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TITOLO TESI
TRANSFORMATION IN THE TOURISM INDUSTRY:
EXPERIENCING SERVICE INNOVATION STRATEGIES

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Abstract

This dissertation joins a vibrant conversation in social sciences about the challenging nature of innovative service experiences in a continuous changing environment, especially in the context of tourism and hybrid organizations. Nowadays, organizations serves a very different world, a world transformed by dramatic shifts in demographics, the impact of globalization, and stunning advances in technology. Past research has recognized the importance of complex organizational and strategic issues that must be resolved and managed if service delivery is to be effective. To address and solve these problems, we drew on research that probes into content experiential tourism experiences of visitors from the perspective of marketing and cultural sociology.

A mixed set of existing qualitative tools is applied to different case studies, in a responsive research approach to the existing field conditions. This research will conceptualize innovative service experience and try to reveal a better understanding of "How to innovate customer-centric service experiences across the entire customer journey, including different offerings, touch points, and channels.

Further, this thesis aims at filling gaps highlighting three key areas of focus identified as the central themes which will be the **driving forces of change** in the future; namely the forces of *demographic* change with an aging population (Paper 1), *digital transformation* (Paper 2), *wealth and societal wellbeing* (Paper 3).

This study presents the first endeavor to fill gaps in transformative services when trying to understand the perceived value of an aging population and digitization; when attempting to raise questions about the possible rational costs of the importance in building trust in human-digital offerings simultaneously within museum digital transformation and last but not least by examining co-creative practices with mindfulness drawn from producers and visitors of hybrid organizations to try to identify and capture value in sustainable development plans.

The results enrich the theoretical perspective of innovative service experience values focusing on its relationship with perceived value dimensions, behavioral intentions, and co-creational mindful behaviors.

> J.F. Kennedy is attributed to saying: "Change is the law of life. And those who look only to the past or present are certain to miss the future."

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Attending to four international conferences, helped me shed the light on my work and introduced me to field experts and professionals which expanded my network in this domain and added a great value to this research; many thanks to the staff and executives who took part in the these conferences.

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Last but not least, every journey will come to an end, yet this end is the beginning of another journey carrying onward life's unpredictable richness; Thank you Cagliari for the warm hospitality, you were like home.

Foreword

My academic and professional background is in Hospitality Management. I hold a permit of tour guidance for the last 9 years from the Ministry of Tourism and I am an active member in the syndicate life - Lebanon. In 2016, I was awarded a competitive Scholarship by the Lebanese Ministry of Education to undertake doctoral research in the field of Business and Management.

As an active member in the syndicate life, I became interested in service experience innovation theme and engaged in research projects that explored this topic applied in areas where mostly transformation in the service landscape occurs – namely digital transformation, demographic change and societal wellbeing.

Through this research I was able to observe the interaction between customers and managerial adaptation to transformations that were occurring in the workplace and tried to understand their impact on the physical dynamics and the social behaviors.

I saw in the conduction the opportunity to research a topic that I felt warranted closer attention. Consequently, my research question explores how to innovate customer-centric service experiences across the entire customer journey, including different offerings, touch points, and channels.

Cultural heritage institutions such as museums and social entrepreneurial organization specifically hybrid ones are my particular area of interest (two social service entity organizations).

In the time it has taken to develop this doctoral research I have been able to analyze how service related establishments are integrating innovative solutions into their premises, as a way of enhancing visitors' experience. Within this context I was able to observe several gaps in the literature that needed more attention, like the role of active senior travelers perceived value of museum digital transformation; The role of Immersive technologies (Virtual Reality in specific) in enabling effective experience collaboration for visitors that are consuming digital heritage; and The role of psychology mainly mindful behavior into organizational research of co-creational service experiences.

My research premise is that museums and Social enterprises may find in stimulating service innovations useful strategies for the fulfillment of visitors' needs in a changing environment especially when leveraging immersive technologies to advance service delivery, when co-creating valuable experiences and when using psychological approaches to improving the societal well-being through transformative services.

Finally, these gaps are addressed to move the field forward and help service providers change strategies and implement platforms for co-creating unique experiences, allowing visitors to become more physically and emotionally engaged in the process.

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Preface

Yesterday's solutions don't work for today's business problems!

It is clear that organizations serve a very different world today, a world transformed by dramatic shifts in demographics, the impact of globalization, and stunning advances in technology (Japanese American National museum, August 2009). Contesting on the changes in which services are delivered and experienced, a number of recent trends have created unique challenges and opportunities for organizations, in which, the touristic environment may be in an ideal place to be addressed.

Since change is inevitable, enhancing and innovating the service experience is receiving a wide recognition among the current priorities for researchers and practitioners in the service industry (Ostrom, Parasuraman, Bowen, Patricio, and Voss, 2015). Particularly in the service sector, scholars have begun to devote attention to customers' service experiences as an important part of organizational life and a core one for their strategies in order to create value and gain sustainable competitive advantages through the processes of innovation and service design (Chen, 2017; Martin-Rios & Ciobanu, 2019; Tussyadiah, 2013). Service experience usually encompasses all customer's cognitive and emotional responses during the production and delivery of a service (Edvardsson, 2005; Gountas, & Gountas, 2007).

This research aims to contribute to the continuously growing body of knowledge in the field of service experience innovation and specifically in transformative services.

It is composed of an introductory section and three articles. The preface explains the overall purpose of the study and briefly presents the main contents of each paper highlighting the links between them. This thesis examines how the service industry is adapting and integrating stimulating service innovative strategies in their approaches when dealing with their customers in a changing landscape and how this, subsequently, is impacting their efforts. Framed within the domain of museum and Social entrepreneurship studies, the project focuses on consumer behavior literature in the touristic field with particular attention to museum activities and hybrid organizations that profits from tourists' influx realm and probes into content of experiential tourism experiences of visitors from the perspectives of marketing, psychology and cultural sociology. This research incorporates a holistic understanding of service experience, considering the physical, cognitive and emotional components as an intertwined whole.

As J.F. Kennedy is attributed to saying: "Change is the law of life. And those who look only to the past or present are certain to miss the future." Indeed, these changes will not be met without proper business management planning playing a significant role in forming a brighter future.

Further, this thesis will challenge to ponder the most critical issues and gaps in business management literature within the touristic and managerial field and explore the most pressing challenges, and interesting opportunities that are facing the world today in order to form new insights to improve performance and decision making for organizations.

It commences with an initial chapter that lays out the framework for the reader, highlighting three key areas of focus identified as the central themes which will be the **driving forces of change** in the future; namely the forces of *demographic* change with an aging population (Paper 1), *digital transformation* (Paper 2), *wealth and societal wellbeing* (Paper 3). On first reading, I was of the opinion that I had overlooked some of the key drivers, such as environmental changes, however the framework is sufficiently broad enough to allow specifics to fit within these headings and especially in chapter three where "*organic food"* was a basic and important common denominator and hence played a role in helping bringing together fractured communities and promote unity around common respect for food, land, and agricultural traditions.

The structure of the thesis then follows on from these three themes illustrated, in the main, seeking to showcase work that informs these issues with experience-centered field exploration informed by the development of three case studies in different settings, mainly brought from Europe (Italy) and the Middle East (Lebanon). The purpose of the case study approach is to obtain first-hand accounts of visitors' experiences with interactive exhibits, exploring their physical, emotional and cognitive responses to these.

Since this thesis seeks to throw a fresh light onto the reality of organizational life, examining how individuals construct meanings, intentions and interpretations to make sense of the world is primordial (Chia, 2003). A mixed set of qualitative tools is applied to different case studies, in a responsive research approach to the existing field conditions. Gummesson (2006) suggests that qualitative rather than quantitative inquiry may represent a more relevant alternative direction in marketing research. Additionally, Gilmore & Carson (1996) discuss the advantages of using integrative qualitative methods in service-marketing-management context. They also combine the notion of integrative research methodology with the idea of a stream of research, or investigations that build on earlier studies and explicitly allow the researcher to develop in distinctive stages throughout the process.

My initial research question was '*What organizations are doing to positively impact the experience of their visitors within a dynamic changing environment and how they are innovating customer-centric service experiences across the entire customer journey, including different offerings, touch points, and channels*?'. Looking for answers to this initial research question I consulted several authors and disciplines addressing the topic in two environmental realm museums and social entrepreneurship.

From a managerial and consumer behavior perspective, I explored at first museums that have recently went digital and investigated museum visitors' experiences through the notions of audience research, their perceived value in using immersive technologies, their trust in digital offering and organizational efforts in providing new immersive service bonds, their level of engagement, and intention behavior to reuse and purchase. This initial theoretical research led me to more thorough exploration of the social connotations and psychological aspects of tourism experiences to better understanding how social interactions could be influenced. I have decided to study social entrepreneurship and go deeper in my understanding if mindfulness of visitors might play a role in valuing experiential production and the co-creation of memorable experiences. As a consequence, the final set of research questions established for this project were:

1) *What are organizations doing to positively impact the experience of their visitors?*

2) *What is the role of visitors in experiencing service innovation with an aging population?*

3) *How are active senior travelers perceiving digital transformation at archeological museums?*

4) *How do service quality and trust in organizational efforts impact the level of engagement and intention behaviors when conventional and new service bonds are provided simultaneously?*

5) *And finally, how co-creation and mindfulness of visitors influence social entrepreneurial efforts in providing good tourism encounters and practices to overcome and manage cultural barriers in troubled changing environments in order to facilitate positive outcomes for the organization, and in turn, the community?*

These questions are answered through three papers.

In order to address these questions thoroughly, I embarked on the review of the literature of five central fields of research: Digital Transformation, Tourism Studies, Marketing Studies, Psychological Studies and Social Entrepreneurial Studies.

From the field of Digital Transformation: I extracted the knowledge needed to understand the influence that interactive technologies have on our touristic engagement with our physical environment.

From the field of Tourism Studies: I took on the necessary knowledge to understand the dynamics of museum's activities and structure, as well as the role immersive technologies (VR) play in the learning and recreational experiences of the museum visits. Moreover, I investigated the effects of an ageing population on tourism perception, and stressed on the need to recognize an inclusive design of museum spaces for older people and especially for museums that are undergoing digital transformation.

From the field of Marketing Studies: I managed to understand and better communicate to various audiences in an experiential economy and understand what is appropriate for organizational goals in the given organizational and environmental context.

From the field of Psychological studies: I was able to focus on the centrality of co-construction of cultural and psychological processes and facilitates understanding psychology from diverse theoretical perspectives. I have investigated insights into how we perceive the world around and what motivates our behavior. Specific research attention incorporated value perception, trust and mindfulness concepts.

And finally from the field of social entrepreneurial studies: I gained knowledge about social entrepreneurs and how they are creating and developing creative solutions to address societal problems. Further, I managed to gain valuable knowledge and suggested some tools that are beneficial to empower and impact the wellbeing and sustainability of a healthy society.

The research questions were complementarily addressed with field enquiry which allowed me to further my knowledge on the lived experiences of visitors in their interactions with immersive technologies, mixed environments (conventional relations and new service bonds) and psychological aspects (Perceived Value, Trust and Mindfulness).

Paper one and two probe the recent advancement in technology and especially with immersive ones (AR/VR apps) at museums that are undergoing digital transformation.

Paper three handles co-creation and mindfulness of visitors in building sustainable outcomes for the wellbeing of society.

In the next section, the abstracts of each article were elaborated, whereas the problematic, aim of the article and the contribution to the field of knowledge and findings are stated. Moreover I added at the end of each part, particular emphasis on how each case study informed the next one in a sequential improvement of field research techniques and approaches to participants.

Figure 1 illustrates the thesis structure, clearly showing the concepts, the area of environmental change and the literature gap addressed in each of the three papers.

All three papers can be located in the marketing strategy branch of knowledge, cultural sociology and psychology.

Figure 1: Thesis Structure
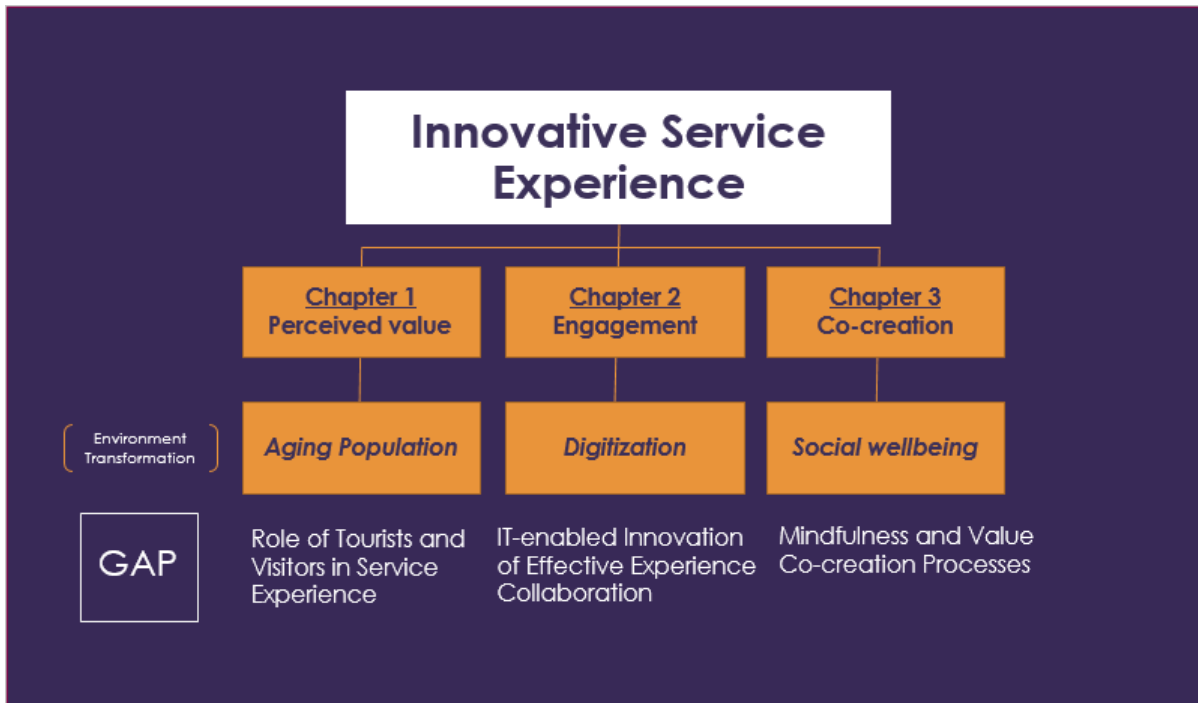
Paper 1. Active seniors and their perceived value of digital museum transformation

Over the last three decades, technology has improved the wellbeing of both producers and consumers. However, the evolution of the digital world and ambiguous access to knowledge have created a bifurcation between those who have the right skills versus those who have insufficient skills to use. Amidst the fast-technological development, the first paper will answer fundamental questions on perceived value of active senior visitors (55+ years old) in the context of archeological museum, while using immersive technologies and social media. Using semi-structured interviews and observations, an inductive single-case study was conducted. This paper contributes to the cultural heritage literature conceptualizing technological experience for active senior travelers through illustrating an extended space in the pre/during/post phases of visit. The results are interesting and may appear counterintuitive first, as they challenge the argument that age (Neves & Amaro, 2012), educational level (Pesonen et al., 2015) and previous experience with ICT (Chung et al., 2015) have a significant role in determining active seniors' perception of digital devices acceptance and usage inside museums. This case did not converge with previous results that suggest the decrease of technology acceptance as people age (Neves & Amaro, 2012). Rather this study has demonstrated that epistemic and emotional dimensions play a greater impact in pushing seniors to accept and use ICT products at archeological museums. Second, results showed that a museum display of technological services has great importance in attracting the attention of seniors.

