Paris: Monum, 2005.
- Casciato, Maristella. "Forum: architettura e cultura nei primi anni Sessanta". *Casabella* no. 606 (1994).
- . "Gli esordi della rivista *Metron*: eventi e protagonisti". *Rassegna di Architettura e Urbanistica*, no.117 (2005): 45-55.
- Chavez, Roberto, Julie Vioria and Melanie Zipperer. "Interview of John F.C. Turner", in 'La Collective', 1 March 2010.
- Christiaanse, Kees. "Campus to City: Urban Design for Universities." In *Campus and the City: Urban Design for the Knowledge Society*, 45–58. Zurich: GTA Verlag, 2007.
- Codignola, Ernesto. *Educazione liberatrice*. Firenze: La nuova Italia, 1946.
- Collini, Stefan. *Speaking of Universities*. London: Verso, 2017.
- Colquhoun, Alan. "Plateau Beaubourg". *Architectural Design*, vol. 47, no. 2 (1977).
- . *Collected Essays in Architectural Criticism*. Cambridge, MA: MIT Press, 1981.
- Comas, Carlos Eduardo. "Memorandum latino americano: La ejemplaridad arquitectónica de lo marginal." 'Special issue on Latin America', *2G*, no. 8 (1998):130-43.
- Cooke, Philip and Andrea Piccaluga (eds), *Regional Development in the Knowledge Economy*. New York: Routledge, 2006.
- Connell, Raewyn. *The Good University: What Universities Actually Do and Why It's Time for Radical Change*, London: Zed Books, 2019.
- Corboz, André. "Les Précédents Du Plan de Jefferson Pour l'Université de Virginie." *Artibus et Historiae* Vol.26, no. 51 (January 2005): 173–94.
- Coulson, Jonathan; Robert, Paul and Isabelle Taylor. *University Planning and Architecture: The Search for Perfection*. London: Routledge, 2010.
- Coulson, Jonathan; Robert, Paul and Isabelle Taylor. *University Trends: Contemporary Campus Design*. London: Routledge, 2018.
- Cruz, Alberto. "Cooperativa Amereida, Chile". *Zodiac* (no. 8, 1992):188-97.
- D'Amia, Giovanna (ed), *Italia-Argentina. Andata e Ritorno, migrazioni professionali, relazioni architettoniche, trasformazioni urbane*. Rimini: Maggioli, 2015.
- Deambrosis, Francesco. *Nuevas Visiones*. Buenos Aires: Ediciones Infinito, 2011.
- Deamer, Peggy (ed). *Architecture and Capitalism. 1845 to the present*. New York: Routledge, 2014.
- . "Letter to the editors". *Volume*, no. 45 (2015): 6-7.
- De Carlo, Giancarlo (ed.), *Pianificazione e Disegno delle Università*. Roma: Edizioni universitarie italiane, 1968).
- . "Why/How to build School Buildings". *Harvard Educational Review* no. 4 (1969):12-35.
- . "L'utopia di Ritoque". *Spazio e Società*, no. 66 (1994).
- . *La Piramide Rovesciata*. Bari: De Donato, 1968.

- De Magistris, Alessandro, 'Burocrazie, strategie, apparati. Un'introduzione', in Bonifazio, Pace, Rosso, Scrivano (eds.), *Tra guerra e pace. Società, cultura e architettura nel secondo dopoguerra*, Milano, 1998.
- De Quincy, Quatremère. "Type (with an Introduction by Anthony Vidler)", in K. Michael Hays (ed), *Oppositions Reader*. Princeton Architectural Press, 1988.
- Del Real, Patricio. 'Building a Continent: The Idea of Latin American Architecture in the Early Postwar'. PhD diss. Columbia University, 2012.
- . "Simultaneous Territories: Unveiling the Geographies of Latin American Cities". *Architectural Design* 81, no. 3 (2011): 16-19.
- . "Building a continent: MoMA's Latin American Architecture Since 1945 Exhibition". *Journal of Latin American Cultural Studies*, Vol. 16, no.1 (2007): 95-110.
- . "Un gusto por la cerveza. El descubrimiento de Henry Russell Hitchcock de la Arquitectura Latinoamericana". *Trace* no.7 (2013): 60-67.
- Del Real, Patricio and Helen Gyger. *Latin American Modern Architectures. Ambiguous Territories*. London: Routledge, 2013.
- Della Torre, Stefano; Raffaella Neri, Massimiliano Bocciarelli and Laura Daglio (eds), *Buildings for Education. A Multidisciplinary Overview of The Design of School Buildings*. Springer International Publishing, 2019.
- Deyong, Sarah. "An Architectural Theory of Relations: Sigfried Giedion and Team X". *Journal of the Society of Architectural Historians*, 73:2 (2014): 226-47.
- Denison, Edward. *Why Growth Rates Differ? Postwar experience in nine western countries*. Washington: The Brookings Institution, 1967.
- Domingo-Calabuig Débora, Castellanos-Gómez Raúl and Ábalos Ramos Ana. "The Strategies of Mat-building". *The Architectural Review*, no.1398 (2013).
- Douglas, Mary. *How Institutions Think*. London: Routledge & Kegan Paul, 1987.
- Drucker, Peter. *Concept of the Corporation*. New York: The John Day Company, 1946.
- Dulio, Roberto. *Introduzione a Bruno Zevi*. Roma: Laterza, 2008
- Eisenman, Peter. *Ten Canonical Buildings: 1950-2000*. Milano: Rizzoli 2008.
- Eliash, Humberto and Moreno, Manuel. *Arquitectura y modernismo en Chile, 1925-1965: Una realidad múltiple*. Santiago de Chile: Universidad Católica de Chile, 1989.
- Evans, Robin. "The Developed Surface. An Inquiry into the Brief Life of an Eighteenth-Century Drawing Technique" (1989), in *Translations from Drawing to Building and Other Essays*, London: Architectural Association 1997.
- Exo Adams, Ross. *Circulation and Urbanization*. London: Sage, 2019.
- Fabricius, Daniela. "Looking Beyond Informality". *Architectural Design*, no.211 (2011):144-9.
- Fernández, Roberto. *El laboratorio americano*. Madrid: Editorial Biblioteca Nueva, 1998.
- . *La ilusión proyectual. Una historia de la arquitectura argentina 1955-1995*. Universidad Nacional de Mar del Plata, 1996.
- Field, John. *Lifelong learning and the new educational order*. Stoke-on-Trent, 2000.
- Forty, Adrian. *Words and Building: A Vocabulary of Modern Architecture*. New York: Thames & Hudson, 2000.
- . *Concrete and Culture: A Material History*. London: Reaktion Books, 2012.
- Foucault, Michel. *Discipline and punish. The birth of the prison*. London: Penguin, 1999.
- . *Security, Territory, Population: Lectures at the College de France 1977-78*. New York: Picador, 2009.
- Frampton, Kenneth. *Modern Architecture: A Critical History*. London: Thames and Hudson, 1980.
- . *Megaform as Urban Landscape*. Ann Arbor, MI: University of Michigan College of Architecture and Urban Planning, 1999.
- Fraser, Valerie. *Building the New World: Studies in the Modern Architecture of Latin America, 1930-1960*. London: Verso, 2000.

