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Marginal Themes: A Phenomenological Approach to Distraction in Digital Media Users

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Abstract: Among the research that nowadays deals with the impact of digital technologies on attention, little is concerned with problematizing the theoretical premises about the nature of this cognitive faculty. Hence, even highly credited studies on digital distraction draw their conclusions from underexamined models of attention, despite them not being the only ones available. In our article we intend to focus on this problem, starting by discussing two case studies in the field of cognitive psychology and trying to show their theoretical shortcomings when compared with an alternative model of attention. We will thus explore the account that a contemporary phenomenologist, Paul Sven Arvidson, has provided of attention and distraction. Finally, we will try to question the conclusions of the empirical studies by reframing them within Arvidson's model, suggesting the importance of sharpening the definition of attention and distraction as preliminary work for investigating how the digital relates to them.

Key words: phenomenology, attention, digital, psychology of attention, distraction

Introduction

At present, there is widespread interest in how the digital—given its increasingly ubiquitous presence in our lives—affects different cognitive faculties, including attention. Although there is no unanimity in this regard, many empirical studies agree in certifying a connection between the regular use of digital devices and an erosion of attention, to varying degrees.[1]

While much research aims to investigate this issue, it happens rather rarely that their theoretical premises are addressed and discussed in a targeted manner,

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despite these strongly influencing the conclusions drawn, even in an experimental context. With regard to our topic, such conceptual frameworks concern in particular the *model of attention*—and, conversely, of *distraction*—referred to and from which one attempts to establish the possible impact of the digital.

In this paper, we intend to focus precisely on this problem, suggesting that even highly influential psychological studies on digital distraction can ultimately rely on an underexamined model of attention. Alternative and no less effective models exist though, including from fields other than psychology, which would presumably lead to other conclusions about the distracting effects of digital devices. In our view, a particularly sharp account of attention comes from philosophy, notably from the phenomenological tradition, upon which we will focus below.

In tackling this issue, the paper will be divided into three main parts. In the first (paras. 1–3) we will briefly present two authoritative empirical studies (Ophir, Nass, and Wagner 2009; Cain and Mitroff 2011) addressing differences in attentional capacities between frequent and occasional users of digital devices,[2] then consider in a very synthetic way the model of attention they rely on and its main historical references. After a brief introduction to the treatment of attention in the phenomenological tradition, in the second part (para. 4) we will explore some major analyses about the experience of attention and distraction by a contemporary phenomenologist, Paul Sven Arvidson. In the third part (para. 5), we will finally try to undertake a critical reading of the two empirical studies discussed, showing how their conclusions could be challenged if evaluated on the basis of Arvidson's paradigm. In conclusion, we hope to at least suggest the need for an alternative and more refined account of distraction—understood in its specific nature, and not merely as a decrease or absence of attention—as preliminary work to investigate its connection to the digital.

1. Cognitive Control in Media Multitaskers

Eyal Ophir, Clifford Nass, and Anthony D. Wagner's study begins with an outline of the "Media Multitasking Index" (MMI), a scale (employed in following studies) whose main function is to create an overall but rigorous subdivision between frequent and episodic users of digital devices.[3] The subjects evaluated through the MMI are thereby distinguished between "Heavy Media Multitaskers" (HMMs) and "Light Media Multitaskers" (LMMs).[4] The authors' ultimate goal is to investigate if HMMs and LMMs present any difference under the aspect of "cognitive control," defined as "the allocation of attention to environmental stimuli and their entry into working memory, the holding and manipulation of stimulus and task

set representations in working memory, and the control of responses to stimuli and tasks" (Ophir, Nass, and Wagner 2009, 15583). To test such a difference, they built a first experiment,[5] consisting in a visual short-term working-memory task of filtering ability: here, the participants viewed two consecutive exposures of an array of red and blue rectangles on a black screen; then, they had to indicate by pressing a button whether or not red targets had changed orientation from the first exposure to the second, ignoring distracting blue rectangles.