Nevertheless, seniors still favor human interaction and being there at the moment over the usage of digital devices.

Third, this study also found that older adults should be given an appropriate level of support when dealing with social media platforms. It is noteworthy that seniors prefer to gain their knowledge through traditional means (e.g. WOM and guide books) (Kim & Kim, 2017).

I believe that this study provides three important insights. First, the findings extend our knowledge on the perceived values of active senior visitors for the introduction of immersive technologies at archeological museums. Second, the study sheds new light on the different dimensions of perceived value (epistemic value, functional value, hedonic value and social value) of active senior visitors within museum transformation. A third contribution of the study entails providing an integrative framework for extending the boundaries of the museum technological visit experience: linking the pre-, during- and post phases of visits.

Building on the results of paper 1; seniors' preferences in gaining knowledge through traditional means and the need for museums to diversify technological offerings to a wider audience, pointed my attention to the combined use of digital offerings. In other words, understand the effectiveness of adopting both traditional relational tactics (Local tour guide) and new service bonds (VR headsets) simultaneously in building relationships with visitors in a typical hospitality context. An area of study that is as well less studied.

Paper 2. Consuming digital heritage and evaluating its service experience

The wide body of scientific research on digital transformation describes it as a net positive. Introducing new service bonds, technological readiness of people and organizations have proven to positively affect higher engagement and adoption usage. In the field of tourism, cultural heritage sites have limped experiences with digital services as consumers of today are a digital bunch. However, there have been a suggestion that failing to perceive visitors' service experiences within digital museum context can have deleterious consequences on the relationships with its customers. The present study aims at filling gaps within digital transformation-customer relationships by understanding the effectiveness of adopting both traditional relational tactics (local tour guide) and new service bonds (Virtual Reality headsets) simultaneously in building relationships with customers in a typical hospitality context. This raises the questions on how service experience with traditional and new service bonds together with trust in organizational efforts of archeological museums would influence visitors' level of engagement with museums? And how such a level of engagement would influence customers' behavioral intention to re-experience, visit the physical archeological site and purchase in the museum shop? To answer these questions, an inductive qualitative approach was adopted; hence 31 visitors to Cagliari archeological museum were interviewed after experiencing Virtual Reality headsets commented by a local tour guide. Overall, the results raise questions about the possible rational costs of digital-human interaction and the importance of building trust in

organizational offerings within museum digital transformation, in order to higher the level of engagement and to boost the customers' intention behaviors for reusing or re-experiencing of such services for future visits to the physical cultural heritage site; and finally assessing its effect on purchase intentions in museum shops.

From there, this initial theoretical research led me (in paper 3) to more in-depth exploration of the social connotations and psychological aspects of tourism experiences, understanding by that better how social interactions could be influenced. I have decided to study a social enterprise that is considered a touristic attraction and it has been receiving an influx of tourists from all over the world. By selecting a social enterprise my aim was to go deeper in my understanding if mindfulness of visitors and service providers might play a role in valuing experiential production or co-creational activities leading to memorable experiences.

Paper 3. Antecedents and Impact of individual and organizational mindful behavior in Social Enterprises that co-create experiences

In this study, I shift the focus to social entrepreneurial research inside small scale organizational boundaries by examining its co-creative practices with mindfulness drawn from its producers and visitors to identify and capture value in sustainable development plans. To do so, we draw on the case of "Souk al Tayeb", a social enterprise (SE) in Lebanon that aims to protect and revive the culinary traditions by empowering small scale farmers, producers, cooks, underprivileged communities and providing them with necessary skills and know-how to allow them to become economically independent.

We explore visitors and producers' mindful behavior in Social enterprises context. Drawing on interviews with main stakeholders (CEO, producers, and visitors), a model of mindful behavior is presented. The findings show that when identity representation of service producers and visitors is prominent, or when service producers along with visitors believe in the message and product quality, psychological non-monetary returns are generated promoting mindful behavior from reciprocal parties and enhancing the participation in existing co-creational activities. Mindful Behavior, when co-creational activities are applied right, can lead to positive outcomes such as social desirability and at the same time may involve costs that could lead to social rejection.

The model makes an important contribution by advancing knowledge on: how co-creation and mindful behavior of visitors influence social entrepreneurial efforts in providing good encounters and practices to overcome and manage cultural barriers in troubled changing environments in order to facilitate positive outcomes for the organization, and in turn, the community. It further extends current research by clarifying how mindfulness may facilitate or hinder customers' involvement in service production.

Moreover, this study would help service providers change strategies and implement platforms for co-creating unique experiences, allowing visitors to become more physically and emotionally engaged in the process. Consideration of all such aspects is vital to research of both mindfulness and mindlessness.

Originality and value of each chapter

This thesis will challenge to ponder the most critical issues and gaps in business management literature within the touristic and managerial field and explore the most pressing challenges, and interesting opportunities that are facing the world today in order to form new insights to improve performance and decision making for organizations.

Within this context, I was able to observe several gaps in the literature that needed more attention, like the role of active senior travelers perceived value of museum digital transformation (Paper 1) ; The role of Immersive technologies (Virtual Reality in specific) in enabling effective experience collaboration for visitors who are consuming digital heritage (Paper 2) ; and The role of psychology mainly mindful behavior into organizational research of co-creational service experiences (Paper 3).

Paper one: The majority of research concerning technological developments and experiences to date has focused on holistic views studying different stakeholders' perspectives or on digital natives' perception regarding museum digital transformation. However, only few studies have evaluated the perceived value of active senior travelers and their overall satisfaction when visiting museums that became digital.

Paper two: Scholars have focused primarily on studying either traditional relational tactics or new service bonds separately in the service industry (Beattie & Schneider, 2018; Siu et al., 2013). Yet, in contrast to the richness of these theoretical perspectives, the range of research designs for trust, level of engagement and intention behavior for both traditional relational tactics (local tour guide) and new technological service bonds (VR immersive headsets) as one service in museum studies has been narrow. Our central theoretical contribution is a holistic model that helps in the conceptualization and operationalization of key constructs that can be used to evaluate a user's perception of technological features and his or her cognitive and affective responses to mixed immersive environments.

Paper three: Despite the fact that mindfulness studies on the societal level revealed that it may increase action-taking for the common good, both individually and collectively (Wamsler, 2018). Organizational scholars have accumulated little insight into how mindfulness in social enterprises impact the service experience and especially when these SE tend to benefit from co-creational activities. To the best of my knowledge, this study is the first attempt to join mindfulness and co-

creational studies together, and it is the first to highlight on the negative outcomes of mindful behavior when co-creating experiences.

Conclusion

This research emphasizes the need for more comprehensive understanding of visitors' experiences within changing forces in the touristic realm and the particular social interactions that occur in it. It contributes to the research on engagement studies, tourist experiences and destination-service management.

Looking through the crystal ball of demographic change (chapter one), technological transformation (chapter two), attitudinal (chapter three), and other trends lend important clues about what visitors of museums and social entrepreneurship will want and expect.

It has pondered the most critical issues and gaps in business management literature within the touristic and managerial field and has explored the most pressing challenges and interesting opportunities that are facing the world today in order to form new insights to improve performance and decision making of organizations.

Current findings enrich the theoretical perspective of innovative service experience values. Firstly, they extend our knowledge on the perceived consumers' value of active senior visitors in the application of immersive technologies pertaining to archeological museums undertaking digital transformation. Secondly, they shed new light on the effectiveness of adopting both traditional relational tactics (Local tour guide) and new service bonds (Virtual Reality headsets) simultaneously in building relationships with customers in a typical hospitality context. Thirdly, they pounder our understanding on how co-creational activities and mindful behavior of service providers and consumers influence social entrepreneurial efforts in providing good tourism encounters and practices to overcome and manage cultural barriers in troubled changing environment. Further, present aspects of mindfulness, namely: antecedents, the experience itself and the outcome (potential benefits and costs).

Finally, I conclude this thesis revealing how the implementation of innovative services and the interaction between service entities [e.g., individual service employees {tour guides}, service processes or offerings {Immersive technologies}, service providers {organizations and local farmers/chefs}] and consumer entities [visitors] influences the well-being outcomes of both.

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Active Seniors Perceived Value of Digital Museum Transformation

Abstract

Purpose – This paper will answer fundamental questions on the perceived value of active senior visitors (55+ years old) in the context of cultural heritage sites, when using immersive technologies, conceptualizing technological experience by illustrating an extended space in the pre, during, and post phases of visits. Furthermore, it will reveal a better understanding of digital transformation opportunities and risks in the tourism industry and its related sectors regarding active senior travelers and it will further provide some insights and tools that are required to follow.

Design/methodology/approach – Since we are studying a population that is thus far not fluent in the means of digital opportunities, we will conduct two semi-structured interviews before and after visits to the museums in order to lower the level of emotional bias responses. Moreover, observations of the participants' interaction with technological devices will be assessed during their visit.

Findings – Current findings enrich the theoretical perspective of perceived value. First, they extend our knowledge on the perceived consumers' value of active senior visitors in the application of immersive technologies pertaining to archeological museums. They also shed new light on the different dimensions of the perceived value (epistemic value; functional value; hedonic value and social value) of active senior visitors concerning museum transformation. Third, they provide an integrative framework for extending the boundaries of the museum technological visit experience: linking the pre, during and post visit phases.

Research limitations/implications – Having a longitudinal study that evaluates the same population of seniors over a longer period would enhance our understanding of perception and adoption behavior in non-users. It entails the dimensions that are necessary from a theoretical and managerial point of view, thus contributing to strategic planning for museum managers who are planning on going digital in the coming years aiming at creating further value and satisfaction for their active senior visitors to cultural heritage sites.

Originality/value – The majority of research concerning technological developments and experiences to date has focused on holistic views studying different stakeholders' perspectives or on digital natives' perception regarding museum digital transformation. However, only few studies have evaluated the perceived value of active senior travelers and their overall satisfaction when visiting museums that became digital.

Keywords Active senior visitors, Immersive Technologies, Level of engagement, Perceived experience value, Cultural heritage, digital transformation.

Paper type Case study

I. INTRODUCTION

Innovative technologies such as smartphone applications and wearables are playing a central role in the way people nowadays access, share and transfer information. In fact, the typical Internet user swims in a sea of social media (Kaplan & Haenlein, 2010). Museums are offering their services while tending to evolve in line with the developments that are occurring in the society (ICOM, 2007). Consequently, this trend is widening the use of mainstream technologies; also, social media has created the need for museums to adapt to lifestyle changes thus endeavoring to further engage their visitors during their visit. Accordingly, museums have started to allocate additional resources in order to digitize their collections and to publicize themselves over the web (Hogsden & Poulter, 2012). In other terms, museums are looking into new developments in media and technology as a means for innovative interaction with art, thus providing a greater engagement with the exhibits and ensuring better customer service (Buhalis, 2003; Stogner, 2013). Moreover, the value deriving from social commerce networks (social media and commercial activities) is creating a direct tie between the visitors and the museum thus generating "consumer-generated media" such as reviews and recommendations that provide some good economic value in the context of marketing and retailing when customers are better engaged and satisfied (Liang &Turban, 2011; Stephen & Toubia, 2010).

However, despite the popularity of these types of new technological means and social media among digital natives, senior citizens are still unable to fully enjoy what is offered. Much of the literature focuses on the digital divide that elderly seniors face with internet usage together with their cognitive and physical difficulties (Welsh, Alijani, & Smith, 2009).

The majority of research concerning technological developments and experiences to date has focused on holistic views studying different stakeholders' perspectives (Dieck & Jung, 2017) or on digital natives' perception regarding museum digital transformation (Muskat, Muskat, Zehrer, & Johns, 2013), in order to ensure that museums will be relevant and valuable to future generations (OP&A, 2007). However, only few studies have evaluated the perceived value of active senior travelers and their overall satisfaction when visiting museums that became digital, knowing that active seniors represent the biggest market for archeological and art museums.