- Freire, Paulo. *Pedagogy of the Oppressed*. New York: Herder and Herder, 1970.
- Frondizi, Risieri. *Hacia la Universidad nueva*. Universidad Nacional del Noroeste, 1958.
- Gajardo, Marcela. "Ivan Illich". *Prospects: the quarterly review of comparative education*, no. 3/4, 1993.
- Garcíavelez Alfaro, Carlos. *Forma y Pedagogía: El Diseño de la Ciudad Universitaria en América Latina*. Applied Research & Design, 2015.
- Gargiani, Roberto. *Louis I. Kahn: Exposed Concrete and Hollow Stones, 1949-1959*. Losanna: EPFL Press, 2014.
- . *Rem Koolhaas/OMA: The Construction of Merveilles*, New York: Routledge, 2008.
- Giedion, Sigfried. *Mechanization takes command, a contribution to anonymous history*. New York: Oxford University Press, 1948.
- . *A Decade of New Architecture*. Zurich: Girsberger, 1951.
- . "The State of Contemporary Architecture: The Regional Approach". *Architectural Record* 115, no. 1 (January 1954): 132–37.
- Gyger, Helen Elizabeth. "The Informal as a Project: Self-Help Housing in Peru, 1954–1986", PhD Diss. Columbia University, 2013.
- Goodwin, Philip L. *Brazil Builds. Architecture New and Old, 1642-1942*. New York: MoMA, 1943.
- Gregotti, Vittorio. *Il Territorio dell'architettura*. Milano: Feltrinelli 1966.
- Gropius, Walter. "Eight Steps toward a Solid Architecture" (1954), reprinted in Ockman (ed.), *Architecture Culture 1943-1968*. New York: Rizzoli, 2005.
- Gropius, Walter. "The Architect Within Our Industrial Society", in *Scope of Total Architecture*. New York: Harper, 1955.
- Gropius, Walter; Architects Collaborative et al. *The Architects Collaborative Inc.: 1945-1965*. Teufen: Arthur Niggli, 1966.
- Gutiérrez, Ramón, et al. *Arquitectura latinoamericana en el siglo XX*. Barcelona: Lunwerg; Milan: Jaca Book, 1998.
- Halley, Peter. "Notes on Abstraction". *Arts Magazine* Vol. 61, June/Summer 1987.
- Hardoy, Jorge. *Las Ciudades en América Latina: Seis ensayos sobre la urbanización contemporánea*. Buenos Aires: Paidós, 1970.
- Harvey, David. *The Limits to Capital*. Oxford: Blackwell, 1982.
- . *A Brief History of Neoliberalism*. Oxford: Oxford University Press, 2005.
- Hays, K. Michael (ed). *Architecture Theory since 1968*. Cambridge, MA and London: MIT Press, 1998.
- Hilberseimer, Ludwig. *Un'idea di piano*. Venezia: Marsilio, 1985 (edited by Sonia Gessner).
- . *Metropolisarchitecture*. New York: Columbia Books on Architecture and the City, 2015 (edited by Richard Anderson).
- Hitchcock, Henry-Russel. "The Architecture of bureaucracy & the Architecture of genius", in *Architectural Review* no.101 (1947).
- . *Latin American Architecture since 1945*. New York: The Museum of Modern Art, 1955.
- . *Architecture: Nineteenth and Twentieth Centuries*. 1958. Harmondsworth, U.K.: Penguin Books, 1975.
- Hitchcock, Henry-Russell and Arthur Drexler. *Built in USA: Post-War Architecture*. New York: Simon & Schuster, 1952.
- Haar, Sharon. *The City as Campus. Urbanism and Higher Education in Chicago*. Minneapolis: University of Minnesota Press, 2010.
- Ibelings, Hans. *Modernism without Dogma: Architects of a Younger Generation in the Netherlands*, (trans. John Kirkpatrick), Rotterdam: NAI, 1991.
- Illich, Ivan. *Deschooling Society*. London: Marion Boyars, 1971.

- Illich, Ivan. *Tools for conviviality*. London: Calder & Boyars, 1973.
- Iturriaga, Sandra and Wren Strabucchi. *Lo Contador. Casas jardines y campus*. Santiago de Chile: ARQ Ediciones, 2012.
- Jacobus, Laura. "On 'Whether a Man Could See Before Him and Behind Him Both at Once': The Role of Drawing in the Design of Interior Space in England, 1600–1800". *Architectural History*, no. 31 (1988): 148–65.
- Jaksic, Ivan. *Academic Rebels in Chile: The Role of Philosophy in Higher Education and Politics*. New York: State Univ of New York, 1989.
- Jameson, Fredric. *Postmodernism, or, the Cultural Logic of Late Capitalism*. Durham: Duke University Press, 1991.
- Jenks, Charles and Georges Baird. *Meaning in architecture*. New York: George Braziller, 1969.
- Kahatt, Sharif S. *Utopias construidas. Las unidades vecinales de Lima*. Lima: Pontificia Universidad Católica del Perú, 2015.
- Kubo, Michael. 'The Concept of the Architectural Corporation', in *OfficeUS Atlas*. Zürich: Lars Müller, 2015.
- Lagos Danilo. 'Arqueología vial. Una mirada vertical al eje norte sur de Santiago', in Mondragon H., Mejia C. (Eds.), *Sudamerica Moderna. Objetos, edificios, territorios*, Santiago: ARQ Ediciones, 2015.
- Lancaster, Joseph. *The British system of education*. London: Royal Free School, 1810.
- Laurie, Angus. "Formalisation: An Interview with Hernando de Soto". *Architectural Design*, no. 211 (2011).
- Lavin, Sylvia. *Architecture Itself and Other Postmodernization Effects*. CCA and Spector Books, 2020.
- Lazzarato, Maurizio. 'Immaterial Labour', in Michael Hardt and Paolo Virno (eds), *Radical Thought in Italy: A Potential Politics*, Minneapolis: University of Minnesota Press, 1997.
- Lefebvre, Henri. *The Production of Space*. New York: Horizon Press: 1974.
- Leon, Ana Maria. "Prisoners of Ritoque. The Open City and the concentration camp". *Journal of Architectural Education*, no. 66:1 (2012): 84-97.
- Liernur, Jorge Francisco. *America Latina: Architettura, gli ultimi vent'anni. Tendenze dell'architettura contemporanea*. Milan: Electa, 1990.
- . "Cien años de soledad?: Identidad y modernidad en la cultura arquitectónica latinoamericana." *ARQ* 15, (1990): 32–39.
- . *Escritos de arquitectura del siglo XX en América Latina*. Madrid: Tanais, 2002.
- . "Latin America: The Places of the Other." In Richard Koshalek et al. *At the End of the Century: One Hundred Years of Architecture*, pp. 277–318.
- . "Vanguardistas versus expertos". *Block*, no. 6 (March 2004): 18–39.
- . "Architetti italiani nel secondo dopo guerra nel dibattito architettonico della nuova Argentina 1947-1951". *Metamorfosi. Quaderni di architettura*, no.24/25 (1995): 71-80.
- Liernur, Jorge Francisco and Pablo Pschepiurca. *La red austral. Obras y proyectos de Le Corbusier y sus discípulos en la Argentina (1924-1965)*. Buenos Aires: Univ. Nacional de Quilmes, Prometeo, 2008.
- Lopez Reus, Eugenia. *Ernesto Nathan Rogers. Continuità e Contemporaneità*. Milano: Christian Martinotti Edizioni, 2009.
- Maki, Fumihiko. *Investigations in Collective Form*. St. Louis: University of Washington, 1964.
- Maldonado, Tomás. *La speranza progettuale: ambiente società*. Torino: Giulio Einaudi, 1970.
- Martin, Reinhold. *Knowledge Worlds. Media, Materiality, and the Making of the Modern University*. New York: Columbia University Press, 2021.
- . "The Dialectic of the University: His Master's Voice". *Grey Room* no.60 (2015):82-109.
- . *Utopia's Ghost: Architecture and Postmodernism, Again*. Minneapolis: University of Minnesota Press, 2010.