As a result, HMMs' performance was linearly affected in a negative way by distractors, whereas LMMs were unaffected by them, suggesting that LMMs may have a stronger ability to successfully filter out irrelevant stimuli.[6] Hence, the authors concluded that "individuals who frequently use multiple media approach fundamental information processing activities differently than do those who consume multiple media streams much less frequently"; more precisely, "HMMs have greater difficulty filtering out irrelevant stimuli from their environment [. . .], they are less likely to ignore irrelevant representations in memory [. . .] and they are less effective in suppressing the activation of irrelevant task sets" (Ophir, Nass, and Wagner 2009, 15585).

2. Distractor Filtering in Media Multitaskers

A second study by Matthew S. Cain and Stephen R. Mitroff is meaningful to us, for it specifically focuses on the impact of digital devices on attention, whereas "cognitive control" is also involved in working memory and other executive functions. Indeed, Cain and Mitroff (2011, 1183) begin their article with a direct reference to Ophir, Nass, and Wagner, highlighting that, even if HMMs showed a deficit in filtering information, it cannot be stated for sure if this deficit arose at encoding, maintaining, or retrieving it.

For this reason, Cain and Mitroff designed an experiment to evaluate the difference between HMMs and LMMs, trying to focus on attention alone. They therefore employed a singleton distractor task with low working-memory demands (the "additional singleton paradigm"), wondering if HMMs' performance would prove to be deficient even in this case. Here, the participants viewed consecutive exposures of an array of geometric figures on a black screen: every display presented only one circle target and between three and eleven square distractors, each of them containing either a "+" or a "=" symbol. On half the trials, all figures were green, whereas on the other half one singleton was red. The experiment consisted of two task conditions, presented in separate blocks: in the first one, participants were correctly instructed that the red singleton would never be the target circle

and in the second block they were again rightly told that the red singleton would sometimes be the target circle, just as likely as any other shape. Participants were then asked to report which symbol occurred inside the circle by pressing a corresponding button. Unlike the previous experiment, where a comparison between two consecutive exposures was required, here the target was related to a choice to be made involving a lasting display, so that working memory was not involved.

In the fulfilment of the task, LMMs were able to use top-down information to improve their performance, focusing only on the requested items independently of the variations of the others, whereas HMMs equally attended to the red and square singletons, even if they were irrelevant to the goal of the experiment. As Cain and Mitroff (2011, 1190) concluded, this reaffirmed difference in performance in a filtering task leads to the claim that HMMs maintain a wider attentional scope than LMMs, regardless of the available instructions.[7]

3. Hints of Psychology of Attention: The "Spotlight" and the "Filter" Metaphors

The studies that we have just discussed are widely esteemed in today's debate by virtue of their intriguing results. Naturally, being empirical studies, they first of all care about the reliability of their experimental procedures and the potential evidences to which they can lead, while more theoretical questions are only secondarily considered. Yet, if one had to ask what concept of attention—something which is not at all unanimously accepted—the authors had in mind, he would find very scarce argumentation in such articles. Indeed, neither Ophir, Nass, and Wagner nor Cain and Mitroff spend too many words explaining how they specifically understand attention or distraction.[8] Actually, what is far more revealing of their conception of attention are the words that they use to mention it. By taking a closer look under this aspect, expressions like "filter," "allocation," "streams of information," or "processing environmental stimuli" encourage us with good enough reasons to say that the authors rely upon a notion of attention conceived at least 1) as a *resource*, and 2) as a mean of *focusing*.

These two ideas are not new: in fact, they refer to some of the most classical theories in the history of psychology. The first one plainly relates to a thread which dates back to Donald Broadbent and leads up to Daniel Kahneman, suggesting to broadly understand attention as a *limited resource* ("capacity theory"). From this perspective, attention should be considered as a scarce resource available for a subject, which has to be allocated to elaborate only a few streams of information coming from the surroundings while keeping the others unprocessed (Broadbent

1958; Kahneman 1973). On the other hand, the idea of attention as a means of focusing leads back to an ancestor of the psychology of attention, William James, who introduced the concept of a "spotlight," i.e., the subjective faculty of *freely* and *actively* focusing on something to the disadvantage of something else.[9] Conversely, distraction ends up being nothing more than what is left out of the filter or what is not brightened by the spotlight.