Therefore, the present study will examine the perceived experience value of active senior travelers (55+ years old) in the context of cultural heritage sites and specifically at museums.

In order to address this fundamental breakthrough in the promotion and preservation of cultural legacy, it is important to understand active seniors' travelers' perception over the whole experience of museum digital transformation to provide better services and equitable participation for all without marginalizing any group. Hence, the present work answers first fundamental questions on perceived experience value of "Active senior visitors" with regards to the fast-technological change through illustrating an extended space in the pre/during/post phases of visit. Second, it provides detailed

insights into the perceived value of immersive technologies and social media on a less studied population that is forecasted to represent a third of the European Unions (EU) population in the next twenty years (Eurostat, 2016) and is considered an affluent fast-growing market and a driving force in the tourism industry (Schröder, Achim, &Torsten Widmann, 2007). Further, seniors who have high levels of purchasing power are becoming more active in the society and traveling much more (Huang & Tsai, 2003). Third, it entails the dimensions that are necessary from a managerial point of view, thus contributing to strategic planning for museum managers who are thinking of going digital in the upcoming years and creating further value and satisfaction for their active senior visitors at cultural heritage sites.

II.   LITERATURE REVIEW

II.1 Museum Transformation within societal Lifestyle Changes

In the last three decades, a wide range of private and public organizations in different fields have recognized the beneficial potentials of new digital technologies, and have implemented strategies to address digital transformation in their respective managements and operations (Matt, Hess, & Benlian, 2015). Also, the tourism field has always been in the forefront for embracing technological innovations (Gretzel, 2011) since information and communication technologies (ICT) are continuing to serve as the main driver for tourism innovations (Atembe, 2015).

Today, visitors expect to use integrative products that can help them find relevant information before and during their trip as well as manage to share and capture their experience during and after their visit (Johnson, Adams Becker, Estrada, & Freeman, 2015). In order to develop such an adequate integrated system, a deep understanding of tourist needs with respect to technology development is required to generate valuable and enjoyable destination experience (McCabe, 2014). Also, museums are trying to better understand their diverse audiences in order to meet future visitors' needs (Hooper-Greenhill, 2006). In fact, they have gradually acquired visitor-based roles instead of museum-based role (Weil, 2007) hence further engaging their visitors and co-creating glamorous experiences for them (Sfandla & Björk, 2013).

Much of museums' energy is spent on attracting people into their premises, this implying the need for making bold changes in marketing, programming and infrastructure in order to fill in the participation gap that they are struggling to achieve (OP&A, 2007). The introduction of innovative and new means of technological devices was a step forward to become more appealing to the "internet generation" who having the constant need to be "continuously connected" will be thus enabled to use their smartphones and other preferred means of devices. Moreover, the rapid development of smartphone devices has made gaming popular and attractive to a broader group of players and started to be used in tourism (Xu, Weber, & Buhalis, 2013). Hand-held gaming, such as touch screen audio-video guides

and mobile augmented reality (AR) applications, were introduced as innovative products of engagement.

Hence, museum mobile applications give the consumer the ability to explore the exhibits before, during and after the visit (Economou & Meintani, 2011). Furthermore, they develop the consumer/museum relationship by allowing visitors to read, collect data and share their experiences on social media during or even after their visit. This provides a mechanism for expanding the museum out into the world, but also inviting the world to dwell into the museum (Ippolito & Bell, 2015).

Meanwhile, changes bring challenges, since each organization is different than the other and needs tailored strategies to succeed (Johnson et al., 2015). In this regard, Morison and Alex (2017) emphasized the nature of museums by stating eight factors that explain why museums need distinct digital strategies compared to those of the business world. Yet, it is unclear how museums are dealing with their seniors' heterogeneity and their use of these new technologies.

II.2 Active Senior Travelers' Heterogeneity and Use of Technology

The overall population of seniors is growing worldwide. In fact, according to the World Health Organization (WHO, 2015), the number of people aged 60 years and older will outnumber children younger than 5 years by 2020, and by 2050 they will represent nearly 22% of the world's population, totaling approximately 2 billion.

Effectively, the senior market is considered one of the fastest growing segments and a driving force in the tourism industry (Schröder et al., 2007). Nowadays, seniors are traveling more frequently and are becoming more active in the society (Huang & Tsai, 2003). With the aging population in developed countries, tourism researchers are becoming more attentive to the quality of life and the experiences of senior travelers regarding a variety of related issues such as their behavioral patterns (Jang, Bai, Hu, &Wu, 2009), travel expenditure (Jang & Ham, 2009), travel constraints (Kazeminia, Del Chiappa, & Jafari, 2015), travel motivation (Jang et al., 2009; Jang & Wu, 2006; Patuelli & Nijkamp, 2016) and satisfaction.

Recently, seniors are showing more interest and motivation in learning and interacting with ICT products (Eriksson & Fabricius, 2015). This led researchers to focusing their studies firstly on both seniors and information communication technologies, but also on the Internet, and more recently on mobile applications and the use of Augmented Reality (AR) (Im et al., 2015; Saracchini, Catalina-Ortega, & Bordoni, 2015). Some of these studies have focused on searching for new ways to help and improve the self-esteem of those seniors who are unfamiliar with the world of digital technologies, as a means to increase their independence, personal happiness and social inclusion, as well as the accessibility and affordability of related technologies.

In addition, some of the literature is focusing on the digital divide that elderly seniors are facing when dealing with internet usage together with their cognitive and physical difficulties (Welsh et al., 2009). Nevertheless, this divide is gradually diminishing (McMurtrey, Steven, James, & Ronald, 2011), as more seniors are using the internet and technological devices (smart phones and tablets) in their daily lives (Kim, Lee, & Bonn, 2016; Pesonen, Komppula, & Riihinen, 2015). However, their use tends to engage them in fewer activities which is limiting the comprehensive exploitation of the immense potential that the web can offer (Haight, Quan-Haase, & Corbett, 2014). Based on that, several studies in different fields have revealed the positive effects of internet use and the ICTs on the wellbeing and quality of life of seniors (Caro et al., 2016; Gustafson et al, 2015).

Anabel Quan-Haase, Kim, & Kathleen (2016) focused their study on the activities that motivate digital seniors to engage in the use of the ICT in their daily life. The study revealed that when seniors, like any other segment of the population, are presented with technologies that are beneficial for their way of life, they tend to adopt them more readily (Kok, Williams, & Yan, 2012), especially if such technologies will increase the level of their mental well-being (Cotten & McCullough, 2013).

Senior travellers represent quite a heterogeneous market with respect to the use of tourism information technology. Pesonen et al. (2015) presented a tentative typology of three different types of senior travelers based on their use of online travel services: 1) Adventurous experimenters (seniors who are avid users of the internet; they prefer to be independent during their travel and select new destinations; have higher education achievements, better language skills and more adventurous mindsets); 2) Meticulous researchers (they are mainly seniors who just log into the internet in search for information; they tend to prefer booking package holiday tours, want to learn new things, and value safety and certainty); 3) Fumbling observers (Seniors who do not use the internet since they have not had previous experience with computers; they value safety, so they focus on package holidays, and engage only in the mother tongue language. These travelers tend to have a low education level).

Many research works have conducted experimental studies with senior citizens who had to learn how to use new devices and applications. These studies proved that once seniors acquired more knowledge regarding the usability of the technological devices in their daily life, they became more motivated to deepen their learning and usage of the ICT products (Caro et al., 2016).

II.3 Customer Perceived Experience Value in the Service Industry

To satisfy their customers, managers of tourism services need to understand their value requirements and then develop unique service value offerings based on those requirements (Gregory, Dess, Lumpkin, & Einer, 2010). It is increasingly recognized that customer perceived experience value in the service industry matters greatly to managerial strategic planning and is considered one of the key determinants of an organizational success or failure (Stickdorn & Schwarzenberger, 2016). In fact,

when organizations satisfy people-based needs, they are delivering value, which puts them in a much stronger competitive advantage position in the long term (Grant, 1991).

Perceived value has long attracted much attention from both industry and academia (Siu, Zhang, Dong, & Kwan, 2013). It is a subjective, complex and multi-dimensional construct (Sánchez-Fernández & Iniesta-Bonillo, 2007) that varies among customers (Parasuraman, 1997), among cultures and at different times (Holbrook, 2006). This appreciation considers perceived value as a dynamic variable that is experienced before purchase, at the moment of purchase, at the time of use, and after use (Falk & Dierking, 2000; Sheng & Chen, 2012).

Given this central role, the phenomenon of perceived value has been addressed with a set of rich theoretical perspectives (Holbrook, 2006; Sheth, Newman, & Gross, 1991; Sweeney & Soutar, 2001; Wang, Lo, Chi, & Yang, 2004; Zeithaml, 1988). Zeithaml (1988) suggested that perceived value is an assessment done by the consumer, to evaluate the utility and quality of the product that he or she is getting for the services that he or she is buying, where the main concentration was on the quality versus price paradigm. Moreover, Sheth et al. (1991) provided the foundation for extending existing value constructs. They noticed the need for considering both the cognitive and affective nature of perceived value and regarded consumer choice as a function of multiple consumption value dimensions. They suggested five dimensions (Social, emotional, functional, epistemic and conditional values), out of which, Sweeney and Soutar (2001) developed the (PERVAL model), a four-dimensional scale of perceived consumer value managing to the functional (quality performance), emotional, price and social aspects. Thereafter, Wang et al. (2004) also adapted the framework suggested by Sweeney and Soutar (2001), but included non-monetary factors such as time, effort, and energy.

Holbrook proposed a typology of consumer value that captures all of the economic, social, hedonic and altruistic components, out of which, eight subcategories were formed: Efficiency, excellence, status, esteem, ethics, play, aesthetics and spirituality. He acknowledged that at each consumption use these eight subcategories occur together to various degrees (Holbrook, 2006).

Gallarza and Saura (2006) tested the utility of Holbrooks' paradigm for tourism experiences and found a clear pattern in the quality-value-satisfaction-loyalty chain. They elaborated by explaining that: "Quality is perceived as an antecedent of perceived value and satisfaction is the behavioral consequence of perceived value, loyalty attitude being the final outcome".

In museum experience, Falk and Dierking (2000) referred to museum experience as a gestalt (learning experience) that can vary from one person to another when three contexts interact or overlap at three different phases of the visit: 1) the "Personal context" which occurs prior to the visit. It mainly refers to visitors' education, expectations, prior knowledge, experience, prior interest, belief, choices they had, and control over such choices; 2) the "Physical context" that occurs during the visit and it refers to the museum's display of objects and the services provided to visitors; 3) and finally the "Social

context" which occurs after the visit and it reflects visitors' identity status within their social entourage and lately through their use of social media.

II.3.1 Pre-visit

In order to probe visitor experience, it is necessary to understand visitors 'expectations before the visit (Sheng & Chen, 2012). Falk and Dierking (2000) argue that museum managements should think about users in terms of their needs. Accordingly, they identified five "experience types" that describe basic human needs: 1) Explorers: they are motivated by personal curiosity; 2) Facilitators: they are motivated by other people and their needs; 3) Experience-Seekers: they are motivated by the desire to see and experience a place (i.e. tourists); 4) Professional/Hobbyists: they are motivated by specific knowledge-related goals (i.e. scholars researching a specific topic); 5) and finally Rechargers: they are motivated by a desire for a contemplative or restorative experience.

Larsen (2007) asserts that planning in advance would influence the actual experience as tourists would expect possible events that would influence their emotional and cognitive aspects before and even after the visit.

In industries where new technologies have to be utilized, Chung, Han, and Joun (2015) found three factors that encourage the use of AR mobile applications. The first aspect is technology readiness, the second is the visual usage and the third is the situational factor.

II.3.2 During-visit

Tourists play an active role in co-creating value-in-use through the contribution of resources that they encounter during their visit (Presbensen, Vitterso & Dahl, 2013). Moreover, introducing new products in any business is pivotal as they affect long term business plans, and have a positive impact on both financial (enhance sales) and non-financial (creating competitive advantage, loyalty and meaningful experiences for customers) aspects (Siu et al., 2013).

In this regard, Kourouthanassis, Boletsis, Bardaki, and Chasanidou (2015) comprehensively demonstrated that the functional properties of Mobile Augmented Reality (MAR) application will evoke feelings of arousal which in turn will influence the behavioral intention of adopting it. In addition, De Rojas and Camero (2008) examined the dynamic interaction between quality and emotion as a determinant of satisfaction.

II.3.3 Post-visit

Chung, Namho, Hyunae, Jin-Young, and Chulmo (2017) revealed that content, personalized service, and system quality will affect users' satisfaction and intention to recommend AR applications. This is in conformity with the study of Wang and Chen (2011) that stresses on the quality dimension of

technological devices which is essential for acquiring customers' satisfaction and thus their loyalty. Visitors tend to express their feeling of satisfaction through social media. On their side, Cabiddu, De Carlo, and Piccoli (2014) identified three distinctive social media affordances for customer engagement in tourism: Persistent engagement, customized engagement, and triggered engagement. Finally, museum operation managers must consider in their digital strategies, how to carefully order and structure their exhibit digital data, especially outside the walls of the museums, in order for its content to reach a greater audience and be useful for everyone who would like to view, share, re-purpose and re-contextualize museum data (Kraemer & Kanter, 2014).

III. METHODOLOGY

III.1 Research Design and Settings

This work is based on a qualitative study. Qualitative research allows for more detailed accounts of the processes and nuances under investigation. An inductive, single case research design was used. It is argued that the adoption of formal inductive procedures can represent an important step towards assuring conviction in qualitative research findings (Baxter & Jack, 2008). According to Yin (1994), the single case study is the preferred research approach when "How" or "Why" questions are being asked. Moreover, the single case study is considered a suitable research design when it is intended to investigate in-depth a multifaceted social phenomenon (Merriam, 1998).