- Maffioletti, Serena (ed), *Ernesto N. Rogers. Architettura, Misura e grandezza dell'uomo. Scritti 1930-1969*. Padova: Il Poligrafo, 2010.
- Maki, Fumihiko; Mario Corea et al., "Sistemas de movimiento en la ciudad", *A&P* no. 8 (1968).
- Martínez, Raúl. "Bruno Zevi, the continental European emissary of Geoffrey Scott's theories". *The Journal of Architecture*, no. 24:1 (2019): 27-50.
- McGuirk, Justin. *Radical Cities: Across Latin America in Search of a New Architecture*. London: Verso, 2015.
- McKean, John. *Giancarlo De Carlo: Layered Places*. Stuttgart: Edition Axel Menges, 2004.
- McLuhan, Marshall. "The Invisible Environment: The Future of an Erosion". *Perspecta*, vol. 11 (1967): 163-7.
- Moholy-Nagy, Sibyl. "Some Aspects of South American Architecture." *Progressive Architecture*, (April 1960): 135-40.
- . *Carlos Raúl Villanueva and the Architecture of Venezuela*. Caracas: Lectura, 1964.
- Moneo, Rafael. "On Typology." *Oppositions 13* (Summer 1978): 23-45.
- Monestiroli, Antonio. *L'Architettura della Realtà*. Milano: CLUP, 1979.
- Monica, Luca (ed). *Un ruolo per l'architettura. Guido Canella*. Napoli: CLEAN, 2011.
- Moreno, Joaquín. *The University is Now On Air: Broadcasting Modern Architecture*. CCA and Jap Sam, 2018.
- Mumford, Eric. *The CIAM Discourse on Urbanism, 1928-1960*. Cambridge: MIT Press, 2002.
- . *The Writings of Josep Lluís Sert*. New Haven: Yale University Press, 2015.
- . "The Emergence of Mat or Field Buildings." In *Le Corbusier's Venice Hospital and the Mat Building Revival*, edited by Hashim Sarkis, 48-65. Munich London New York: Prestel Verlag, 2001.
- Mumford, Lewis. "A New Regional Plan to Arrest Megalopolis." *Architectural Record*, Vo.137 no. 3 (1965):147-153.
- . *Technics and Civilization*. Brace: Harcourt, 1934.
- . "La Nascita Della Città Regionale." *Comunità*, no. 55 (1957).
- . *The Culture of Cities*. New York: Harcourt, Brace & World, 1966.
- Muthesius, Stefan. *The Postwar University: Utopianist Campus and College*. New Heaven: Yale University Press, 2000.
- Montaner, Josep Maria. *Arquitectura y crítica*. Barcelona: Ed. Gustavo Gili, 2011.
- . *Arquitectura y crítica en Latinoamérica*. Editorial Nobuko S. A, 2011.
- . *Después del Movimiento Moderno. Arquitectura de la segunda mitad del siglo XX*, Editorial Gustavo Gili, Barcelona, 1993.
- . "La crítica de la arquitectura en América Latina". *DC Papers*, no.2 (1999): 7-11.
- . "La Experiencia Del Lugar Ernesto Nathan Rogers, Enrico Tedeschi, José Antonio Coderch y Lina Bo Bardi". *El lugar. Cuadernos de Proyectos Arquitectonicos*, no.2 (2011): 39-45.
- Newman, Oscar. *CIAM '59 in Otterlo*. Stuttgart: Karl Krämer Verlag, 1961.
- . "The New Campus". *Architectural Forum* (May 1966): 44-51.
- Norberg-Schulz, Christian. *Genius loci. Paesaggio, ambiente, architettura*. Milano: Electa, 1979.
- . "Il concetto de luogo". *Conspazio* (June, 1969): 20-23.
- Novick, Alicia. "Planes versus proyectos: Algunos problemas constitutivos del Urbanismo Moderno. Buenos Aires (1910-1936)". *Revista de Urbanismo*, no.3 (2000):1-26.
- Ockman, Joan (ed.), "Reaffirmation of the Aims of CIAM", in *Architecture Culture 1943-1968*. New York: Rizzoli, 2005.

- Ockman, Joan and Edward Eigen (eds), *Architecture Culture 1943-1968: A Documentary Anthology*. Milan: Rizzoli, 1993.
- Olgay, Victor. *Design with Climate. Bioclimatic Approach to Architectural Regionalism*. Princeton: Princeton University Press, 1963.
- Ortega y Gasset, José. "Misión de la Universidad", in *Revista de Occidente*, Alianza Editorial, 1982.
- Ortiz, Federico et al. *La arquitectura del liberalismo en la Argentina*. Buenos Aires: Ed. Sudamericana, 1968.
- Pearlman, Jill. "Joseph Hudnut's Other Modernism at the Harvard Bauhaus." *Journal of the Society of Architectural Historians*, Vol. 56, no. 4 (December 1997): 452-477.
- Pérez Oyarzún, Fernando. *Le Corbusier y Sudamérica: Viajes y proyectos*. Santiago: Ediciones Arq, 1991.
- . "Ortodossia/eterodossia. Architettura moderna in Cile". *Casabella*, no. 650 (1997).
- Pevsner, Nikolaus. *Pioneers of the modern movement from William Morris to Walter Gropius*. London: Faber & Faber, 1936.
- . *An Outline of European Architecture*. London: Penguin Books, 1942.
- . *A History of Building Types*. Princeton: Bollingen Foundation, 1979
- Pozzi, Clelia. "Latin America Made in Italy. The Editorial Construction of a Domesticated Modernism". *ABE Journal* no.7, 2015.
- Prieto, Eduardo. "Tedeschi, el historiador como crítico", in *Una introducción a la historia de la arquitectura* (pp. 187-210). Barcelona: Reverté, 2017.
- Puddu, Sabrina, Martino Tattara and Francesco Zuddas. *I Territori della Conoscenza. Un Progetto per Cagliari e la sua Università*. Macerata: Quodlibet, 2017.
- Puddu, Sabrina and Francesco Zuddas. "Corporation Takes Command: The Project of the Sir John Cass Faculty of Architecture and Design between Complicity and Resistance". *Architecture and Culture*, Vol. 9, no.1 (March 2021):1-18.
- Quatrill, Malcolm. *Latin American Architecture: Six Voices. Studies in Architecture and Culture 5*. College Station: Texas A&M University Press, 2000.
- Readings, Bill. *The University in Ruins*. Cambridge: Harvard University Press, 1996.
- Rebecchini, Giuseppe. *Progettare l'università*. Roma: Edizioni Kappa, 1981.
- Ribeiro, Darcy. *La universidad latinoamericana*. Caracas: Ediciones de la Biblioteca Universidad Central, 1971.
- . *La universidad nueva: un Proyecto*. Buenos Aires: Ciencia Nueva, 1973.
- Rice, Charles. *The emergence of the interior: architecture, modernity, domesticity*. New York: Routledge, 2007).
- . *Interior Urbanism. Architecture, John Portman and Downtown America*. London: Bloomsbury, 2016.
- Rigotti, Ana Maria. "Fósiles de futuro: megaestructuras". *BLOCK* no.9 (2012):18-31.
- . "De la ciudad al territorio, del municipio a la nación: las promesas del urbanismo como alternativa tecnocrática de gestión (1928/1958)", in Mariano Plotkin and Eduardo Zimmermann (ed.), *Los saberes del Estado* (pp. 159-184). Buenos Aires: Edhasa, 2012.
- Rogers Ernesto Nathan (ed.), *L'Utopia della Realtà*, Bari: Leonardo da Vinci, 1965.
- Rogers, Ernesto Nathan. *Esperienza dell'architettura*. Torino: Einaudi, 1958.
- . *Editoriali di architettura*. Turin: Einaudi 1968.
- . "Le preesistenze ambientali e i temi pratici contemporanei". *Casabella continuità*, no. 204, 1955.
- . "Note sull'Argentina". *Casabella-Continuità*, no.285 (1964).
- . 'Continuità o Crisi?', *Casabella-Continuità* no. 215 (1957).
- Rogers, Ernesto Nathan (ed), *L'utopia della realtà. Un esperimento didattico sulla tipologia della Scuola Primaria*. Bari: Leonardo da Vinci Editrice, 1965.