Whilst similar theories have long been accredited and continue to be widespread today (albeit with various revisions), it would be hasty to assume that their diffusion is a guarantee of their being self-evident and problem-free. Above all, it would be naïve to believe that they do not inform the outcomes of the experiments in which they are adopted as theoretical background. Without taking a detailed look at all the criticisms of these models—which goes far beyond the scope of this article—we will try to show how alternative and by no means less effective models have also been provided in the philosophical field, resorting to different methodologies. Among these is *phenomenology*.[10]

4. An Alternative Paradigm: The Issue of Attention for Phenomenology

If we briefly retrace the history of phenomenology, we can find some occasions in which the question of attention has been faced. Edmund Husserl concentrates on it in the third chapter of the *Second Logical Investigation*, he spent an entire course on the problem of attention in 1904–05 ("*Wahrnehmung und Aufmerksamkeit,*" Hua XXXVIII), and he dedicated very meaningful paragraphs to it in *Ideen I* (Hua III/1, 211–15). He then came back to this point in *First Philosophy* (Hua VIII, 98–106), in the *Analyses Concerning Passive Syntheses* (Hua XI, 148–72) and again in *Experience and Judgment* (Husserl 1939, 79–91). Moreover, the topic of attention was also addressed by Maurice Merleau-Ponty (1981, 26–51) and widely taken up by Aron Gurwitsch (e.g., 2009b, chap. X).

Despite not being a topic among the most addressed in classical phenomenology,[11] several contemporary authors belonging to this tradition have reconsidered the subject of attention, some in a more historical-theoretical direction (Steinbock 2004; Jacobs 2016), others as an open field of research with analyses still to be carried out in the present. In fact, it is striking how the very subject of attention has led many authors to engage in a parallel study of phenomenology and cognitive science, not only from a general point of view, but above all by conducting targeted and concrete analyses (Arvidson 1996; 2006; Waldenfels 2004; Breyer 2011; Wehrle 2013; Depraz 2014; D'Angelo 2020). Among such works, of which we do not mean to provide a complete account, we will hereby limit

ourselves to briefly presenting the investigation developed by Paul Sven Arvidson, a contemporary philosopher who has engaged in a particularly intense dialogue between phenomenology and cognitive science.[12] We will thus try to sketch some of the tenets of his work, namely his analyses of the structures of attention and distraction as experienced in the first-person perspective, so as to test whether even with such accounts the conclusions of the previous experiments can be considered compelling.

4.1. Arvidson's Phenomenology of Attention: Theme, Context and Margin

Adhering to the phenomenological principle of *epoché* (Hua III/1, 61–66), Arvidson's point of departure cannot be an uncritical reception of a pattern of attention as filter, resource, or spotlight: indeed, all of these models are based on metaphors that exemplify attention from physical things, and thus carry an objectifying tendency that makes it more difficult to draw directly on the movement of attention as we constantly experience it. Accordingly, Arvidson opts to begin with a *qualitative* distinction of the fundamental structures of attentional consciousness, that is, its organization in terms of "*theme,*" "*thematic field*" (or "*context*") and "*margin.*"[13]

The theme is what most engrosses one subject's attention and appears as prominent, like the words on which the reader's eyes rest at this moment. Similarly to James' focus, the theme is what is referred to in experimental terms as the "target": it is the attentional center segregated from the background that, according to a principle of gestalt-coherence, stands out as a unit (Gurwitsch 2010, 310 ff.) and distinguishes itself from its surroundings, which could only emerge virtually as a potential unity. Yet, a theme does not need to be perfectly sharp (e.g., I may be focusing on an unclear face in the fog as thematic); clarity is therefore rather an intrinsic *goal* of thematic attention than a condition of it (Arvidson 2006, 4–5).