The main focus of our study is to understand how the introduction of new means of technological devices and immersive technologies at archeological museums is perceived by senior visitors as well as if this is affecting their overall satisfaction.

First, among other constellations of cultural heritage sites, specifically the museums were chosen, because they summarize the historical and archeological heritage in a relatively small location. Moreover, since we are considering studying senior travelers who represent a population that may have physical constraints, it was preferred to select a cultural heritage site where seniors can relatively feel safe, have easier access to its facilities (toilets, elevators and air-conditioning) and are able to explore and get in touch with their cultural relevance.

Second, we selected the case study according to the following criteria: 1) transparency: since we had full access to key information (Pettigrew, 1990; Tsoukas, 2010) and a good background knowledge of the museum and its environment, such as its history, visitors segments, competitors, work habits and routines (Sandberg & Tsoukas, 2011); 2) the occurrence of investments in immersive technologies in the establishment aiming at addressing and implementing the digital transformation; 3) and the exploitation of a unique archeological attraction.

In application of the aforementioned criteria, we selected the National Archaeological Museum of Cagliari as the site of our present research. In 2013, the National Archaeological Museum of Cagliari

implemented the first part of their digitization investment plan by developing its virtual building tour and making it available on its blog. In the same year, the museum created its social media channels, taking another step towards the process of digitization and paving the way for its first attempt at a new avenue in communicating with its visitors. In 2016, the museum became "liquid". In fact, it was renovated with the latest technologies with a special attention given to its content that was exhibited to be accessible for all. Finally, it became the only museum in the world which has managed to show the Nuragic Civilization Era through media and technological tools. Consequently, the National Archaeological Museum of Cagliari figures as a suitable entity for our study since it enables us to observe the phenomenon of digital transformation at the very moment of its occurrence.

III.2 Data Collection

In the tourism industry, most customer feedback and search for relevant information are taking place online. However, since I am studying a population that is so far not fluent in the means of digital opportunities, two quick semi-structured interviews were conducted before and after the visit to the museum to lower the level of emotional bias responses. Also, observations of the participants' interaction with technological devices were assessed.

The interview questions were all open-ended (See Appendix A). Three main phases of the tourism process were taken into consideration to evaluate the overall experience and the level of engagement of active senior travelers with their environment when using new technologies implemented in the archeological museum. The design embedded four perception value dimensions through an extended space in the pre/during/post phases of visit: 1- during the pre-visit, the epistemic value dimension was studied; 2-during the visit, the hedonic and functional dimensions were handled; and 3-during the post-visit I concentrated on the social value dimension. In the first interview, I asked screening and background questions to better understand active senior travelers' motivations and expectations: It was important to understand what pushed travelers to visit the destination, how the searching process took place, and what previous expectations the visitors had before using the services provided (customer orientation). The second interview concentrated on the evaluation of technological immersive devices (interactive touch screens and videos): I asked the visitors to provide information about the content, functionality, and utility of the devices that they used. This part gave us an idea about how visitors perceived the interface of the device and if the information provided by the device was useful, simple, smooth and easy to be used. Thus, visitors were able to point out some concerns related to the functionality of the device in order for it to be fixed, if needed (Perceived value in use). Moreover, concerning the hedonic dimension, visitors were asked if their experience met their prior expectations, and they were asked to assess their emotional state for the overall experience when using ICT products (interaction between the user and the product). For example, they were asked if it was fun and

pleasurable to use or not, if it had enriched their knowledge, also about the overall level of satisfaction of the visit, and most importantly, if they would repeat the same experience and recommend it to others. It is worth noting that the interviewees were not asked about the economic value of their experience as all of the technological services were offered for free. Additionally, demographic information were collected such as name, gender, age, education, income, occupation, nationality, and level of interaction with technologies.

For this case, the Snowball sampling technique was used to recruit interviewees since patterns could only be identified after the coding of the initial interview with active senior travelers (Biernacki & Waldorf, 1981).

When new patterns stopped emerging, no more interviews were conducted. In total, the data were collected from 23 interviewees. Table 1 summarizes the main characteristics of the interviewees noting that all the names were invented.

The interviews were conducted while in the field. They were recorded and stored in electronic format on a Dictaphone before being translated, when necessary, and then transcribed.

In addition, direct observations were conducted in three distinct days. These observations were made during the museum opening hours. We observed how active senior travelers were interacting with and using the technologies made available by the museum. Moreover, we took notes during the observations and we used the thick description technique to enrich the content (Geertz, 1973; Yin, 1994).

The analysis of such a largely qualitative data was conducted through the software package Nvivo11 for its capacity to support the storage, cross-referencing and analysis of large amounts of data in multiple different formats such as texts, images, audio files, etc. (Bazeley & Jackson, 2013). Differentiating the data sources and collecting data from two sources were employed to triangulate the analysis in an attempt to generate robust conclusions (Benbasat, David, & Melissa, 1987; Dubé & Paré, 2003; Eisenhardt, 1989; Yin, 1994).

III.3 Data Analysis

Inductive logic was used to analyze the set of data and to arrive at conclusions about the information gathered, thus formulating a theory that is based on the interpretation of the data rather than setting out with a predetermined hypothesis to prove or disprove. In doing so, a within-case analysis was performed (Eisenhardt, 1989; Eisenhardt & Graebner, 2007). This analysis was done reading the interviews as many times as needed to identify the presence of key elements that led to the identification of significant statements. In-depth theoretical categories were examined during the coding procedures (Strauss & Corbin, 1998). To analyze each interview and the rest of the dataset, a three-step coding process was used. First, the phrases considered as good units of text were coded by

myself and my supervisor. When a new potential code was identified, a definition and an example of codes were provided (See Table 2) (Boyatzis, 1998; Miles & Huberman, 1994). The code structure was implemented and enhanced during the coding process. In the second step, the coding outputs were compared to pinpoint mutual problems and differences, and to develop the first structure of emerging themes and their links.

Table 1: Summary of the interviews

Interviews	Names	Duration (minutes)	Age	Gender	Nationality	Education level	Occupation	Level of interaction with technology	Used ICT during the visit
Interview 1	Jean	6:48	70	Male	French	Ph.D.	Neurological doctor	Good	No
	Catherine		68	Female	French	University	Psychologist	Good	No
Interview 2	Danielle	5:20	71	Female	French	University	Professor	Fair	No
	Alain		72	Male	French	University	Engineer	Fair	No
Interview 3	Peter	6:26	61	Male	Sweden	University	Professional sailor	Good	Sligtly
	Elizabeth		60	Female	Sweden	University	Professional sailor	Good	Yes
Interview 4	Franca	6:49	60	Female	Italian	High school	Employee	Fair	No
	Mauro		62	Male	Italian	Technical institution	Employee	Good	No
Interview 5	Carla	5:56	69	Female	Dutch	University	Medical Doctor	Bad	No
Interview 6	Sara	10:26	60	Female	New Zeeland	Graduate	Teacher and jewelry designer	Good	No
Interview 7	Defrish	14:14	62	Female	Dutch	University	Social worker	Good	Yes
Interview 8	Marc	5:43	63	Male	England	University	N.A.	Good	Yes very fast
	Gill		61	Female	England	Professional	N.A.	Good	Yes very fast
Interview 9	Margo	7:28	57	Female	French	University	Digital marketing	Very good	Yes
	Herve		58	Male	French	University	Commercial marketing	Good	Yes
Interview 10	Mr. Smith	6:06	65	Male	US	University	Lawyer	Good	Yes slightly
	Mrs. Smith		65	Female	US	University	Lawyer	Good	Yes slightly
Interview 11	Hedda	8:47	74	Female	US	College	Architect	Bad	Yes
	Garry		67	Male	Austrian	College	Architect	Fair	No
Interview 12	Alberto	9:19	57	Male	Italian	University	Employee	Good	Yes
	Titziana		60	Female	Italian	University	Employee	Good	Yes
Interview 13	Zomar	9:22	60	Female	Dutch	Ph.D.	Psychiatry	Good	No
Interview 14	Milena	7:14	57	Female	Italian	University	Teacher	Bad	No

As the coding process continued, the list of codes changed, new codes were introduced and some others were merged. Throughout the data analysis process, the new transcripts were compared with the previously coded data (Strauss & Corbin, 1998). I stopped conducting interviews (hence the coding process) when we found no more emerging themes from the dataset arriving at the theoretical saturation (Strauss & Corbin, 1998). At this point, reliability was checked and found satisfactory, and coefficient K was above 0.8. Furthermore, the main codes were ordered into two parent nodes (Perceived value and Satisfaction) of similar categories. Perceived value had five dimensions out of which subcategories (child nodes) were drawn. Satisfaction, on the other hand, had three subcategories. The third stage of the coding concerned a process of pattern identification (Miles & Huberman, 1994). Here, great volumes of data from the two previous steps of coding were condensed into a smaller number of constructs that were considered relevant to understanding the emerging theory. The findings from the abovementioned coding process are displayed in the next paragraph. Table 2 shows the major patterns and their labels, definitions, descriptions, and illustrative examples.

IV. FINDINGS

In this section, some of the key findings about the technological perceived value of active senior visitors within museum digital transformations are outlined.

IV.1 Epistemic Value

All visitors were particularly motivated to visit the archeological museum, to have an overview of Sardinia's history, as well as to deepen their knowledge and satiate their curiosity about the Nuragic civilization. For some, the museum was a good starting point for their trip to check which touristic sites they were interested in visiting during their stay: "*We were interested to go there so we can prepare our trip effectively and know better where to go*". For others, it was their last stop as they found it a good place to summarize what they have already seen in previous sites and get to see some of the missing historical monuments to complete the picture in their heads: "*We already visited the cities of Nora and Tharos, we had much information that were general. Visiting the museum gave us a global understanding of the history of the island, Sardinia. Have a better chronological understanding of several civilizations…*" Herve said.

Furthermore I investigated whether seniors have gained their prior knowledge through the website of the museum. In fact, none of the participants used the website to seek general information. They all preferred to gain their knowledge through traditional means like guide books, tour guides and friends. Titziana and Alberto mentioned that they would prefer to access the website after their visit, to refresh their memories about what they have seen and to search deeper by reading more about some of the pieces that caught their attention during their visit to the museum.

It is noteworthy that word of mouth and guide books have played an important role in shaping the prior expectation of tourists about their visits. "*We have met a lot of friends that have been in here and said it is a fantastic museum and we agree!*"

Concept	Dimension	Definition	Example
Perceived value	**Epistemic value**	It is a kind of value which attaches to cognitive successes such as true beliefs, justified belief, knowledge and understanding	"Essentially for the Nuragic sites, to understand the archeological sites" "Yeah well, I have a smartphone, I use the internet. I am not like a web designer or IT specialist nothing like this but yeah"
	Functional value	The things that are held or included in something, information made available by electronic medium.	"In fact, these things we didn't use them because thanks to God we can see and hear for us it was not useful but I think it would be useful for people who cannot see and can't hear, touch and language signs."
	Hedonic value	It refers to desirable objects that allow the consumer to feel pleasure, fun and enjoyment.	"I think that was my emotional state, I was quite happy. You know for me I felt quite fortunate and lucky to see these beautiful ancient art effects and it was very interesting to me because before I visited other archeological museums in other places like in Puglia and Toronto and Napoli and Sicilia or in Crete also and some of the items in the exhibition I can see some correlation with other classical civilizations around the Mediterranean. So, I felt very happy to see these things."
	Social value	Social norms, rules of behavior that are considered acceptable in a group or society	"I have already sent some pictures in groups of WhatsApp"
Satisfaction	**Overall satisfaction**	It is a measure of how products and services supplied by a company meet or surpass customer expectation.	"Yeah for me it was extremely positive" "Exceeded, because it's very experimental and some of it is going to work very well"
	Recommend	Put forward (someone or something) with approval as being suitable for a particular purpose or role	"I have already sent some pictures in groups of WhatsApp and definitely would share my review with the people around me and recommend it."
	Intention to repeat experience	It is often considered as a measure of loyalty by the consumer.	"We usually come and pay a visit from time to time to see all the new things that they discover"

Table 2: Summary of the second step of analysis: concepts, dimensions and their definitions, and examples

Interest in Use: Challenges and Opportunities Brought to Life

 Some are concerned about the use of technology

Not knowing how to use the device: Concerns about not knowing how to use the device were expected. For example Carla explained: "*We won't use it, because we are old for this technology (laughing)*". Also, Marc was only interested to try it if it was "*easy to be used*". On the other hand, Danielle pointed out that she had never used an immersive mobile application but was interested and willing to try. Catherine noted a new insight related to her acceptance to try new technologies and explained that she would be interested in trying it, as long as it was not something she must put on her head. The expression on her face explicitly divulged her concerns related to hygiene, as she preferred to experience immersive technologies through her phone that she had been actually using it comfortably at the age of 71, without having to touch a device that has been used by a multitude of tourists.