- Rossi, Aldo. *L'architettura della Città*. Padova: Marsilio, 1966.
- . “Nuovi Problemi.” *Casabella-Continuità*, no. 264 (1962): 2–7.
- . “Argentina, Buenos Aires”. *Casabella-Continuità*, no.285 (1964).
- Rowe, Colin and Slutzky, Robert. “Transparency: Literal and Phenomenal”. *Perspecta*, no. 8 (1963): 45-54.
- Rowe, Colin and Slutzky, Robert. “Transparency: Literal and Phenomenal part II”. *Perspecta* no.13-14 (1971).
- Rowe, Colin and Fred Koetter. *Collage City*. Cambridge, MA: MIT Press, 1978.
- Scott, Goeffrey. *The Architecture of Humanism: a Case in the History of Taste*. London: Architectural Press, 1980.
- Segre, Roberto. *América Latina en su arquitectura. América Latina en su cultura series*. New York: Holmes and Meier, 1981.
- Segre, Roberto, and Rafael López Rangel. *Arquitectura e territorio nell'America Latina*. Milan: Electa, 1982.
- Sert, Josep Luis. *Can Our Cities Survive?* Cambridge: Harvard University Press, 1942.
- Smithson, Alison (ed), *Manual del Team X*. Buenos Aires: Nueva Visión, 1966.
- . “How to recognize and read matbuilding. Mainstream Architecture as it has developed towards the Mat-Building”. *Architectural Design* no. 9 (1974):573-90.
- Speaks, Michael and Fredric Jameson. “Envelopes and Enclaves: The Space of Post-Civil Society (An Architectural Conversation)”. *Assemblage*, no. 17 (1992):30-37.
- Spencer, Douglas. *The Architecture of Neoliberalism: How Contemporary Architecture became an Instrument of Control and Compliance*. New York: Bloomsbury, 2016.
- . “Returns on the City: Detroit and the Design of Late Fordism”. *Harvard Design Magazine*, no.46 (2018).
- Stow, David. *The training system, moral training school, and normal seminary for preparing school-trainers and governesses*. London: Longman Brown Green and Longmans, 1854.
- Swenarton, Mark; Tom Avermaete and Dirk van den Heuvel (eds). *Architecture and the Welfare State*. London: Routledge: 2014.
- Tafuri, Manfredo. *Teorie e storia dell'architettura*. Bari: Laterza 1968.
- . *Architecture and Utopia: Design and Capitalist Development*. First published in Italian in 1973 as *Progetto e Utopia. Architettura e sviluppo capitalistico*. Cambridge, Mass: MIT Press, 1976.
- Torrent, Horacio and Cabral, Claudia Costa. “Argentina III: Arquitecturas como infraestructuras urbanas”. *Revista AOA* no. 36 (2017).
- Turner, John and et al., “The Architecture of Democracy”. *Architectural Design* Vol 8, no. 38 (1968) edited by Monica Pidgeon.
- . *Freedom to Build: Dweller Control of the Housing Process*. New York: The Macmillan Company, 1972.
- . *Housing by People: Towards Autonomy in Building Environments, Ideas in progress*. London: Marion Boyars, 1976.
- Turner, Paul V. *Campus: An American Planning Tradition*. Cambridge: MIT Press, 1987.
- Tyrwhitt, Jaqueline; Josep Luis Sert and Ernesto Nathan Rogers (eds), *The Heart of the city: towards the humanisation of urban life*. London: Lund Humphries, 1952.
- Ungers, Oswald Mathias, Rem Koolhaas, Peter Riemann, Hans Kollhoff, and Arthur Ovaska. “Cities within the City. Proposals by the Sommer Akademie for Berlin.” *Lotus*, no. 19 (1978).
- Vidler, Anthony. “The Third Typology”. *Oppositions* 7 (Fall 1976): 1-4.
- . “Platonic Paradigms: A Memory of The School of Athens”. *Perspecta*, no. 48 (2015):78-87.
- Villanueva, Carlos Raúl. *Caracas en tres tiempos*. Caracas: Ediciones de la Comisión del Cuatricentenario, 1966.

- Violich, Francis. "Evolution of the Spanish City: Issues Basic to Planning Today". *The Journal of American Institute of Planners*, Vol.28, no.3 (1962):170-79.
- Waisman, Marina. "Algunos conceptos críticos para el estudio de la arquitectura latinoamericana." *Boletín del Centro de Investigaciones Históricas y Estéticas* (Caracas) 18, 1974.
- Walton, Graham and Graham Matthews (eds). *Exploring Informal Learning Space in the University: A Collaborative Approach*. Oxford: Routledge, 2018.
- Webster, Helena. "The Architectural Review: A Study of Ritual, Acculturation and Reproduction in Architectural Education". *Arts and Humanities in Higher Education*, Vol 4, no. 3 (October 2005): 265–282.
- Whiteley, Nigel. *Reyner Banham, historian of the immediate future*. Cambridge: MIT Press, 2002.
- Whyte, William. *The Organization Man*. New York: Simon & Schuster, 1958.
- . *The social life of small urban spaces*. Washington DC: The Conservation Foundation, 1980.
- Waisman, Marina (ed), *Documentos para una historia de la arquitectura argentina*. Buenos Aires: Ediciones Summa, 1984.
- . "Crónica chilena para uso de argentinos". *Nuestra Arquitectura*, no. 377, 1960.
- . *La estructura histórica del entorno*. Buenos Aires: Nueva Visión, 1972.
- . *El interior de la historia: Historiografía arquitectónica para uso de latinoamericanos. Colección historia y teoría latinoamericana*. Bogotá: ESCALA, 1990.
- Wolfe, Tom. *From Bauhaus to Our House*. New York: Farrar Straus & Giroux, 1981.
- Woods, Shadrach. *Candilis-Josic-Woods: Building for People*. New York: F.A. Praeger, 1968.
- Woods, Shadrach. *The Man in the Street. A Polemic on Urbanism*. Baltimore: Penguin Books, 1975.
- Zenghelis, Elias. "The Aesthetics of the Present". *Architectural Design*, Vol. 58, no.3-4 (1988).
- Zevi, Bruno et al., *An Opinion on Architecture*. Boston: The Century Press, 1941.
- Zevi, Bruno. *Verso un'architettura organica*. Turin: Einaudi, 1945.
- . *Saper vedere l'architettura*. Turin: Einaudi, 1948.
- . *Storia dell'architettura moderna*. Turin: Einaudi, 1950.
- . "Della cultura architettonica: messaggio al Congrès Internationaux d'Architecture Moderne", in *Metron*, no. 31-32 (1949).
- Zuccaro Marchi, Leonardo. *The Heart of the City. Legacy and Complexity of a Modern Design Idea*. London: Routledge, 2018.
- Zuddas, Francesco. *The University as a Settlement Principle. Territorialising Knowledge in Late 1960s Italy*. London: Routledge, 2019.
- . "The Idea of Universitas". *AA Files* no.75 (2017):119-31.