Secondly, the context "consists of all the co-present items in experience that are relevant to the theme, but are not themselves thematic" (Arvidson 1996, 73). For example, a contextual element of the words that I am now writing is the white background from which they stand out. The co-presence of the context does not strictly need to be temporally simultaneous: what Husserl called "fresh memory" [*frische Erinnerung*] (Hua X)—the immediate past which is maintained in actual experience, making this possible—should also be considered as part of the context, if it is in direct continuity with the theme that emerged. As a last point, context is a necessary condition for any theme: words could be written on a screen, on a piece of paper, or on the palm of one's hand, but they could not be a concrete phenomenon in the absence of any thematic field.

Finally, Arvidson (2006, 6–9) presents the margin as a sort of halo of experience, consisting of all that is irrelevant to the theme and the thematic-field, but is anyway present. Examples of the margin are bodily awareness (proprioception) or the environing world, like the room I am in or the chair I am sitting on. It is extremely important to stress that what makes something marginal *has nothing to do with a spatial position*: being marginal does not mean being situated far from the theme. Indeed, if there was an ink stain on my paper that did not obstruct me from fluently reading, it would be marginal. Moreover, just as the context does not necessarily have to be simultaneous, even marginality may not be strictly bound to the present: the retention of something unrelated to my current theme—such as the position of my legs during writing, which I could recall if I were asked to tell it—is still marginal.[14] Consequently, marginality does not have anything to do with spatiotemporal existence; rather, it is a matter of *meaning*. In this sense, to be marginal means being unrelated, disconnected, or non-pertinent *in terms of meaning* with respect to the theme.

As a final but decisive remark, it is worth noting that theme, context and margin do not lie juxtaposed, side by side, and statically. Rather, as Arvidson (2006, 84–85) argues, here is a constant "*dynamic tension*" between them, as if the theme were always to slip away, to be supplanted, and other environmental elements were pushing to impose themselves as new themes. Arvidson spends lengthy analyses describing the manifold forms in which dialectical transitions occur between these three different dimensions,[15] but each of them seems to be characterised by the overall *unstable nature of attentional consciousness*, whose perceptual restructuring is always in progress and never solidly achieved.[16]

4.2 From Attention to Distraction

Having sketched some of the basic tenets of Arvidson's analysis, among the various attentional configurations he illustrates, there is one of particular interest for our purposes. More precisely, starting from the more general definition of attention, he also aims at identifying the specific structures of attentional processes in which *distraction* consists. In order to provide a brief account of distraction, by resorting to Arvidson, we can refer to a paragraph where he addresses the question of "how attention captures marginal content" (2006, 78–84). Here, the phenomenologist opens his analysis by introducing the example of an ideal distractor, that is, an alarm:

> Suppose that suddenly, as I am writing, the deafening home alarm system sounds. . . I will get a thematic grip on this rude sonorous interruption. But the question here is how does this theme enter into attention? When we say it "captured" my attention, was it first somehow marginal, and then thematic? Or is there just a disconnected gap between the previous theme and the present one, a "blink" in attention [. . .]? (Arvidson 2006, 79)

Arvidson's simple questions get straight to the point: anyone knows that alarms suddenly burst in our experience and somehow catalyse it, but what is the phenomenal structure of such an event? In our opinion, Arvidson's inquiry enables us to identify at least three of its characteristics, namely 1) *unrelatedness*, 2) *passivity*, and 3) *relative discontinuity*.

As to the first feature, Arvidson (2006, 79) affirms that a distractor "almost immediately supplants what was previously thematic." Yet, pushing us away from a pre-existing theme is not sufficient for something to be properly understood as a distractor; to call it this way, *what distracts us must also come from the margin*. Indeed, if something from the context attracted our attention—such as a sentence following the one we just read—we would not say that we have been distracted at all. In this regard, an essential trait of distraction seems to be the *unrelatedness between subsequent themes*: since the distracting object has come from the margin, *there is no pertinence between the old and the new theme*.[17]

Another characteristic of distraction seems to be that it is experienced as something suffered, that is, it outlines a *passive disposition*. In the case just mentioned, for example, attention is subjected to the catalysing pull of the alarm.[18] It is important to remark that passivity must be understood here as a *phenomenological trait*, opposed to that of activity, and not as something that would derive "from the outside": indeed, an intrusive thought or the symptom (common to various psychopathologies) of hearing voices are fully passive and distracting experiences, albeit "internal," in psychological terms. In this regard, Arvidson (2006, 82) highlights that, even if voluntary attention has its own efficacy, "endogenous selection can at most *prepare* the sphere of attention for the likelihood or inevitability of [. . .] a transformation of contents," and not rigidly determine it.[19]