Missing the real experience: Many have pointed out their lack of interest in using AR not because they did not have enough knowledge or interaction with the digital world, but because they would appreciate seeing the pieces or exhibits as Herve stated *"in their classical form".* Alberto explained that he preferred to be in the moment rather than to be distracted by the digital layering that could hinder him from seeing and appreciating the real archeological pieces. Sara shared Hervés' and Albertos' opinions about *"being there in the moment"* stating that she did not feel related to the use of new devices and referred their use to younger generations: *"No I didn't use them. I am not so interested in these kinds of things. I am more interested in seeing the art effects. But maybe for children or young students! It's more interesting to have these technological things, but I am not so attracted."* In contrast, she continued by explaining that she would be interested in using mobile applications, only if the device would demonstrate intangible aspects that are hard to exhibit in real life: *"I mean… maybe if there was some recreation of how the life was in classical times, like how the people were living in that time. […] I like to see objects that people were using. So maybe, if there were some recreations of how life was for the people, imagining how their houses were, how their markets were, something like that would be nice!"*

*Losing human interaction***:** Milena stated: "*I am against this technology, because I found, it's more useful to touch the objects… We would prefer if there was a tour guide, yes! A person that responds to our questions and not general questions registered on a machine."*

Others Support the Use of Mobile Application

On the other hand, as aforementioned, seniors nowadays are more interested in using ICT products in their daily lives and are adopting them faster when such products are perceived beneficial to their way of life (Anabel et al., 2016; Kok et al., 2012). Three main reasons explained why active senior visitors like these technologies:

Bringing the hidden to display: In fact, Zomar told us: *"I am in favor of new technologies, because you have more insight on the things that are on display and it can relate to something that happened thousands of years ago and make it your own".*

Getting overview: Gill explaining her way to use new technologies said: *"I personally wanted an overview. So, I didn't need to read about every art effect [in the website], I was more interested in learning about the Nuragy and the burial tombs. […] So, I didn't read everything.".*

Listening instead of reading: Hedda our oldest participant (74 years old) was interested in using videos and other immersive technologies because she had visual constraints. She stated: *"I would, [use of ICT] well because I can listen to it instead of reading".*

IV.2 Functional Value

Seniors' answers revealed that they prefer simple, user-friendly devices to navigate, with some labeled explanations in different languages along with panels set aside to characterize the theme of each of the sections in the museum.

Suggestions were given to provide different applications whereby visitors can select their preferred language and better interact with the visual representations of videos with sound effects. *"The only enhancement is to have the information in English as well, that would be perfect and I think that if technology was more included, our experience would be better.*

I recommend like a touch screen where there are four languages and at the screen that explains about the Nuragy civilization". Milena, in fact, claimed that she needed more engaging videos that would stimulate the mind: *"No (with a laughter) they [videos] were beautiful but not interesting. Because they do not stimulate the imagination".*

IV.3 Emotional value

When visiting museums, visitors expect to experience easiness and fun, cultural entertainment, personal identification, historical reminiscence and escapism (Sheng & Chen, 2012). Emotional value plays an important role in consumers' behavior and their intention to repeat the use of the device. Zomar explained about her positive past experience with the Louvre mobile application, hence the satisfaction related to her prior experience encouraged her to consider the use of the same type of technologies at a different touristic site: *"I went a few times to the Louvre museum. […] you can download the application of the Louvre and then read and go with your mobile phone and look at whatever you want to see. I would definitely use it in this museum too!"*

Mrs. Smith added by stating her excitement when evaluating her level of satisfaction: *"I feel it brings me back to those times, […]. I mean I could visualize these people that these masks belong to. I was excited."*

IV.4 Social Value

Many of the interviewed seniors were satisfied with their overall visit to the museum and would recommend it to their friends and families. However, they were unsure to repeat the visit since in their capacity as travelers they would not know exactly when they will revisit the island. As for the locals, they have stated that they would revisit the museum in case new objects were introduced to the exhibition. Finally, on the subject of re-using the same technological devices in another touristic context, those who were pro-use would repeat the experience while those who were against would not: "*I have already sent some pictures in groups of WhatsApp and definitely would share my review with the people around me and recommend it*" Milena said.

V.   DISCUSSION AND THEORETICAL CONTRIBITION

In this study, I sought to identify how active seniors perceive digital museum transformation at archeological museums, addressing a knowledge gap in consumer behavior theory. Marketers recognize that consumers' behavior is an ongoing process of exchange that entails the entire consumption course which includes the factors that influence the consumers before, during and after their purchase (Solomon, 2014). Although previous research on perceived value in the tourism field has been extensive (Sánchez-Fernández & Iniesta-Bonillo, 2007), such literature often lacked a cohesive approach to understanding how the introduction of new means of technological devices and immersive technologies at archeological museums is perceived by senior visitors. Rather, previous work has tended to focus on digital natives (Muskat at al., 2013). I therefore, began with a research question seeking to explore different dimensions of perceived value (epistemic value; functional value; hedonic value and social value) of active senior visitors within archeological museum transformation. The case of National Archaeological Museum of Cagliari was studied.

The results are interesting and may appear counterintuitive first, as they challenge the argument that age (Neves & Amaro, 2012), educational level (Pensonen et al., 2015), and previous experience with ICT (Chung et al., 2015) have a significant role in determining active seniors' perception of digital devices acceptance and usage inside museums. This case did not converge with previous results that suggest the decrease of technology acceptance as people age (Neves & Amaro, 2012). Rather this study has demonstrated that epistemic and emotional dimensions play a greater impact in pushing seniors to accept and use ICT products at archeological museums. At a broader level, these results are in accordance with the recent literature of technological acceptance (e.g., Caro et al., 2016; Hauk, Hüffmeier, & Krumm, 2018) revealing that when seniors, like any other segment of the population, are presented with technologies that are beneficial for their way of life, they tend to adopt them more readily (Kok et al., 2012), especially if such technologies will increase the level of their mental well-being (Cotten et al., 2013).

Second, my findings supports the need for seniors to have access to interesting and easy to use interfaces. In other words, providing diversified products accessible to the wider audience is a must. In addition, the results showed that museum display of technological services has great importance in attracting the attention of seniors. Nevertheless, seniors still favor human interaction and being there at the moment over the usage of digital devices.

Third, this study also found that older adults should be given an appropriate level of support when dealing with social media platforms. On the social context, seniors demonstrated a very low level of engagement with social media platforms and rarely rated or wrote reviews on the aforementioned museum social media platforms. It is noteworthy that seniors preferred to gain their knowledge through traditional means (e.g., WOM and guide books) (Kim & Kim, 2017).

I believe this study provides three important insights. First, these findings extended our knowledge on the perceived consumers' value of active senior visitors for the introduction of immersive technologies at archeological museums. Second, this study sheds new light on the different dimensions of the perceived value (epistemic value; functional value; hedonic value and social value) of active senior visitors within museum transformation. A third contribution of this study consists in providing an integrative framework for extending the boundaries of the museum technological visit experience: linking the pre, during and post visit phases.

V.1 Managerial Implications

Recognition of the importance of the different dimensions of value should enable museum managers to develop more sophisticated positioning strategies (Sweeney & Soutar, 2001).

The results of this study show that efficient museums should consider, when introducing new technological devices, distinct criteria including those of the epistemological, social, functional and hedonic values through illustrating an extended space in the pre/during/post phases of visit (See Table 3).

I believe that museum managers should better understand digital seniors' heterogeneity and interest, hence creating tailored applications accessible in different languages that are suitable to different types of visitors. I hereby propose the development of the following applications:

1) General application: for people who would like to have a fast general overview of the museum;

2) Specialists application: for people who would like to deepen their knowledge by focusing in details on their interest while skipping the rest; 3) Experts application: for people who would like to enjoy the benefits of technology as well as the human interaction.

Moreover, visitors will have the option to be accompanied by professional local tour guides, together with the use of devices to support the tour guides explanations, hence enabling them to ask any related questions.

Table 3: Managerial recommendations for traditional and non-traditional visitors through the extended space of pre/during/after visit dimensions when perceiving value

Visit phases	Kind of value	Traditional visitors	Non-traditional visitor
Pre visit	Epistemic value	Application with essential information + optional free tour guide	Application with detailed information + optional free tour guide
During the visit	Hedonic value	Market "highlight" pieces at the museum	Market small exhibitions with local artisans
		Employee /visitor interaction	Employee /visitor interaction
	Functional value	Make sure to offer the information in different languages	Make sure to offer the information in four different languages
		Less information	Detailed information
		Short attractive videos	Long attractive videos
After the visit	Social value	Recommend following Facebook page	Join the Blog of the museum and advise to contribute in writing an article

Thus, recognizing the value of traditional and non-traditional senior travelers was imperative in understanding the right implications that would affect the museum when going digital.

Second, during the visit, two perceived values dimensions were used: Hedonic and Functional values. It is recommended that the management would invest in the training of its employees, especially the security guards since they are the people who spend the most time close to the art pieces and have direct contact with tourists. It would certainly be an added value to visitors to obtain additional information and assistance from any of their encountered employees at the museum. Moreover, the management should market the museum by highlighting one or two artifacts as main attraction points, rendering the museum frequently mentioned in articles, magazines and online websites, hence encouraging traditional visitors to take action and choose this location as a "must-see museum".

In terms of targeting traditional visitors, it is recommended to organize events that would actively engage these visitors, such as involving them in watching an artist in action. In order to ensure a high level of functional values, the application should comprise some entertaining videos highlighting general overview information while discarding the less important details; this will keep the interactive experience simple, but vibrant and entertaining. It is also recommended that the application would be provided in multiple languages. As for the non-traditional visitors, the application should highlight the details while giving the option to skip, shift or choose the topic of interest.

After the visit, it is advisable to create a professional photo booth with the same museum ambiance along with figurines representing the highlighted pieces of art thus enticing traditional visitors to log into their social media account and follow the museum social page in order to retrieve their pictures. Hence, they will not only share their personal details with the museum but also will indirectly market the location among their social media friends. As for the non-traditional visitors, offering them the

opportunity to share their experience on the museum's blog by writing articles and sharing their art or creation would attract other non-traditional visitors.

V.2 Study Limitations and Future Research

The present study presents some limitations. First, it was conducted in the archeological museum of Cagliari, south of Italy; hence the strategic approach that was unveiled cannot be generalized to other types of museums elsewhere, by replicating the same study in settings different from that of archeological museums. Indeed, this particular type of museums might determine a sample selection bias, according to which only people with specific characteristics are attracted by such museums, and this selection process might affect the study results. In turn, by replicating the study in alternative settings, the potential sample selection bias would be minimized. Second, a qualitative research strategy was opted; however, the next step would be to use a quantitative approach to better generalize our findings. Third, this study focused on the perceived value of active senior travelers using the technology within an indoor environment. It would be interesting to explore if the perception of seniors would change when such technology is used in outdoor environments.

Fourth, as mentioned in the methodological section, since the devices used at this museum were offered for free, our study excluded the economic value from the perceived value dimensions. Thus, another interesting theme for future research would be to evaluate the economic dimension implication on the overall experience at the museum.

Finally, Wilkening and Chung (2009) emphasized that museum visitors, as they do at different stages of their lives, will have different needs and perceptions. Conducting a longitudinal study evaluating the same population of seniors over a longer period would enhance our understanding of perception and adoption behavior of non-users.

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Appendix A: A Semi-structured Interview Protocol

Oral introduction:

Warm greeting…

(Introduce myself)

I am here today to try to meet a lot of people to talk about their overall experience at museums after their usage of ICT services to assess the process used inside the museum for implementing improvements. I'm really glad I'm meeting with you because I could have a pretty good idea of what the reality is! I would like to explain the process of how the process goes. I'm recording so I can actually talk to you instead of taking notes, we transcribe our discussion, than go through them to bring out themes, to learn from what is going on.

I would like to assure that your name will never be associated with the research, I take very seriously responsibility to protect the identity of people. Moreover, it's important for people to be honest or we are not going to learn anything. (With a big smiley face)

First Interview (Before the visit) {concentrate on website entry}

Q1- Let's start by having you describe why are you interested in visiting this museums?

Q2- and how did you come upon it? Did you enter the museum website? (Who took the decision to come?)

Q3- Are you thinking of exploring the digital services provided by this museum?

If this museum offered AR immersive technologies would you be interested to try it? Can you elaborate why?

Q4- What are your expectation?

The aim of these question is first to provide comfortable, non-threatening way into the interview, It locate the person in the organization from his/ her own perspective, it gives us an idea about the personality trait of the interviewee and the motivation that pushed them to visit it. (Time, effort, energy spent dimensions)

Second Interview (After the visit) {concentrate on the content, functionality, utility, emotional part of usage}

Q1- Can you walk me through the process of your visit?

Q2- Can you describe things that needed ironing out along the way? How about enhancements?

The aim of these two questions is to elicit description of the process that active seniors had during their visit. This question can give us the opportunity to explore a broad range of factors like difficulties faced when using the digital services and manage to take their opinion about suggestions that could be included or even ironed, that could enhance the service provided for this specific segment. (Quality/performance dimensions)

Q3- Now let's hear about if your experience met your prior expectations?

The aim of this question is to explore the level of preparedness and the level of expectations that could directly affect the outcome result of the experience. (Attitude/Emotional dimensions)

Q4- Can you tell me about your general emotional state when you were using digital services or any other immersive technology provided? (Interaction between the user and the product)

Q5- How did you perceive the overall visit of the museum?

Q6- Would you repeat the same experience in a different cultural heritage site?

Q7- How about recommending it? (Social / Emotional dimensions)

The aim of these questions is to encourage respondents to talk about all their emotional status, to which level this service has satisfied or not their experience with these technologies. And the extent to which they might recommend or even repeat the same experience in a different context or destination.