Chapter 1

- Álvarez-Prozorovich, Fernando and Jordi Roig Navarro. *Bonet Castellana*. Barcelona: Ediciones UPC, 1999.
- Alvite, Silvia. “La Ciudad Universitaria de Tucumán (1947-1952). Región, paisaje y organicismo”. *Registros*, Vol. 14, no.2 (2018).
- Braceti, Rodolfo. “César Pelli”, in *Nueva*, no. 425 (1999).
- Brett, Lionel. “The space machine: an evaluation of the recent work of Le Corbusier”. *Architectural Review*, no. 102 (1947).
- Calcaprina, Cino. *Planificación Regional. Enfoque de un plan para la vida del noroeste argentino*. Universidad Nacional de Tucumán, 1950.
- Castro, Alejandra. ‘Lecturas Actuales del Manifiesto Liminar de La Reforma Universitaria de 1918’, Dossier Especial: A Cien Años de la Reforma Universitaria de 1918.
- Collins, Christiane C. and George R., “Monumentality: A Critical Matter in Modern Architecture”, in *Harvard Architectural Review*, Vol.4 (1984):14-35.
- Croce, Benedetto. *History as the Story of Liberty*. London: G. Allen and Unwin, 1941.
- Frampton, Kenneth. “The Status of Man and the Status of his Object: A Reading of Hannah Arendt”, in Melvyn A. Hill (ed), *Hannah Arendt: The Recovery of the Public World*, New York: St. Martin Press, 1979, reprinted in Michael Hays, *Architectural Theory since 1968*, Cambridge: Mit Press, 1998.
- Giedion, Sigfried. “The Need for a New Monumentality”, in Paul Zucker (ed). *New Architecture and City Planning: A Symposium*. New York: Philosophical Library, 1944.
- Guiducci, Roberto. “Appunti sulla fabbrica di São Paulo in Brasile”. *Casabella-Continuità* no. 216 (1957):66-71.
- Hilberseimer, Ludwig. *The New City: Principles of Planning*. Chicago: Paul Theobald, 1944.
- . “Book Review New Architecture and City Planning-A Symposium”. *College Art Journal*, Vol. 6, no. 2 (1946).
- . *The new regional pattern*. Chicago: Paul Theobald, 1949.
- Hyde, Timothy. “Plans, plans and planning: José Luis Sert and the Idea of Planning”, International Conference *José Luis Sert: The architect of urban design*, Harvard Design School, October 2003.
- Katzenstein, Ernesto, Natanson, Gustavo and Schvartman, Hugo. *Antonio Bonet: Arquitectura y Urbanismo en el Río de la Plata y España*. Buenos Aires: Espacio Editora, 1985.
- Lathouri, Marina. ‘Reconstructing the topographics of the modern city: the late CIAM debates’, PhD Diss. University of Pennsylvania, 2006.
- ‘A plan for Saint-Dié’, in *Architectural Record* no.4 (October 1946).
- Maffioletti, Serena. “Ernesto N. Rogers and the CIAM: Teaching for Democracy”. *DOCOMOMO Journal*, no. 49 (2013):28-33.
- Marcaccio, Roberta. “A Hero of Doubts”. *AA Files* no.75 (2017):59-70.
- Marigliano, Franco. ‘El Instituto de Arquitectura y Urbanismo de la Universidad Nacional de Tucumán. 1946-1955. Modelo arquitectónico del estado y Movimiento Moderno en Argentina’, PhD Diss. Universidad Politécnica de Madrid, 2003.
- . “La ciudad universitaria de Tucumán. El triunfo de la visión racionalista”. In Alejandra Sella and Noemi Adagio (eds.), *Enrico Tedeschi. Work in progress* (pp. 85-89). Mendoza: IDEARIUM (2012).
- McLeod, Mary. ‘Saint-Die. A Modern Space Conception for Postwar Reconstruction’, in Jean-Louis Cohen (ed.), *Le Corbusier: An Atlas of Modern Landscapes*. New York: MoMA, 2013.
- Molinari, Luca. ‘Milano-Tucumán-Buenos Aires-New York-Milano, 1947-1949. Circolarità dei saperi e delle relazioni: il carteggio E.N. Rogers – BBPR’, in P. Bonifazio, S. Pace, M.Rosso e P. Scrivano. *Tra guerra e pace, società, cultura e architettura nel secondo dopoguerra*. Franco Angeli, Milano 1998.
- Molinari, Luca. ‘Continuità: a response to identity crises. Ernesto Nathan Rogers and Italian architectural culture after 1945’, PhD Diss. Delft University of Technology, 2008.

Mumford, Lewis. 'The Death of the Monument', in Martin, Nicholson and Gabo, *Circle: International Survey of Constructive Art*. London: Faber and Faber, 1937.

Nicolini, Alberto and Paolasso, Carlos. "Racionalismo y arquitectura orgánica en Tucumán", in Marina Waisman (ed) *Documentos para una historia de la arquitectura argentina*. Buenos Aires: Ediciones Summa, 1984.

Pelli, César. *Observations For Young Architects*. The Monacelli Press, New York, 1999.

Pérez Lindo, Augusto. *Universidad, Política y Sociedad*. Buenos Aires: Editorial Universitaria de Buenos Aires, 1985.

Olivetti, Adriano (ed.). *Studi e Proposte preliminari per il Piano Regolatore della Valle D'Aosta*. Torino: Nuove Edizioni Ivrea, 1943.

Piccarolo, Gaia. 'Cino Calcaprina e il contributo italiano all'Istituto de Arquitectura y Urbanismo de Tucumán', in Giovanna D'Amia (ed), *Italia-Argentina. Andata e Ritorno, migrazioni professionali, relazioni architettoniche, trasformazioni urbane*. Rimini: Maggioli, 2015.

Rogers, Ernesto Nathan. "The Heart: Human Problem of Cities", in J. Tyrwhitt, J. L. Sert, E. N. Rogers (eds). *The Heart of the city: towards the humanisation of urban life*. London: Lund Humphries, 1952.

Rogers, Ernesto Nathan. "Tradition and modern design", in Reyner Banham (ed), *The Aspen papers. Twenty Years of Design Theory from the International Design Conference in Aspen*. London: Pall Mall, 1974, pp. 78-85; (trans.) "Tradizione e attualità", in *Esperienza*, cit., pp. 243-257.

Sacriste, Eduardo. *Charlas a principiantes*. Buenos Aires: Centro de estudiantes de arquitectura, 1963.

Sert, Luis J. "The Human Scale in City Planning", in Paul Zucker (ed). *New Architecture and City Planning: A Symposium*. New York: Philosophical Library, 1944.

Sert, J. Luis. "From Architecture to City Planning", in Stamo Papadaki (ed.), *Le Corbusier: Architect, Painter, Writer*. New York: MacMillan, 1948.

Solà-Morales, Ignasi, "Tendencia: neoracionalismo e figurazione", in *Decifrare l'architettura. "Inscriciones" del XX secolo*, Torino: Umberto Allemandi & C., 2001.

Tedeschi, Enrico. *Plaza de Armas de Cuzco*. Universidad Nacional de Tucumán, 1961.

Waldmann, Peter. *El Peronismo (1943-1955)*. Buenos Aires: Hyspamérica Ediciones Argentinas, 1986.

Chapter 2

Beca, Carlos Eugenio; Bianchetti, Lucídio and Richards, Cecilia. "Ernani Maria Fiori: un profesor brasileiro en tierras chilenas-testimonios". *Educação & Realidade*, vol. 38, no.3 (2013): 1021-34

Berrios, Cristián. "Universidad de Concepción", in *Documentos de Arquitectura Moderna en America Latina 1950-1955* edited by Grupo de Investigación FORM (2013).

Berrios, Cristián. *Emilio Duhart: Ciudad Universitaria de Concepción. Elaboración de un espacio urbano moderno*. Santiago: LOM Ediciones, 2017.

Bonomo, Umberto. "Las dimensiones de la vivienda moderna: La Unidad Vecinal Portales y la producción de viviendas económicas en Chile, 1948-1970", Ph.D. diss. Pontificia Universidad Católica de Chile, 2009.

Braun, Ricardo. *Bresciani, Valdés, Castillo, Huidobro*. Buenos Aires: Instituto de Arte Americano e Investigaciones Estéticas, 1962.

Browne, Erique. "The Community Architecture of Fernando Castillo", in Eliash and Campos (1990).

Crispiani, Alejandro. "The interior life". *ARQ* no.105 (2020): 37-39.

Dewey, John. *Experience and Education*. New York: The Macmillan company, 1938.

Drucker, Peter. *Concept of the Corporation*. New York: The John Day Company, 1946.

Eliash, Humberto. *Fernando Castillo: de lo moderno a lo real*. Bogotá: Escala, 1990.

Esparza-Saavedra, Verónica. "Emilio Duhart Harosteguy. Un Arquitecto Integral 1935-1992". Ph.D. diss. Universidad Politécnica de Catalunya, 2015.