As a third and final aspect, distraction seems to produce a *break* in our experience: unlike the "density" of an enduring theme in which we are engaged, the irruption of a distractor implies some sort of discontinuity. With respect to this point, Arvidson (2006, 79–80) firmly reiterates that any interruption can appear *only* against the background of continuity: indeed, a perceptual shift from the margin to the theme does not outline two fully separate contents that are just

subsequent one to another with no reciprocal interferences. Rather, there is a temporal halo of our previous experience that is utterly insuppressible.[20] This time stream condensed by retention[21] at the same time makes the disruption between contiguous experiences possible and it provides consciousness with an immanent unity that no interruption can break.

5. Reconsidering Digitized (In)attention

At this stage, we are left with the difficult task of bridging the two different types of accounts examined, namely that of experimental cognitive psychology and that of phenomenology. To be more specific: how could the experimental situations described in the first two articles be translated into Arvidson's terms?

It is not particularly difficult to acknowledge that the red targets in Ophir, Nass, and Wagner's experiment and the non-red singletons in that of Cain and Mitroff were experienced by the subjects involved as *thematic*: indeed, they stood out as units segregated by a background and emerged as the focal point of attention. If this can be said to be rather unambiguous, then what about the phenomenological significance of the other items?

Looking closely, the target singletons were always spotted within a congeneric whole, i.e., in the overall set of items on the screen, just as we might spot a novel among others on a bookstore shelf. Now, in virtue of such a common background from which a target item is singled out, it seems difficult not to assign the surrounding items the phenomenological role of thematic context. In fact, they are co-present with respect to the theme, even without being thematic themselves. But, if this is true, then it looks like the condition for us to speak of distraction, namely that the emerging theme abruptly comes from the margin, is not met here: failing to focus on a shape because it is replaced by other objects belonging to the same context is, in fact, what Arvidson (2006, 70) calls "simple attention shifting" or "serial shifting," i.e., when "the relevant context for the old theme provides the item that will become the new theme."[22] This is indeed a proof of the aforementioned instability of the attentional field, open to the world and to what comes from it, so that what belongs to the context somehow struggles to emerge as a potential theme; but this—more than distraction—is nothing but the most common shift of attention of our daily lives ever!

True, one might say, but the subjects who were involved in the experiments were specifically instructed to focus on certain targets and then turned out to be unable to fulfil the task over time. Even then, however, this does not seem to be sufficient to justify the description of the surrounding items as marginal rather

than contextual. It is true that I can be deeply focused on something, for example in writing these words, and even things that are very close—e.g., the pen on the desk—end up being marginal, as part of the environing world, which would never attract my attention (perhaps unless they started moving). But in this case, the intense focalisation that makes the theme so dense (and, consequently, the margins inclusive of many more things) is deeply rooted in who I am: it is grounded, for example, in the way I plan and fill my day, in the way I express my personality and, ultimately, in overall life plans. All this ensures that, in writing, the evolution of the words before my eyes is *passively motivated* as a theme: I do not have to strive to concentrate, as the thing itself appears relevant and saturates my attention (and even here, however, environmental elements may still provisionally impose themselves). Something quite different seems, instead, to happen in the experimental cases mentioned above, where the target singletons do not arouse any motivated interest, do not have any ability to passively impose themselves on attention; rather, it is the subject involved who is asked to *actively* focus on them, abstracting them from all the rest. But sustaining fixed attention on something for a prolonged time, and moreover on something completely uninteresting, is simply the most unstable form of attention there is. Therefore, seeking different attentional balances must be considered entirely natural and cannot be properly regarded as a case of distraction.