Interview number			
Museum name			
Museum type	Archeological - ART – history- General – specialized – science & tech – natural history- children- other		
Name			
Gender			
Age			
Educational level			
Occupation			
Nationality			
Level of interaction with technology	Good	Fair	Bad
Length of the Interview			
Start:	End:		

Appendix B: Interviews and Observations Table

	Interview generated answers				Observation		Evaluation
Interviews	**Interviewee**	**Age**	**Gender**	**Level of interaction with technology**	**Thick observation summary**	**Problem during the interaction**	**Evaluation**
Interview 1	Jean	70	Male	Good	Couple: paid most of their attention to the bronze statues and jewelry that goes to the Nuragic civilization. The pieces created 1 minute discussion, they seemed happy. The couple did not use any ICT product offered at the museum.	No	Have good level of interaction but didn't use any technological device.
	Catherine	68	Female	Good		No	Have good level of interaction but didn't use any technological device
Interview 2	Danielle	71	Female	Fair	Couple: They had a guide book in their hands but did not open it during their visit. The couple had fast tour in the museum to have an overview of its exhibits. They did not use any of the technological devices offered	No	Have a fair level of Interaction and did not use ICT, fast superficial visit to have an overview of museum content
	Alain	72	Male	Fair		No	Have a fair level of Interaction and did not use ICT, fast superficial visit to have an overview of museum content
Interview 3	Peter	61	Male	Good	Couple: interested in the exhibits, stopped and red labels and used the tablet in the lower floor. They did not have any problems in use. The Woman spent more time using the tablet than the man.	No	Have good level of interaction with ICT and did use it in their visit. But they wished if there was more English translated labels in the upper floor
	Elizabeth	60	Female	Good		Asked help from Peter when using the tablet	Have good level of interaction with ICT and did use it in their visit. But they wished if there was more English translated labels in the upper floor
Interview 4	Franca	60	Female	Good	Couple: Seemed they enjoyed the museum, did not use any ICT product and spent some time in front of the statues of Monte Prama	No	Have good level of interaction with technology but skipped them all ICT products
	Mauro	62	Male	Good		No	Have good level of interaction with technology but skipped them all ICT products
Interview 5	Carla	69	Female	Bad	Spent most of her visit in front of the Nuragic bronze statues. And	No	Have bad level with

					did not stop and use any of the ICT products		technological devices and came to the museum just to check the bronze statues.
Interview 6	Sara	59	Female	Good	Spent considerable time in front of the bronze statues and Nuragic giant statues and jewelry section. Did not use any ICT products	No	Have a good level with ICT but did not use any of the devices because she was more interested in seeing the real exhibit.
Interview 7	Defrish	62	Female	Good	Gave equal attention to all of the exhibits in the museum and did watch the videos but missed the tablet in the lower floor.	No	Have a good level of ICT and is willing to try new products if available
Interview 8	Marc	63	Male	Good	Walked quite quickly through the museum, Were interested in the bronze statues and the burial section, they gave attention to the videos but did not wait till their end. Missed the tablet section.	Need English narration of videos	Have good level of ICT, but missed the experience because of language barrier
	Gill	61	Female	Good		More english translation	Have good level of ICT, but missed the experience because of language barrier
Interview 9	Margo	56	Female	Very good	Couple: Were interested in the Nuragic parts of the museum. Did watch the videos but missed the tablet because other people were using it.	English translation	Very good use of ICT, willing to use technological devises
	Herve	57	Male	Good		English translation	Good use of ICT, prefer to see the exhibits in their natural state
Interview 10	Mr. Smith	65	Male	Good	Couple: were interested in the Nuragic civilization, and paid much attention to the bronze statues, did watch the videos but did not wait till the end.	Suggested more languages	Good use of ICT, willingness to try them
	Mrs. Smith	65	Female	Good		No	Good use of ICT, willingness to try them
Interview 11	Hedda	74	Female	Bad	Couple: they went through the museum and had an overview, the woman checked the video in the upper floor. The man no. They did not use the tablet in the lower floor	No	Don't use ICT, but willing to try it because she has physical constraints
	Garry	67	Male	Fair		English translation in the upper floor	Uses fairly ICT but was not interested to use them in the museum.
Interview 12	Alberto	55	Male	Good	Couple: they were interested in seeing the exhibits, concentrated their interest on the Nuragic objects. They used most of the ICT provided by the museum	Weather a bit hot	Good knowledge in ICT, not interested to use ICT during the visit. They dig deeper after their visit
	Titziana	59	Female	Good		No	Good knowledge in ICT, not interested to use

							ICT during the visit. They dig deeper after their visit
Interview 13	Zomar	60	Female	Good	Got to see in close the jewelry, the potteries, weapon, and coins. Did Not use any ICT product.	More English explanation. A bit hot	Have a good ICT level, used ICT and would use it in the future
Interview 14	Milena	56	Female	Bad	Had a fast overview in the museum, she watched the video in the lower level and interacted with the employees	No	Is not willing to use it. Prefer human contact

Appendix C: Consent for participation in a research interview

I agree to participate in a research project led by Christelle Traboulsi from the University of Cagliari, Italy. The purpose of this document is to specify the terms of my participation in the project through being interviewed.

1. I have been given sufficient information about this research project. The purpose of my participation as an interviewee in this project has been explained to me and is clear.

2. My participation as an interviewee in this project is voluntary. There is no explicit or implicit coercion whatsoever to participate.

3. Participation involves being interviewed by (a) researcher(s) from the University of Cagliari. The interview will last approximately 15 minutes. I allow the researcher(s) to take written notes during the interview. I also may allow the recording (by audio/video tape) of the interview. It is clear to me that in case I do not want the interview to be taped I am at any point of time fully entitled to withdraw from participation.

4. I have the right not to answer any of the questions. If I feel uncomfortable in any way during the interview session, I have the right to withdraw from the interview.

5. I have been given the explicit guarantees that, if I wish so, the researcher will not identify me by name or function in any reports using information obtained from this interview, and that my confidentiality as a participant in this study will remain secure. In all cases subsequent uses of records and data will be subject to standard data use policies at the EUI (Data Protection Policy).

6. I have read and understood the points and statements of this form. I have had all my questions answered to my satisfaction, and I voluntarily agree to participate in this study.

7. I have been given a copy of this consent form co-signed by the interviewer.

_____ _____

Participant's Signature   Date

_____ _____

Researchers Signature   Date

For further information,

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Paper two

CONSUMING DIGITAL HERITAGE AND EVALUATING ITS SERVICE EXPERIENCE

Abstract

The wide body of scientific research on digital transformation describes it as a net positive in terms of first, introducing new service bonds, and second by asserting that technological readiness of people and organizations have proven to be positively affecting a higher level of engagement and adoption usage. In the field of tourism, cultural heritage sites have limped experiences with digital services by considering that the consumers of today are a cold digital entity. However, failing to accurately perceiving visitors' service experiences within digital museum context had been suggested to have deleterious consequences for relationships with the visitors. The present study aims at filling gaps within digital transformation-customer relationships by understanding the effectiveness of adopting both traditional relational tactics (Local tour guide) and new service bonds (Virtual Reality headsets) simultaneously in building relationships with customers in a typical hospitality context. This raises multiple questions: How does service experience with traditional and new service bonds and trust in organizational offerings, influence visitors' level of engagement at museums? And how does the level of engagement influence behavioral intention to re-experience, to visit the physical site and to purchase from the museum shop? To answer these questions, an inductive qualitative approach was adopted; hence 31 visitors to Cagliari archeological museum were interviewed after experiencing Virtual Reality headsets commented by a local tour guide. Overall, the results raise questions about the possible rational costs of digital-human interaction and the importance of building trust in organizational offerings within museum digital transformation, in order to higher the level of engagement and to boost the customers' intention behaviors for reusing or re-experiencing of such services for future visits to the physical cultural heritage site; and finally assessing its effect on purchase intentions in museum shops.

I. INTRODUCTION

Digital technological transformation of cultural heritage studies assumes that technological innovative investments can be associated with greater customer engagement leading to satisfactory experiences (Yovcheva, Buhalis, & Gatzidis, 2013). There are several rationales for this assumption. First, by going digital, cultural heritage institutions are providing easier access to culture, knowledge and co-creating experiences. Similarly, going digital would enhance and create dialogues with the connected contemporary society through social media and also protect and promote the exchange of ideas and knowledge (Gibbons et al., 1994). The connection to technology also makes the link between tangible and intangible cultures more interactive and playful (Marques & Borba, 2017).

Faced with the constantly evolving customer expectations and the explosion of competing new entertainment options, museums are facing increasing pressure from various constituencies to become more "digital", since it is now imperative for every business to adapt to and to take advantage of the ways that the digital world had radically changed consumers' behavior expectations hence act upon delivering innovative service experiences (European commission, 2015; Friedman, 2005).

Given the central role of tourism service experiences, the phenomenon of digital transformation has been addressed with a set of rich theoretical perspectives. A first line of research has been extensively studied and adopts people and organizational technological acceptance of Information and Communication Technologies (ICT), in this article referred to as New Technological Service Bonds (NSB) (Davis, 1989; Davis, Bagozzi, & Warshaw, 1989; Huang, Backman, Backman, & Moore, 2013; Venkatesh, Davis, & Morris, 2007; Venkatesh, Morris, Davis, & Davis, 2003), that have proven to directly affect visitor's engagement and adoption usage (Venkatesh, Thong & Xu, 2012).

In a second stream of research, strategies are examined in the aim of exploiting the benefits and opportunities that arise from this transformation and contribute in enhancing and expanding products and service portfolios into new domains (Berman, 2012; Matt, Hess &B enlian, 2015; Nylén&Holmström, 2015). Other research streams relied on co-creational value views, in which customer experiences were regarded as a significant factor for service enhancement (Prahalad & Ramaswamy, 2004 a -b).

Hence, recognizing the untapped potential of matching culture and innovative technologies, many museums undertook digital transformation by increasing their digital offerings (e.g. Virtual Reality (VR), Augmented reality (AR) applications) and their marketing channels proficiency, as well as to follow strategic changes aiming at providing a valuable engaging and innovative interactive journey for their audiences (Stogner, 2013), in their desire to creating and appropriating superior financial performances on a sustained basis (Peteraf & Barney, 2003) and ensuring better customer service (Buhalis, 2003). However, the acquisition of a new technological service bond (VR/AR) alone is not sufficient to guaranteeing benefit from use.

Prior studies on introducing new service bonds in museum context have supported the need to diversify products accessibility to a wider audience (Traboulsi, Frau & Cabiddu, 2018), since not all visitors have the same technological readiness to profit from these services and some still prefer to gain their knowledge through traditional relational tactics (TRT) (e.g., tour guide, WOM and guide books) (Kim & Kim, 2017).

In fact, failing to accurately perceiving visitors' service experiences within digital heritage context had been suggested to have deleterious consequences for relationships with the customers. Therefore, museums are now trying to jointly mix the two services together in order to provide satisfying experiences to their customers. The ability to successfully manage customer relationship provides tourism organizations with an opportunity to increase their value proposition and obtain a sustained competitive advantage (Siu, Zhang, Dong & Kwan, 2013). Hence, an extensive study of the needs and expectations of users is essential. Moreover, scholars have focused primarily on studying separately either TRT or new service bonds in the service industry (Beattie & Schneider, 2018; Siu et al., 2013).

Yet, in contrast to the richness of these theoretical perspectives, the range of research designs for trust, level of engagement and intention behavior for both TRT (Local tour guide) and new technological service bonds (VR immersive headsets) as one service in museum studies has been quite narrow.

For the purpose of this article, Virtual Reality applications will be studied in the realm of a museum that is under the process of digitization development. In fact, Virtual Reality is the use of computer technology to create a simulated environment; it allows users to immerse themselves in virtual scenarios that otherwise cannot be easily envisioned. A result of this immersion is the ability

to perceive, feel, and cognitively process information that would have otherwise not been available; hence such an immersion augments human cognition.

Several organizational researchers have argued the usefulness of virtual reality in heritage sites. Some consider it to be a distraction for museums and that it is a simple operation of automation of the culture; because it depends on a closed programming where heritage objects are used in a 3D animation restrict, hence such a process doesn't provide new knowledge or enhance understanding. Others consider heritage sites to be already a sort of VR, as visitors time travel in their imagination, hence by using VR, there is a clear potential to identifying unique opportunities for creating new creative types of experiences on-site (Suh& Prophet, 2018).

Despite the opposing thought streams, there has been a consensus that technological devices will never replace the real experience and the best technology experiences are the very human ones. Therefore, a better understanding of experiential phenomena in tourism service is particularly important, and will permit the industry to perform better (Chen & Chen, 2010).

For such purpose, the present study aims at studying the effectiveness of simultaneously adopting both TRT (Local tour guide) and new service bonds (VR headsets) in building relationships with customers in a typical hospitality context that is undergoing digitization; this raises questions on how service experience with traditional and new service bonds together with trust in organizational efforts of archeological museums would influence visitors' level of engagement with museums? And how such a level of engagement would influence customers' behavioral intention to re-experience, visit the physical archeological site and purchase in the museum shop?

In order to consider under what conditions service experience would get to its uttermost, we examined the interaction between trust in service offerings (organizational effort and employees' effort) on the level of engagement with Intention behavior to reuse (Re-experience), purchase and finally visit the physical site.

Our central theoretical contribution is a holistic model that helps in the conceptualization and operationalization of key constructs that can be used to evaluate a user's perception of technological features and his or her cognitive and affective responses to mixed immersive environments. Thus, this research aims at contributing to the literature on both customer relationship management (CRM) and tourist behavior research. On one hand, this research adds to the current CRM literature by investigating the influence of NSB and traditional relationship

tactics simultaneously on the level of engagement and intention behavior. On the other hand, this study enriches tourist behavior research because it is conducted by using a sample of museum visitors.

The remainder of this article is organized as follows: 1. The theoretical background provides a literature review of the key constructs related to TRT (local tour guiding) and new service bonds (VR headsets) mediated museum service experience, including experiential value, trust elements, level of engagement and visitors' behavioral intentions. This section introduces trust theory and attentional control theory, which underpin our question regarding the effects of key NSB and TRT design elements on visitors' level of engagement and behavioral intentions; this section also outlines the potential mechanism that explains these effects. 2. The methodology section details the research design and procedure. 3. The results section presents the data description and major findings, and 4. The article concludes with a discussion and study limitations.

II.   LITERATURE REVIEW AND THEORETICAL BACKGROUND

This section reviews and discusses previously published studies on virtual reality and museums service experience with new service bonds (Virtual reality headsets) and traditional rational technics (tour guide interpretation), trust in new technology, as variables affecting visitors' level of engagement at museums. It is therefore hypothesized that the level of engagement affects the behavioral intention to reuse new service bonds and/or traditional rational tactics, as well as to visit the physical site and increase souvenir shopping intentions.