- Forray, Rosanna and Márquez, Francisca. "The Memory of Inhabiting Modern Architecture. Villa Portales, 1955–2010". *Latin American Perspectives*, Vol.4 no.3 (2016): 64-82.
- Fuentes Hernández, Pablo. "Campus Universitarios en Chile: Nuevas Formas Análogas a la Ciudad Tradicional". *Atena*, no.496 (2007): 117-144.
- García-Molina, Jaime. *El campus de la Universidad de Concepción. Su Desarrollo Urbanístico y Arquitectónico*. Concepción: Ediciones Universidad de Concepción, 1995.
- Gropius, Walter. "The Architect Within Our Industrial Society", in *Scope of Total Architecture*. London: George Allen & Unwin Ltd, 1956.
- Gropius et al., Walter. *The Architects Collaborative 1945-1965*. Teufen: Arthur Niggli, 1966.
- Hidalgo, Aldo. "Habitar la infamiliaridad del espacio de la técnica". *REVISTA AUS*, no. 17 (2015): 56-61.
- Iommi, Godofredo. *Hoy me voy a Ocupar de mi Cólera. Valparaíso: Taller de Investigaciones Gráficas*. Valparaíso: Escuela de Arquitectura UCV, 1983.
- Jara, Catalina. *Innovaciones Tecnológicas en la Construcción del Espacio Moderno: El Proyecto de BVCH para la Universidad Técnica del Estado (1957-1967)*. Santiago de Chile: 2009.
- Klaus, Herdeg. *The Decorated Diagram. Harvard Architecture and the Failure of the Bauhaus Legacy*. Cambridge: The MIT Press, 1983.
- Kubo, Michael. "The Concept of the Architectural Corporation", in Eva Franch i Gilabert, Amanda Reser Lawrence, Ana Miljacki, and Ashley Schafer (eds.). *OfficeUS Agenda*, Zürich: Lars Müller Publishers, 2014, pp. 37-48.
- Martin, Reinhold. "Made in Manhattanville", in *Columbia in Manhattanville* edited by Caitlin Blanchfield. New York: Columbia GSAPP (2016): 128-136.
- Molina, Cristóbal. "Henry-Russell Hitchcock y Rollie Mckenna en Chile. Precisiones al capítulo Chileno de la exposición y libro Latin American Architecture Since 1945, del MoMA de Nueva York". *Revista 180*, no.24 (2009):12-17.
- Montealegre, Alberto. *Emilio Duhart, Arquitecto*. Santiago de Chile: Ediciones ARQ, 1994.
- Pérez de Arce, Rodrigo; Pérez Oyarzún, Fernando and Rispa, Raúl. *Escuela de Valparaíso: Grupo Ciudad Abierta*. Santiago: Contrapunto, 2003.
- Pérez Oyarzun, Fernando. "The Valparaíso School". *Harvard Architecture Review* (1993): 82-101.
- Pérez Oyarzún, Fernando. *Bresciani, Valdés, Castillo, Huidobro*, Santiago de Chile: Editorial Universidad Católica de Chile, 2006.
- Pérez Oyarzun, Fernando; Pérez de Arce, Rodrigo; Torrent, Horacio and Quantrill, Malcolm. *Chilean Modern Architecture since 1950*. College Station: Texas A&M University Press, 2010.
- Talesnik, Daniel. "The Itinerant Red Bauhaus, or the Third Emigration". Ph.D. diss. Columbia University, 2016.
- Weibel-Fernandez, Hugo. "Vivienda Moderna en Chile 1945 -1965. Bresciani-Valdes-Castillo-Huidobro", Ph.D. diss. Universidad Politécnica de Catalunya, 2008.
- Zuddas, Francesco. "Radical Notes: Archizoom Re-Viewed via Ivan Illich". *Architecture and Culture* no.8 (2020):119-42.

Chapter 3

- Allen, Stan. "Mat Urbanism: The Thick 2-D." In *Le Corbusier's Venice Hospital and the Mat Building Revival*, edited by Hashim Sarkis, 118–26. Munich London New York: Prestel Verlag, 2001.
- Baird, George. "Free University, Berlin: AA Publication/Exhibition in the Members' Room", in *AA Files* no. 40 (1999):65-71.
- Codignola, Ernesto. "Scuola, palestra di vita". *Domus*, no. 220 (1947).
- Corea, Mario. *El diseño transfuncional. La estructura posibilitante. Notas para la discusión*. Córdoba: Universidad Nacional de Córdoba, 1972.

- Corea Mario; Adrian Caballero and Jackie Monzón. "Propuesta de remodelación para el área central de Santiago de Chile", in Corea M. et al., *Contribución a un enfoque crítico del diseño* (pp.45-112). Buenos Aires, Argentina: CP67, 1973.
- De Carlo, Giancarlo. "La Scuola e l'Urbanistica". *Domus*, no. 220 (1947).
- . "Una precisazione". *Casabella-Continuità* no. 214 (1957).
- . *Proposta per una Struttura Universitaria*. Venezia: Cluva, 1965.
- . "Il Territorio senza Università". *Parametro*, no. 21–22 (1973).
- . "Un Caso di Studio: l'Università di Pavia". *Parametro*, no. 44 (1976):20-22.
- De Carlo, Giancarlo and Bunčuga, Franco. *Conversazioni su Architettura e Libertà*. Milano: Elèuthera, 2000.
- Del Real, Patricio. "Wandering Around. Architecture as Threshold between Territory and Poetry". *OASE* no. 80 (2009):61-69.
- Feld, Gabriel and Smithson, Peter (eds), *Free University, Berlin: Candilis, Josic, Woods, Schiedhelm. Exemplary Projects, 3*. London: Architectural Association, 1999.
- Kiem, Karl. *The Free University Berlin (1967-73). Campus design, Team X Ideals and Tectonic Invention*. Berlin: VDG, 2008 (Trans. Mary Pepchinski).
- Molinari, Luca. "Giancarlo De Carlo and the post-war modernist Italian architectural culture: role, originality and networking", in *Team 10 - between Modernity and the Everyday* conference proceedings, Delft University of Technology, 5-6 June 2003.
- Mondragón, Hugo and Mejía, Catalina (eds.), *Sudamerica Moderna. Objectos, edificios, territorios*. Santiago: ARQ Ediciones, 2015.
- Nicolin, Pierluigi. "Conversazione su Urbino". *Lotus International* no.18 (1978).
- Occhialini, Connie E. *Peter Smithson at ILA&UD*. Milan: ILAUD, 2016.
- Pendleton-Jullian, Ann M. *The Road That Is Not a Road and the Open City, Ritoque, Chile*. Cambridge, Mass.:MIT Press, 1996.
- Pérez de Arce, Rodrigo. "The Garden of Intersecting Paths. The Remodelación San Borja and the schools of architecture". *ARQ* no.92 (2016).
- Rigotti, Ana Maria. "Lecciones de la vivienda para construir ciudad: megaformas para la remodelación del centro de Santiago de Chile". *Urbana* Vol. 6, no.8 (2014).
- . "El otro cruce de los Andes. Megaformas proyectadas en Argentina para Santiago", in Hugo Mondragón and Catalina Mejía (eds.), *Sudamerica Moderna. Objectos, edificios, territorios*. Santiago: ARQ Ediciones, 2015.
- Rispa, Raúl (ed), *School of Valparaíso. Open City*. Santiago de Chile: Contrapunto, 2003.
- Spellman Catherine, Unglaub Karl and Smithson Peter. *Peter Smithson: Conversations With Students; A Space for Our Generation*. New York: Princeton Architectural Press, 2005.
- Torrent Horacio, Crispiani Alejandro and Moya Rafael. *La Escuela de Valparaíso y sus Inicios: Una Mirada a Través de Testimonios Orales*. Santiago de Chile: DIPUC, 2002.
- Tzonis, Alexander. "Search for a new urbanity: commentary". *Ekistics* (November 1963).
- Tzonis, Alexander and Lefaivre, Liane, 'Beyond Monuments, Beyond Zip-a-Tone, Into Space/Time', in *Free University Berlin: Candilis, Josic, Woods, Schiedhelm*, London: AA Publications, 1999.
- Van Eyck, Aldo. "University College, Urbino". *Zodiac* no. 16 (1966).
- Woods, Shadrach. "The Education Bazaar". *Harvard Educational Review* no. 4 (1969):116-25.
- Zardini, Mirko. "From Team X to Team x". *Lotus International* no.95 (1997).
- Zuddas, Francesco. "Pretentious Equivalence. De Carlo, Woods and Mat-building". *FAMagazine* no. 34, (2015):45-65.