It could lastly be argued that the authors of the two empirical studies are basically not concerned with these considerations, as they work on an utterly different level. This is partly true. Yet, if we have chosen to deal with these, it is precisely because, as mentioned in the introduction, they claim an explicitly *qualitative* interest in digital attention: namely, they do not set out to measure *how less* attentive a heavy user of digital devices is from a lighter one, but to assess *how differently* they pay attention—and thus, conversely, how they distract themselves in a different fashion. This attitude is further supported by the fact that Ophir, Nass, and Wagner (2009, 15585) suggest that HMMs' difficulty in filtering distractors "may be a difference in orientation rather than a deficit," as well as when they hypothesize that the "growth of multitasking across individuals leads to or encourages the emergence of a *qualitatively* different, breadth-biased profile of cognitive control" (Ibid., emphasis added). And, probably, the authors' qualitative interest, far from costing them in scientific accuracy, actually made their studies even more intriguing, promoting their influence in the contemporary debate.

Conclusions

Throughout this paper we have tried to establish a dialogue, on the basis of particular case studies, between experimental cognitive psychology and phenomenology. The critical remarks raised in the conclusion against the former should not, however, be seen as an attempt to completely dismiss the experimental context, deeming its results invalid *tout court*. Rather, we attempted to show how phenomenology—here through a static eidetic analysis of attention and distraction—can participate in scientific inquiry by providing a clarification of starting concepts and the scope of their legitimacy. Not an alternative to scientific work, then, but a potential part of it. If, on the one hand, we were forced to question whether the exposure to sets of geometric figures could reveal a genuine form of distraction, on the other hand, Arvidson's framework does not exclude at all, and indeed is perfectly compatible with the experience we have of the digital in our lives. Even within the framework of his phenomenology of attention, it is possible to identify several circumstances in which *digital media appear in experience precisely in the form of distractors*. No matter whether it is a ringtone, a vibrating alarm, or even an intrusive thought about checking our Facebook profile, such cases must be classified as distracting, for they all move from the margin to the theme and present the features of unrelatedness, passivity, and relative discontinuity.

At the heart of this approach is the assumption—compatible, we think, with the intentions of Ophir, Nass, and Wagner, and Cain and Mitroff—that distraction is not a lapse in attention, but rather, as we suggested, an expression of the *intrinsic instability of attentional consciousness*. If one accepts this, then it must be concluded that any attempt to detect the forms of inattention that affect assiduous media users can only turn out to be abstract if it takes quantification of distractibility as its starting point—since, indeed, *distraction is not a decrease in attention*, but a *different way of attending*.

In conclusion, these considerations on the one hand certify how phenomenology and the empirical sciences are bound to have different purposes. And yet, on the other hand, we hope we have succeeded at least in suggesting how phenomenology, through its subtle descriptive analyses and its attempt to attain a synthesis of the structures of our experience, can actually achieve accounts that are no less effective than the models adopted, for example, in the field of cognitive psychology and on which experimental research relies. What is more, there is nothing to prevent such accounts from being used in turn as alternative starting points in scientific research. In this sense, investigating the formal structures of

attention not only makes it possible to challenge experiments on digital distraction in which precisely distraction may not be properly involved, but also provides an effective theoretical model that—as advocated by Shaun Gallagher (2003)—can itself be framed in an experimental setting. For, after all, all data are valuable only if they are data of what was actually intended to be researched.

Notes

1. To this regard, several studies have confirmed that receiving notifications—whether they are acoustic, tactile or visual—does in fact affect the subject's attention even when he/she is not actually using the device (Stothart, Mitchum and Yehnert 2015; Levy, Rafaeli, and Ariel 2016). Other surveys have examined the prevalence of "media multitasking" (i.e., a person's consumption of more than one stream of digital contents at the same time), noting that, in relation to this, switching from one target to another generates a constant dispersion of attention—defined as "switch cost" (Ralph et al. 2013). In addition, frequent users of digital devices have been found to be subject to considerably more endogenous distraction (difficulty in concentrating, proliferation of mind wandering), increased even by the mere presence of a device nearby (Thornton et al. 2014; Ward et al. 2017; Bruineberg and Fabry 2021).