II.1 Virtual reality and its application to tourism: brief overview

Virtual reality has been applied to various areas of tourism research. Guttentag (2010) suggested six areas of tourism in which VR may prove to be of valuable use for heritage preservation approach; namely in planning and management, marketing, entertainment, education, accessibility, and heritage preservation. Also, he emphasized on the important role of VR in protecting vulnerable sites. Moreover, the study of Riva et al. (2007) showed that VR presence is an essential variable that plays a mediator role between media experience and emotions and that it also influences the characteristics of the experience, including the emotional ones provided by the technology.

In museum studies, Carrozino & Bergamasco (2010) proposed a categorization of VR installations and individuated their strengths and weaknesses.

For Example, Thomas and Carey (2005) showed that "visiting museum's website can increase one's interest in visiting the real museum, this serve as an indirect evidence that visiting tourism destinations in VR may encourage real visitation". Kiourt, Koutsoudis, and Pavlidis (2016) adopted an innovative and fully dynamic Web-based virtual museum framework which is "an open system for everyone interested in creating virtual 3D environments that exhibit their own content or content in Web-based repositories" and have investigated its positive effect on engaging experience. Moreover, using new technological tools in museums can enhance learning experiences, foster participation in collaboration, and increase creativity and visitors' engagement (He, Wu, & Li, 2018). Hence, VR is considered to be influential on visitors' level of engagement with museums which is the essence of this research.

II.2 Visitors' level of engagement with cultural heritage attractions

The engagement or involvement theory is mainly used and adopted by marketers and practitioners to better understand customer experience. Bryce, Curran, O'Gorman, and Taheri (2015) presented their view on visitors' engagement as context based. From a marketing perspective, the term engagement is defined as "the interactive value co-creative process between a company or an organization and its customers" (Huang, 2017). It has been also agreed upon that, involvement "contributes to co-creation and to the perceived quality of an experience and satisfaction, therefore it is an essential dimension to consider in the management of experiences" (Campos, Mendes, do Valle, & Scott, 2016).

Previous studies on visitors' level of engagement with tourist attractions have demonstrated that this theory can be measured by three main drivers: visitors' prior knowledge, visitors' motivations, and visitors' cultural capital. One important contribution to the understanding of visitors' engagement was a study conducted by Taheri, Jafari, and O'Gorman (2014) in the field of heritage management and marketing. The authors developed and tested a measurement scale of visitors' level of engagement at Kelvingrove Art Gallery and Museum in Glasgow and were able to validate their scale by demonstrating that prior knowledge and recreational motivation can positively affect visitors' level of engagement with the museum. That is to say that visitors who have better prior knowledge (measured in terms of previous experience, familiarity and expertise)

and who are more motivated about visiting the site are more likely to have high level of engagement with the site.

Prior knowledge has been explained by its relation to satisfaction and its effect on tourist behavior and decision making (De Rojas & Camarero, 2008). As mentioned above, prior knowledge can be measured in terms of visitors' past experience with the tourism attraction, familiarity with the site (the visitors' information and knowledge about a specific product and or a service attained from sources other than the past experience), and finally subject expertise (ability to perform and select products and to deal with problems) (Sheng & Chen, 2012). In their study of the relationship between prior knowledge and satisfaction, Huang, Afsharifar, and Van der Veen (2018) found that visitor's satisfaction increases with increased familiarity and/or expertize.

From a psychological perspective, visitors' motivations are associated to individuals' willingness to act and take decision. It is composed of internal and external factors that initiate and satisfy a certain need or desire (Lai, 2011). Visitors to museums as cultural heritage sites can be motivated by self-expression (museums help visitors express who they are), self-actualisation (display knowledge and expertise on certain subjects), self-image (positive influence on visitors' personal image), entertainment (enjoying time), recreation and personal enrichment (get to know new cultures and gain knowledge) (Ballantyne, Packer, & Falk, 2011; Falk, Dierking, & Adams, 2011; Kolar &Zabkar, 2010; Park & Yoon, 2009).

Furthermore, the frequency of people's participation in cultural consumption should not be overlooked (Taheri et al., 2014). Cultural Capital of individuals defined as the rich repository from which visitors draw meaning can optimize the consumption experience and enhance engagement (Siu et al., 2013; Taheri et al., 2014).

II.3 Museums' service experience (traditional and new technological service bonds)

It is clear that the museums serve a very different world today, a world transformed by dramatic shifts in demographics, the impact of globalization, and stunning advances in technology (Japanese American National museum, 2009). Recent advancements in technology have greatly expanded available options to museums by collecting information from visitors and non-visitors alike, in an aim to try and respond to audiences that increasingly look, think, behave, and process information differently. This requires museums not only to get to know their audiences better, but to be willing to making bold changes in marketing, programming, and infrastructure in order to

meet future visitor needs. Museums are in charge of staging novel experiences in today's experiential economy (Mehmetoglu & Engen, 2011). As they become more and more visitor-oriented, museums need to center their research focus on visitor experiences (Kotler & Kotler, 2000). In fact, Visitors' experiences originate from a set of interactions between a customer and a product consequently provoking a reaction (Gentile, Spiller, & Noci, 2007).

A key construct that captures the success or failure of the entire museum experience is their perceived experiential values (Chan, 2009). These experiential values imply that customers' engagement and their perceived value have different dimensions (epistemological, hedonic, functional, economic and social) (LaSalle & Britton, 2003, Traboulsi et al., 2018). Experiential values evaluation depends on the comparison between a customer's expectations and the stimuli coming from the interaction with the organization and its offering in correspondence with the different moments of contact or touch-points (Parasuraman, Berry, &Zeithaml, 1991). In fact, Sheng and Chen (2012) extracted five types of museum visitors' experience expectations namely: easiness and fun, cultural entertainment, personal identification, historical reminiscences and escapism.

In order to reap the benefits of digital innovation, firms need to acquire new skills both internally and externally while establishing new digital roles. In doing so, firms should endorse continuous learning of the unique properties of digital technologies to their employees in order to secure a higher level of engagement with their customers (Nylén & Holmström, 2015).

In this research, museums' "service experience" is referred to as an experience with new technological service bonds together with traditional relational tactics.

On one hand, experience with new technological service bonds includes four attributes; namely the quality of service, meaningfulness, aesthetic appreciation and newness (Dahlqvist & Wiklund, 2012; DeLone & Mclean, 2003; Etkin & Ghosh, 2017; Im & Workman, 2004; Thuring & Mahlke, 2007).

Regarding the first attribute "*service quality"*, scholars have acknowledged the importance of three quality constructs for tourists when using immersive technologies such as content quality, system quality and service quality (Jung, Chung, & Leue 2015). In fact, several studies have confirmed the effect of content quality on user acceptance (Ahn, Ryu, & Han, 2007; Wang & Chen, 2011). Further, system quality and personalized services have affected positively users' satisfaction and intention to recommend augmented reality applications (Jung et al., 2015).

Moreover, the study of De Rojas and Camarero (2008) on visitors' experience, mood and satisfaction in heritage context has revealed that there is a significant relationship between quality and emotions where the perceived quality is a direct determinant of satisfaction. This leads us to the second attribute "meaningfulness".

"Meaningfulness" is the degree to which new services are perceived as valuable and useful; with purposefulness and significance to the end user (Chandralal & Valenzuela, 2015). More recently, scholars have suggested that later-stage segmented markets differ not only in terms of users' need but also in terms of the ways that products express users' identities (Berger & Heath, 2007; Hassenzahl, 2018). In fact, offering new meaningful technological services affect customers' perceptions of "*museums' organizational effort investment*" (Siu et al., 2013). Im and Workman (2004) study showed that it is the meaningfulness dimension rather than the novelty dimension of creativity that is of greater importance in explaining the link between market orientation and new product success.

"Aesthetic innovation" is important in the context of an ever frequent introduction of products that meet greater market success and impact sales (Eisenman, 2013). In digital innovation, measuring the user experience involves not only usability issues, but also the aesthetic properties of digital products and services (Nylén & Holmström, 2015). Recent research has suggested that the generation of visitors' experiential value is paired with their aesthetic appreciation process (Chung, Lee, Kim, & Koo, 2018; He, et al., 2018). Moreover, the study of Abrahamson (2011) determines that digital production processes would enable fusions' rapid visualization, creation, and awareness among global consumers; such production processes create or reinforce three types of fusions: 'beautiful technologies', that is technologies rendered aesthetic; 'efficient beauties', that is aesthetic artifacts rendered technologically efficient; and 'concoctions', that is new technologies fused with new cultural tastes. Based on these conceptualizations, it is thus essential for museums to generate compelling stimuli through myriad exhibits and settings in order to successfully engage tourists in aesthetic experiences.

The "*Newness"* attribute of new technological service bonds is mainly associated with change, novelty and creativity (Baregheh, Rowley, &Sambrook, 2009), whereby the industry challenges existing standards (Rindfleisch& Moorman, 2001). Product and company centric innovations are being taken over now by the co-creation experience as a basis for value and as the future of innovation (Binkhorst & Den Dekker, 2009).

The relation between experiences with new technological service bonds and visitors' engagement is enhanced by the study of Addis (2005) and Siu et al. (2013), which revealed that the use of these new technologies can enhance learning experiences, foster participation in collaboration, and increase creativity and visitors' engagement. Further, Addis (2005) reached to the conclusion that the use of new technologies strengthens the interaction between the consumer and the message, and gives rise to a Virtual Edutainment Environment (Addis, 2005).

On the other hand, traditional relational tactics is measured in terms of two variables*: tour guide interpretation and professionalism* (Weiler & Walker, 2014). The former has been examined by a number of studies. Ham and Weiler (2007) found that guided tour group visitors had significantly higher satisfaction levels than did visitors traveling independently without a guide. Additionally, Morgan and Dong (2008) found higher levels of satisfaction among the group who received interpretation compared to the group who received no interpretation, as findings identified that visitors derived better visit satisfaction through interpretive resources not supplied by the site. The study of Beattie and Schneider (2018) revealed different levels of visitor satisfaction among guided, audio-guided, and self-guided interpretation. Specifically, those primarily using their own personal resources had greater satisfaction than those who took an interpretive guided tour or read exhibits and signs.

In tourism studies, museum services comprise both tangible and intangible services. Previous studies have investigated the significance effects of various relationship tactics. In this study we will concentrate on examining tour guiding interpretation skills and their role in service delivery process along with immersive technologies and specifically VR headsets. Mainly, when tourists hire a tour guide, they expect some requirements to be met, of particular importance were the ability of the tour guide to (a) provide an interesting commentary, (b) interact with the tour group, and (c) ensure the smooth running of the tour (Hughes, 1991).

Furthermore, Weiler and Walker (2014) established six principles of tour guide interpretation: involving (active and sensory), thematic, relevant (content, to what visitors know and care about), enjoyable (diverse approaches) and emotionally engaging, accurate (facilitates understanding) and logical (organized and sequential). They stated that: "in order to enhance the visitor experience guides need to make "IT-REAL".

II.4 Trust in offerings

Within social studies, trust is defined as a key element in partnering and a central factor in contributing to positive interpersonal relationships, because the deep-seated human need to understand his/her social surroundings is remarkably complicated and human behavior is not always predictable (Covey, 1989; Fox, 1974; Model, 2003). People adopt trust as a central social complexity reduction strategy when a social environment cannot be regulated through rules and customs (Luhmann, 2000). By trusting, people reduce their perceived social complexity, consequently ruling out the risk of undesirable behaviors on the part of the trusted party (Luhmann, 2000).

From a managerial marketing perspective, Hawes, Mast, & Swan (1989), elaborated that trust is a catalyst in many buyer-seller transactions, and it can provide buyers with higher expectations and satisfying exchange relationships. Organizations build trust by promising that they will keep on providing their best service quality and reliable business practices. Therefore, trust acts as an important component in the process of building and maintaining relationships (Gwinner, Gremler, & Bitner, 1998). Consumer relational benefits can be categorized into three distinct benefit types: confidence, social, and special treatment benefits. Confidence benefits are received more and rated as more important than the other relational benefits by consumers, followed respectively by social and special treatment benefits. (Gwinner et al., 1998).

Also trust plays an essential role in building buyer commitment and facilitates the development of long-term buyer-seller relationship. Within the same context, trust and distrust in an organization have been discussed as important topics by some scholars who reviewed and presented the benefits and the barriers for building and sustaining trust in organizational theory (Kramer, 1999). According to Siu et al. (2013), customers are likely to give their commitment to a museum if they perceive the museum's relationship building intentions and efforts.

Mcknight, Carter, Thatcher, and Clay (2011), argued that trust in the Information Technology (IT) plays an important role in shaping IT-related beliefs and behavior. Information technology has been a dominant field of discussion for scholars and practitioners who were interested in exploring the role of trust in IT usefulness and acceptance (i.e. Lankton, McKnight, & Tripp, 2015; Söllner, Hoffmann, & Leimeister, 2015; Söllner, Hoffmann, Hoffmann, Wacker, & Leimeister, 2012).

Factors affecting trust in human-robots have been the core of research of Hancock et al. (2011) within the person-to firm relationships. Furthermore, a great deal of research has identified trust as a positive factor in recommending and selling an organization's products and brands (i.e Delgado-Ballester & Munuera-Alemán, 2005).

Wang and Benbasat (2005) for instance, tested a Technology Acceptance Model-TAM in measuring the effect of trust construct on online recommendation agents, and they found that the former is considered as an integral factor influencing the successful adoption of online recommendation agents. Gefen, Karahanna, and Straub (2003) have also adopted the TAM model in examining online trust building and were able to demonstrate that perceived usefulness and perceived ease of use were in fact factors that help in increasing customers' trust in e-vendors.