Chapter 4

- Alvite, Silvia. "Enrico Tedeschi y la crítica fotográfica en el paisaje arquitectónico latinoamericano". *Anales del IAA*, no. 45 (2015): 73-86.
- Aureli, Pier Vittorio. "Architecture for Barbarians: Ludwig Hilberseimer and the Rise of the Generic City". *AA Files*, no.63 (2011): 3-18.
- . "The Barest Form in which Architecture Can Exist: some Notes on Ludwig Hilberseimer's Proposal for the Chicago Tribune Building". *San Rocco*, no.2 (2011).
- Banham, Reyner. *Problemas de historia ambiental*. Córdoba: IIDEHA, 1969.
- . "The History of the Immediate Future", *Journal of the Royal Institute of British Architects* no. 68, (1961): 252-269.
- . "The New Brutalism", in *Architectural Review*, (December 1955): 355-361.
- . "A home is not a house", in *Art in America* no.2 (1965): 70-79.
- Blanc, María Claudina. "La renovación de la enseñanza de la arquitectura a la luz de la crisis de posguerra. Enrico Tedeschi entre Roma y Tucumán, 1945-1952". *XVI Jornadas Interescuelas/Departamentos de Historia*. Mar del Plata: Universidad Nacional de Mar del Plata, 2017.
- Chamoiseau, Patrick. Texaco. Paris: Gallimard, 1992.
- Codina, Leonardo. *La estructura como instrumento de una idea: Enrico Tedeschi: el proyecto de la Facultad de Arquitectura de la Universidad de Mendoza*. Buenos Aires: 1:100 Ediciones, 2013.
- Correa, Felipe. *Beyond the City: Resource Extraction Urbanism in South America*. Austin: University of Texas Press, 2016.
- Crouch, Dora P. and Axel I. Mundigo. "The City Planning Ordinances of the Laws of the Indies Revisited. Part I: Their Philosophy and Implications", in *The Town Planning Review*, Vol. 48, no.3 (1977): 247-268.
- De Seta, Cesare. *Giuseppe Pagano fotografo*. Milan: Electa Editrice, 1979.
- Frampton, Kenneth. "On Reyner Banham's The Architecture of the Well-tempered Environment". *Oppositions* no.7 (1976): 86-89.
- Gannon, Todd. *Reyner Banham and the Paradoxes of High Tech*. Los Angeles: The Getty Research Institute, 2017.
- Hardingham, Samantha and Kester Rattenbury. *Cedric Price Potteries Thinkbelt*. London: Routledge, 2007.
- Koolhaas, Rem. "Imagining Nothingness" (1985): 199-202, in Rem Koolhaas and Bruce Mau *S,M,L,XL*. New York: Monacelli Press, 1995.
- Malecki, Sebastián. "Historia y Crítica. Enrico Tedeschi en la Renovación de la Cultura Arquitectónica Argentina, 1950-1970". *Eadem Utraque Europa*, no.14 (2013): 137-174.
- Meister, Anna Maria. "Radical Remoteness. The HfG Ulm as Institution of Dissidence", in Ines Weizman. *Architecture and the Paradox of Dissidence*. London: Routledge, 2013.
- Nicoloso, Paolo. *Le vicende del concorso per la cattedra di Urbanistica all'Istituto Universitario di Architettura di Venezia, 1947-1949*, in Patrizia Bonifazio, Sergio Pace, Michela Rosso, Paolo Scrivano (ed.), *Tra guerra e pace. Società, cultura e architettura nel secondo dopoguerra*. Milano: Franco Angeli, 1998.
- Niglio, Olimpia. *Enrico Tedeschi in Argentina*. Rimini: Aracne Editrice, 2020.
- Pagano, Giuseppe. "Un cacciatore d'immagini", in *Cinema* (December 1938).
- Pagano, Giuseppe and Guarniero Daniel. *Architettura Rurale Italiana*. Milan: Ulrico Hoepli Editore, 1936.
- Pommer, David Spaeth and Kevin Harrington. *In the Shadow of Mies: Ludwig Hilberseimer, Architect, Educator and Urban Planner*. Chicago: The Art Institute of Chicago, 1988.
- Raffa, Cecilia. "Teoría para la construcción de una ciudad: Enrico Tedeschi y su vínculo con la morfología urbano-edilicia de Mendoza (Argentina, 1960)". *Cuaderno Urbano. Espacio, Cultura, Sociedad*, no.25 (2018): 73-90.

- Saggio, Antonino. *L'opera di Giuseppe Pagano tra politica e architettura*. Bari: Edizioni Dedalo, 1984.
- Schmidt, Claudia. "Would this be of your interest? Reyner Banham's Seminars in Argentina and the Debate About Environmental Control in 1968". *Bitácora*, no.33 (2016): 118-125.
- Sella, Alejandra and Noemi Adagio (eds), *Enrico Tedeschi. Work in progress*. Mendoza: IDEARIUM, 2012.
- Tedeschi, Enrico. *L'Architettura in Inghilterra*. Firenze: Edizioni U, 1947.
- . *Una Introduccion a la Historia de la Arquitectura*. Universidad Nacional de Tucumán: 1951.
- . *La Plaza de Armas del Cuzco*. Tucumán: Universidad Nacional de Tucumán, 1961.
- . *Teoría de la Arquitectura*. Nueva Vision: Buenos Aires, 1962.
- . "Arquitectura Organica. Primera Parte". *Nuestra Arquitectura* no.272, 1952.
- Tedeschi, Enrico and Norberto Rodríguez Bustamante. *La arquitectura en la sociedad de masas*. Buenos Aires: Paidós, 1962.
- Tournikiotis, Panayotis. *La historiografía de la arquitectura moderna*. Madrid: Maira y Celeste, 2001.
- Waisman, Marina. "Crónica chilena para uso de argentinos". *Nuestra Arquitectura*, no. 377, 1960.
- Waisman, Marina. "IIDEHA 68: Reyner Banham", in *Summa* no. 13 (1968): 19-20.
- . "Enrico Tedeschi. Una invitación a la historia. *Summa*, no. 215/216 (1985):72-77.
- . "Mendoza nel desierto". *Summa*, no. 99 (1976).
- Zaera-Polo, Alejandro. "The Politics of the Envelope", *Log* no. 13-14 (2008): pp. 193-2007.
- Zaera-Polo, Alejandro. "The Politics of the Envelope, Part II", *Log* no. 16 (2009): pp. 97-132.
- Zevi, Bruno. "Contro ogni teoria dell'ambientamento". *L'Architettura. Cronache e storia* (August 1965): 212-213.