2. Although written a decade ago, such articles are still considered a landmark in the debate on the subject. In addition to their renown, the choice of these two studies is due to the fact that, differently from most of the works on the subject, their authors explicitly claim a qualitative approach to the investigation of the modification of attention in frequent users of digital devices. This means that they do not aim to measure *how much less* attention an assiduous user of digital devices witnesses than a light one, but rather *whether* and *how* appreciable differences in attention occur between these two groups.

3. The MMI assesses a range of different media multitasking combinations, thus providing an account of the level of multitasking during the usage time of digital devices; its scores—obtained through a questionnaire provided to the participants—are calculated as the weighted sum of the number of media consumed simultaneously, divided by the total hours of consumption of each device.

4. As it has been noticed (Baumgartner et al. 2017), the MMI has several disadvantages, for example it turns out to be poor in detecting the influence of digital devices referred to the *age* of the participants, as well as in pointing out more detailed differentiations within the single categories. Anyway, the importance of such a scale lies in enabling us to frame an overall difference between assiduous and non-assiduous media users, whereas other studies that do not rely upon the MMI assess either very specific multitasking combinations or directly avoid to deal with the influence of digi-

tal devices related to the habit of multitasking. Indeed, the systematic feature of the MMI reflects Ophir, Nass, and Wagner's intent to grasp multitasking "as a trait, not simply a state" (Ophir, Nass, and Wagner 2009, 15583), that is, as a subjective inclination spreading along time and not as a merely isolated action.

5. The authors also conducted a second experiment, which we will not take into account, for it deals more specifically with working memory and not with attention.

6. For our specific purposes in this paper, we will not dwell on the correctness of the specific measures or on the statistical analyses adopted by the authors to the point of assuming such conclusions. Rather, we will limit ourselves to reporting their interpretation of the experimental results in general terms, focusing on the theoretical statements that therefore they believe they can make.

7. In the authors' words, such results "suggest that HMMs may have broader attentional filters than LMMs—a bias toward taking in more of the available visual information—which could impact both their laboratory performance and their daily lives" (Cain and Mitroff 2011, 1190).

8. In fact, even by looking at their references, we can only find a couple of papers on this matter, which anyway do not seek to provide a systematic account of attention.

9. "Everyone knows what attention is. It is the taking possession by the mind, in clear and vivid form, of one out of what seem several simultaneously possible objects or trains of thought. Focalization, concentration, of consciousness are of its essence. It implies withdrawal from some things in order to deal effectively with others. . ." (James 1983, 381–82).

10. The relationship between phenomenology and empirical sciences has always been troubled. On the one hand, Husserl endeavoured from his earliest works to emphasise that the interest of phenomenology was specifically *transcendental* and not factual, thus opening a seemingly irremediable gap between the two fields of research (see Zhok 2011). On the other hand, in recent decades there has been an ever-increasing interaction between them: in the footsteps of an exemplary representative of phenomenology such as Merleau-Ponty, attempts to bring empirical sciences and the phenomenological method into dialogue are now almost uncountable (just to name a few, see Varela 1996; Petitot, Varela, Pachoud, and Roy 1999; Gallagher 2003, 2005; Thompson 2007; Schmicking 2010). Without any claim to exhaustiveness, let us sketch in an extremely succinct way at least two characteristics which, in our view, are indispensable to correctly understand the phenomenological method in a broad sense. A first point is that the main aim of phenomenology does not consist in describing particular, individual phenomena, but rather in *making the structures both of subjective acts and of their corresponding realms of objects explicit*; in other words, it consists in detecting the *conditions of possibility* of a phenomenon in any possible experience of it. Accordingly—contrary to how some critics (Dennett 1991; Metzinger 2003) tend

to misinterpret it—phenomenology has absolutely nothing to do with introspection, if only because the very distinction between interior and exterior is in principle rejected (Belt 2020). The second aspect, already remarked in Husserl's *Logical Investigations* (Hua XVIII, 193), is that any result, to be considered as such, must be traceable to *evidence* [*Evidenz*] and must relate to it as ultimate criterion of validity. In this perspective, empirical or quantitative data may reveal possible connections between apparently unrelated phenomena, but *they do not autonomously represent a definitive proof or argument in themselves*. This remark on the appeal of phenomenology to evidence must not be interpreted as a claim in favour of subjectivity against objectivity, since the structures that phenomenology intends to highlight are in no sense subjective (namely, private and idiosyncratic), but *objective*, that is, re-identifiable as such by any transcendental subject. In this sense, the choice of translating the German term "*Evidenz*" as "*internal* evidence" is at the very least misleading (see Husserl 1970).

11. In our opinion, this is not due to a generic carelessness, but rather to deeper reasons which are related to the essence of attentive experience as such. However, an in-depth analysis of this point—which we count on making in the future—exceeds the purposes of this paper.

12. To this end, he even coined a new lexicon in order to translate the terminology of cognitive psychology into phenomenological terms (Arvidson 2003). More precisely, he provided fine accounts of several key cognitive science concepts (e.g., "selective attention," "priming," "target," "attentional blink," "automaticity," "precuing," "attentional costs," "distractors," "early-" and "late selection," and so on) in a first-person perspective, so that the contributions of phenomenology could be borrowed in an easier way in empirical-experimental contexts. In this sense, it is no coincidence that Arvidson's analyses are heavily inspired by those of Gurwitsch, whose potential for interacting with the cognitive sciences has recently been convincingly acknowledged (see Embree 2004).

13. A distinction—valid to a certain extent, according to the author himself (Arvidson 1992)—which, again, openly sources from Gurwitsch's former works (see chap. 3 in Gurwitsch 2009a and part five in Gurwitsch 2010).

14. Let us note in passing that these analyses of intentional interweaving—linked to what are basically the most elementary structures of the field of consciousness—are a perfect example of how phenomenology is not the description of simply present phenomena, but the explication of complexly layered systems of intentional implications. A good example of this are Husserl's analyses in chapter two of the fourth section in *First Philosophy*.

15. Movements in reference to which Arvidson—as in his 2003 article—coined an original lexicon. The shifts between theme, context and margin can in fact take the form of "enlargement," "contraction," "elucidation," "obscuration," "context-replacement," "restructuration," "singling out" or "synthesis" (see Arvidson 2006, chap. 3).

16. In Arvidson's purpose, such an organization of consciousness refers to what Husserl would have called "passive syntheses" (Hua XI). In fact, as Arvidson (2006, 82) argues, the constant reconfiguration of our experience is not primarily an effect of our will: "the subject does not make the targeted content thematic, the subject *allows* it to present itself as thematic." Of course, voluntary attention is a possibility of ours, but it actually occurs quite exceptionally: what happens most of the time is a constant restructuration of our phenomenal contents on the basis of pre-delineations of incoming perceptual developments, independently of our personal intentions. This statement should in no way be misunderstood as a concession to the determination of experience by subpersonal neural mechanisms, and thus as a *de facto* surrender of phenomenology to cognitive science. Passive syntheses are "limit-phenomena" (see Steinbock 2017, 22–26), underlying the explicit thematization of given objects, but they still originate *from consciousness* and, therefore, they cannot be identified as unconscious processes.

17. Although necessary, this must not be considered as a sufficient condition for distraction. For example, if I thoughtlessly laid on a sunbed near the seashore and a mosquito buzzed close to my ear, I would acknowledge that it annoyed me, but I would be reluctant to say that it distracted me—even if in this case, too, a theme arises from the margin. In this sense, distraction seems to imply the violation of a theme that is somehow *normative*, in the broad sense of something that was *meant to endure*.

18. As Arvidson (2006, 80) puts it, "the power the deafening alarm has in attending is immense, such that an orienting response which almost immediately makes it thematic is seemingly irresistible."

19. A remark that echoes what was previously said about passive syntheses.

20. For instance, "when we interrupt our dealing with a scientific topic to pay attention to something which happens in our environment, we also retain a certain awareness of our previous activity" (Gurwitsch 2009b, 365).

21. As well as by protention, on the other hand.

22. A dynamic that, once again, had already been described by Gurwitsch (2009b, 255), who wrote: "Here we progress from one theme to another; however, to a theme which was materially related to the one 'held in grasp' before, both belonging to one and the same sphere of objects."

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