Chapter 5

- Behne, Adolf. *The Modern Functional Building* (1923), trans. Michael Robinson, Santa Monica, CA: Getty Research Center for the History of Art and the Humanities, 1996.
- Bergdoll, Barry and Leah Dickerman (eds), *Bauhaus 1919-1933: Workshops for Modernity*. New York: The Museum of Modern Art, 2009.
- Bracco González, Mercedes and Lucía Romero. "La creación de Ciudad Universitaria de Buenos Aires (1958-1966): Proyección de una Ecología común para la transformación de la vida académica en la facultad de Ciencias Exactas y Naturales". *Redes*, Vol. 20, no. 39 (2014):115-37.
- Brand, Peter Charles (ed), *La globalización neoliberal y la planeación urbano-regional. Perspectivas para América Latina*. Medellín: Edición de la UNC, 2009.
- Caminos, Horacio. "Around the Simple Box". *The AA Journal* no. 766 (1952):73-74.
- Caminos, Horacio; Eduardo Catalano and Carlos Coire. "Planteamiento de un Problema Urbanístico". *Tecné* no.3 (1944): 46-50.
- Caminos, Horacio; John F.C Turner and John A Steffian. *Urban Dwelling Environments studio. An Elementary Survey of Settlements for the Study of Design Determinants*. Cambridge: MIT Press, 1969.
- Caminos, Horacio and Reinhart Goethert. *Urbanization Primer*. Cambridge: MIT Press, 1978.
- Catalano, Eduardo. *The Constant: Dialogues on Architecture in Black and White*. Cambridge Mass.: Cambridge Architectural Press, 2000.
- Coire, Carlos (ed). *Le Corbusier en Buenos Aires*. Buenos Aires: Edición de la SCA, 1979.
- Coire, Carlos. *Eduardo Sacriste. El hombre y su obra*. Buenos Aires: Universidad de Morón, 2004.
- Dal Fabbro, Armando. "Guido Canella al Dottorato di Venezia. Poetismo e Ortodossia", in Enrico Bordogna, Gentucca Canella and Elvio Manganaro (eds). *Guido Canella 1931-2009*. Milan: Franco Angeli, 2014.

- Davis, Mike. "Urban Renaissance and the Spirit of Postmodernism". *New Left Review* no. 151, (1985).
- Faiden, Marcelo. "Ciudad universitaria de Buenos Aires, el proyecto inmaterial de Catalano y Caminos". *Summa +* no. 135 (2014).
- Glaeser, Ludwig. *Ludwig Mies van der Rohe Drawings in the Collection of The Museum of Modern Art*. New York: MoMA, 1969.
- Martin, Reinhold. "Money and Meaning: The Case of John Portman". *Hunch*, no.12 (2009).
- Marullo, Francesco. 'Typical Plan: The Architecture of Labor and the Space of Production', PhD Diss. TU Delft University, 2014.
- Neumann, Dietrich. "Three early designs by Mies van der Rohe". *Perspecta* no. 27 (1992):77-97.
- . "Mies's Concrete Office Building and its Common Acquaintance". *AA Files* no. 74 (2017):70-84.
- Prandi, Enrico (ed). *Sessantadue domande a Guido Canella*, Napoli: CLEAN, 2005.
- Portoghesi, Paolo. "Perché Milano. Une saison en enfer". *Controspazio* no. 1 (1973).
- Quintelli, Carlo (ed), *La città del teatro*. Milan: Clup, 1989.
- Reichlin, Bruno. "Guido Canella, l'architetto dell'hinterland", in Bordogna Enrico, Gentucca Canella and Elvio Manganaro (eds), *Guido Canella 1931-2009*. Milano: Franco Angeli, 2014.
- Rice, Charles. "Stalking John Portman". *AA Files*, no. 64 (2012):21-29.
- Schlemmer, Oskar. 'The Staatliche Bauhaus in Weimar' (1923), in Hans M. Wingler, *The Bauhaus: Weimar, Dessau, Berlin, Chicago*, trans. Wolfgang Jabs and Basil Gilbert, Cambridge, MA: MIT Press, 1969.
- Schuldenfrei, Robin. "Capital dwelling: industrial capitalism, financial crisis, and the Bauhaus's Haus am Horn", in Peggy Deamer (ed), *Architecture and Capitalism. 1845 to the present*, New York: Routledge, 2014.
- Schuldenfrei, Robin. *Luxury and Modernism: Architecture and the Object in Germany 1900-1933*. Oxford: Princeton University Press, 2018.
- Seelow, Atil M. "The Construction Kit and the Assembly Line. Walter Gropius' concepts for Rationalizing Architecture". *Arts*, Vol. 7 no. 4, 2015.
- Suzuki, Katuyuki (ed). *Guido Canella*. Bologna: Zanichelli, 1983.
- Whitehead, Alfred N. *Process and Reality: An Essay in Cosmology*. New York: Macmillan & Company, 1929.

Magazines and Journals

- "Architecture and Culture" Vol. 9, no.1 (2021). 'The Neoliberal University'
- "Architectural Design" no.4 (April 1964). 'State University of Technology, Santiago', pp. 194-6.
- "Architectural Design" no. 5 (1960)
- "Architectural Forum" (October 1963). 'Le Corbusier at Harvard: A Disaster, Or a Bold Step Forward?', pp. 105-107.
- "Architecture Plus" no.4 (1974)
- "Architectural Record" no.4 (October 1946)
- "ARQ" no. 26, 1994
- "AUCA" no.3 (1966). 'Plan Seccional Diagonal Pedro Aguirre Cerda'
- "AUCA" no.8 (1967). 'Universidad de Concepción', pp. 57-59.
- "AUCA" no.8 (1967). 'Universidad Técnica del Estado', pp. 55-56.
- "AUCA" no.13 (1968). 'Foro Abierto', pp.54-56.
- "BLOCK" no.9 (2012)
- "Casabella-Continuità" no. 264 (1962). 'Centri Direzionali Italiani'.
- "Casabella-Continuità" no. 270 (1962). 'La città-territorio: verso una nuova dimensione'.
- "Casabella-Continuità" no. 214 (1957)
- "Casabella-Continuità" no. 215 (1957)
- "Casabella-Continuità" no. 216 (1957)
- "Casabella-Continuità" no. 229 (1959)
- "Casabella-Continuità" no. 245 (1960)
- "Casabella" no. 368-369 (1972)
- "Domus" no. 220 (1947)
- "Controspazio", no.5-6 (1972)
- "Harvard Design Magazine", no.34 (2011). 'Architectures of Latin America'
- "Harvard Educational Review" no. 4 (1969)
- "L'Architecture d'Aujourd'Hui", no. 13/14 (1947)
- "L'Architettura: Cronache e Storia", no.17 (1957). 'Enrico Tedeschi. Un Italiano sulle Ande', pp. 658-9.
- "L'Architettura: Cronache e Storia", no. 49 (1959). 'Quattro residenze unifamiliari in Argentina', pp. 452-9.
- "L'Architettura Cronache e Storia", no.92 (1963). 'Reticolo anti-sismico di Enrico Tedeschi', p.103.
- "Lotus International" no.95 (1997)
- "Lotus International" no.165 (2018). 'The Politics of Campus'
- "Metron", no. 2 (1945). 'La costituzione dell'associazione per l'architettura organica a Roma', pp. 75-76.
- "Metron", no.7 (1946). 'Libera professione in provincia', pp. 22-26.
- "Nuestra Arquitectura" no.254 (1950). 'Ciudad Universitaria de Tucumán'
- "Nuestra Arquitectura" no. 356 (1959)
- "Nuestra Arquitectura" no.433 (1966). 'Escuela universitaria de Arquitectura'.

“Nuestra Arquitectura” no. 439 (1967)
“Nuestra Arquitectura” no. 440 (1967)
“Parametro” no. 21-22 (1973)
“Parametro” no. 44 (1976)
“Revista de Arquitectura”, no. 9 (1938)
“Revista de Arquitectura”, no. 10 (1939)
“Spazio e Società” no. 66 (1994)
“Summa”, no.17 (1969). ‘Escuela de Arquitectura de la Universidad (libre) de Mendoza’
“Summa” no.64-65 (1973)
“Summa” no. 219 (1990)
“Summa +” no. 135 (2014)
“The Architectural Review”, Vol. 112, no. 671 (1952). ‘University city of Tucuman, Northern Argentina’.
“The Architectural Review”, no.794 (1963). ‘Non-Orthogonal: Deviationist Elevations’
“The Architectural Review” no. 102 (1947)
“The Architectural Review” no. 905 (1972)
“Urbanistica” no. 8 (1951). ‘La città universitaria del nord-ovest Argentino’, pp. 45-48.
“Zodiac” no. 7 (1992). ‘Università’
“Zodiac” no. 8 (1992). ‘Laboratorio Latinoamerica’

Cover image is a drawing by the author of the variable sections from the concrete facade elements of Facultad de Arquitectura y Urbanismo de Mendoza designed by Enrico Tedeschi.