In parallel, in the fields of E-commerce and online purchasing experience, researchers were interested in measuring and analyzing the formation of trust (Kim, Xu, & Koh, 2004; Koh, Fichman, & Kraut, 2012). Kim et al. (2004) compared between potential customers and repeat customer on the basis of online trust building factors and found that trust building depends on many antecedents, with satisfaction being the most important especially for repeat customers. The results of Koh et al. (2012) revealed that perceptions of national integrity, legal structure and supplier verification had positive influence on buyers' trust in global suppliers.

Few applied researches have attempted to measure trust in digital transformation and technological tools (such as human-computer interface, computer generated environment, 3D computer simulation, etc.) on the level of engagement with museums. Moreover, recent studies are increasingly focusing on the direct relation between virtual reality applications based on their features in terms of interaction and immersion at museums (Carrozzino & Bergamasco, 2010).

IV.5 Behavioural intention

Through their study on destination perceived quality and visitors' satisfaction, the results of Zabkar, Brencic, and Dmitrovic (2010) revealed that satisfaction with tourist services and a high level of visitors' involvement with tourist attractions can contribute to positive behavioral intentions in terms of customer retention and repeat visits.

Regarding intention to purchase or shopping, it is argued that museum shops may be viewed by curators as supporting entities of institutional objectives only in their particular role in providing additional revenue and aiding ongoing institutional awareness via promoting branded 'souvenir'

merchandise (McLean, 2012). The study of McIntyre (2010) revealed that visitors consider shop spaces as an integral part of their experience during a visit, which helps in expanding the onsite and continued learning process, and helps in generating memories after the visit. Therefore, it is assumed that higher level of engagement and satisfaction with the museum and its offerings may lead to an increase in visitors' shopping intention.

The literature review of this research has covered previously published studies on the level of engagement with museums, and the factors affecting it, and its relation to behavioral intention in experience and purchase.

III. METHODOLOGY

III.1 Research setting

In this article, museum visitors are at the center of the research which has been conducted in the aim of developing a comprehensive model to explore user's level of engagement and intension behavior, after experimenting new service bonds (Virtual reality headsets) and traditional means of communication known in this article as traditional relational tactics (Guiding Interpretation) simultaneously at archeological museums.

Cagliari archaeological museums' visitors in Sardinia-Italy, were invited to participate in this study. Participants were asked to experience VR application using Samsung Gear VR headset. Actually, Virtual reality enables you to look around a virtual space as if you were actually present there. Modern VR headsets fit under one of two categories: Mobile or tethered. In this study Mobile headsets were used, which are shells with lenses into which you can place your smartphone. The lenses separate the screen into two images for your eyes, turning your smartphone into a VR device.

For the purpose of this study, I was employed for 10 days as a local tour guide and my duty was to explain the virtual sets to visitors who were interested in using this technology. So I had to acquire a vast understanding of the archeological sites that the visitors were going to visit virtually. I managed to select two cultural heritage sites in Sardinia that were already registered in the application.

I used two main criteria for selecting these cultural heritage sites:

First, I needed to have an exposure on different types of VR experiences, the device I used had already 3 types of VR sets registered, so I selected those that had: the panoramic view, the 3D reconstruction and the 360-tour visualization. Second, I wanted to focus on main attractions existing in Sardinia and that are located in opposite geographical locations (North and South)

Thereafter, I prepared an extensive research on the selected historical sites, under the constant evaluation, approval and supervision of historians and archeologists collaborating with the museum management.

Along with my prior personal experience as a tour guide for the last 9 years, I sought to share my expertise and knowledge in this field with the visitors. Hence I prepared a message with the help of the historians, testing and practicing it regularly with them on the best manner to present the content, aiming at providing the best possible consistency in the quality of the interpretation imparted to all my virtual visitors.

The experience consisted in visiting virtually two important cultural heritage sites in Sardinia, and simultaneously listen to the explanation or interpretation of the local tour guide (Figure 2). The First cultural heritage site I chose was the archaeological site of Nora. First, the content of this visit consisted in seeing panoramically the archaeological site. Then a brief elaboration of the site's history was provided further pinpointing the most relevant constructions dating to several period of history. After elaborating the history of Nora in the panoramic virtual set, we were to visit the 3D digital reconstruction of the roman house that existed in the same site in order to try and visualise the intangible aspects of the site on how it used to be when it was originally constructed. Thereafter, we moved to the north to explain the second site.

The second cultural heritage site I selected was that of Giuseppe Garibaldi museum situated on Caprera Island. Here the visitors had the opportunity to explore the third type of VR experience which is the 360 tour visualizing the House and the Gardens of the museum.

The interpretation of the virtual visit of both sites lasted approximately 20 minutes. After the VR experience, all participants were requested to be interviewed. The interviews were conducted in three languages: English, French and Italian. I used Interviews for their importance as effective and informative communication means. In fact, Interviews allow us to become better informed and to maintain an effective interaction with visitors hence to better understand the nature of their behaviours and try to provide better satisfactory services meeting their demands.

The Interview protocol was first held in English and later translated to Italian and French. A forward and back translation procedure was then adopted in which one translator translated the original to French or Italian, and then another translator back-translated from Italian or French to English (Sun & PJU, 2009). This procedure significantly decreased the occurrence of any losses in meanings due to translation.

III.2 Data collection

An Inductive qualitative approach was adopted; thereby 31 museum visitors to Cagliari archeological museum were interviewed after they had experienced Virtual Reality headsets commented by a local tour guide. The interpretation of the guide lasted around 20 minutes and the interviews that were taped and transcribed took between 9 to 30 minutes on average.

I followed a semi structured protocol (See Appendix D) and used a mixture of descriptive and contrast questions (Spradley, 1979). The interview protocol comprised questions about all experiential elements with the human digital interaction at the museum. I used an interview guided and organized around the following nine broad areas:

The first area represented visitors' motivations and interests: It was important to understand what pushed the visitors to try this experience and what previous expectations the visitors had before using the services provided.

The second area consisted on the evaluation of the experience with human digital interaction: I asked the visitors to provide information about the "Quality of service with device and interpretations". These questions gave us an idea about the the content, functionality, and meaningfulness of the human digital experience. Thus, visitors were able to point out some concerns related to the functionality of the device in order for it to be fixed, if needed.

Moreover, visitors were asked questions related to their level of engagement, hence understanding if they had already underwent such an experience; other questions targeted their level of attention as we tried to understand if they had any prior knowledge regarding the sites that they visited virtually. Actually, understanding the level of engagement of visitors would be giving us the possibility to understand better visitors' experience and later their intention behaviors.

Furthermore, understanding the perception of visitors regarding organizational effort would constitute an important indicator to reveal visitors' trust in the offering provided.

Additionally, Intention behaviours were assessed: We asked the visitors if they were willing to repeat the experience in other sites; about their intention to visit the real physical cultural heritage site after using VR sets, and their experience gained toward the urge to purchase a souvenir for reminiscence (Intention to purchase).

Finally, demographic screening and background information were collected, such as: age, gender, educational level, occupation, marital status and nationality. It is worth noting that the interviewees were not asked about the economic value of their experience since all technological services were offered for free for the purpose of the study. In fact, the goal of these interviews was to acquire a better understanding of the values generated when consuming digital heritage that is commented by a guide at archaeological museums.

Figure 2: Digital human interaction with Hans, Hermann and Emma from Germany

III.2.1 Sample profile

A total of 31 participants were interviewed. (Table 4) shows the sample demographic.

The respondent gender ratio was female 18 to male 13. The 18-55 years old age group had the largest proportion, followed by those aged over 55 years and those under 18 years. Most

respondents had a Bachelor and higher education 23 respondents. 13 were married and 18 Single.

Respondents were from various nationalities and occupational background mostly from Europe.

Table 4: Demographic information of respondents.

Interviews	Names	Duration (minutes)	Age	Gender	Country of birth	Country of residency	Education level	Occupation	Marital status
Interview 1	Hans	27:16	14	Male	Germany	Germany	School	student	Single
	Hermann		50	Male	Germany	Germany	Bachelor	Potty culture	Married
	Ema		51	Woman	Germany	Germany	Bachelor	Architecture	Married
Interview 2	Mia	17:26	63	Woman	Germany	Germany	PhD	City of Munich	Single
	Hanna		63	Woman	Germany	Germany	Master	Retired	Widowed
Interview 3	Klaus	15:10	28	Male	Germany	Germany	PhD	Students	Single
	Emilia		25	Female	Russia	Germany	Master	students	Single
Interview 4	Eva	10:51	22	Female	Slovenia	Slovenia	Electro technical faculty	Student	Single
	Domen		24	Male	Slovenia	Slovenia	High school	Student	Single
Interview 5	Emilia	18:23	65	Female	Germany	Germany	PhD	Psychology	Married
	Frank		68	Male	Germany	Monaco	PhD	Medicine	Married
Interview 6	Sofia	10:05	23	Female	Germany	Munich	Bachelor	Medical	Single
	Wilhelm		25	Male	Germany	Munich	Bachelor	Engeneering	Single
Interview 7	Lina	9:10	24	Female	Lithuania	Lithuania	Bachelor	School psychology	Married
	Dominic		24	Male			Bachelor	Programing	Married
Interview 8	Daniel	10:49	63	Male	Italy	Italy	Bachelor	Retired	Married
	Monica		61	Female	Italy	Italy	Professional	N.A.	Married
Interview 9	Mia	11:35	8	Female	US	Italy	School	Student	Sinlge
	Ethan		10	Male	US	US	School	Student	Single
	Olivia		37	Female			School	Housewife	Married
Interview 10	Jessica	12:49	20	Female	UK	UK	Bachelor	Student	Single
	Eliza		24	Female	UK	UK	Bachelor	Archeology	Single
	Daisy		51	Female	UK	UK	School	Employee	Divorced
Interview 11	Alice	14:08	20	Female	France	France	Masters	Students	Single
	Raphael		22	Male	France	France	Masters	Students	Single
Interview 12	Victor	27:54	49	Male	France	Switzerland	Master	Engineer	Married
	Chloe		50	Female	France	Switzerland	Bachelor	Teacher	Married
Interview 13	Yu Yan	15:39	31	Female	China	Switzerland	Ph.D.	Biology	Single
	Caesar		30	Male	Greece	Switzerland	Ph.D	Computer science	Single
Interview 14	Emma	9:29	45	Female	Belgium	Belgium	Bachelor	Economics	Married
	Lucas		47	Male	Belgium	Belgium	Bachelor	IT	Married

III.3 Data analysis

During the analysis, the progression of the first-order analysis led to emergent themes concerning the level of engagement and intention behaviors of visitors when experimenting new service bonds and traditional rational tactics simultaneously in an archeological museums. I used Nvivo 12 software to group together the different situations that the informants described. Then, I assembled groupings that related to similar issues or relationships into broader aggregations of informants and furnished these with appropriate relevant labels. I stopped conducting interviews (hence the coding process) when no more emerging themes were generated from the dataset arriving at the theoretical saturation (Strauss & Corbin, 1998). Further, reliability was checked and found satisfactory, and coefficient K was above 0.7. The main codes were ordered into four parent nodes (Service experience, Trust in offerings, Level of engagement and Intention behaviors) of similar categories. Service experience and trust in offerings had two dimensions out of which subcategories (child nodes) were drawn. On the other hand, Level of engagement and Intention behaviors had three subcategories. The next step was to compare the data from different interviewees and to develop a list of higher order analytic dimensions (Van Maanen, 1988), completed with descriptors that facilitate theoretical analysis. Finally, I used data displays (cf. Miles Huberman, 1994) to create more general emergent themes.

The findings from the abovementioned coding process are displayed in the next paragraph.

Table 5 shows the major patterns and their labels, definitions, descriptions, and illustrative examples.

Table 5: Patterns, labels, definitions and illustrations

Concept	Dimension	Definition	Illustration
Service quality	Newness	A kind existing novel innovation	For me it was my first experience with VR and yeah I was curious of how it works, yeah and the idea that you could look around everywhere… I think it is nice to use this VR for tourism purposes – *Klaus, 28*
	Aesthetic	Study of the mind and emotions in relation to the sense of beauty	It would have been nice to see some people walking around in their costumes with their original costumes. You know like you have this archeological site and maybe a little bit insights about how the Romans life was functioning. I think I would have liked this to see some costumes male and female – *Hanna, 63*
	Meaningfulness	Significance and value of experience	yeah yeah but I still would like to visit it in person rather than going digital – *Domen, 24*
	Interpretation	Bringing out the meaning of a particular conception	yeah I enjoyed your interpretation of the panoramic view more than the museum one, just because I am not a fan of museums- *Eva, 22*
Trust in offerings	Institutional	Reliance on the integrity and strength of the organization	It's good that there are some description in English because I think German people come here less. But people who could speak English could have more information, I also like the time ordering of all the exhibits. Like starting from the earliest period and smoothly going to the older period in the top and so you can track everything, plus it is organized by location, where you can find something and it was fun to have this little sculpture out of plastic or silicon to touch- *Emilia, 65*
	Individual	Confidence expectation in relying truthful information	I think I prefer this one, it was nice because we could ask questions. It was more interactive and you answered our questions specifically it was not general information but very specific – *Chloe , 50*
Level of engagement	Motivation	The state of having a strong reason to act or accomplish something	I thought it would be kind of curious to see what type of headsets they were. I was expecting something really awesome! I was expecting a tour with special activities – *Ethan, 10*

	Prior knowledge	The knowledge that stems from previous Knowledge	Well I know much about VR, and I wanted to know how good they were – *Luca, 47*
	Prior expectation	The prior belief that something will happen or be the case	For me it was my second time to experience virtual reality through headsets. It was very interesting! we had before a small experience with VR but it was not as good as here – *Eva, 22*
	Attention	Directing the mind to an object with considerable care	I don't know exactly because I fell asleep. I felt bored. Because, I felt no connection to Garibaldi's life. But now I know more even if I fell asleep – *Mia, 63*
Intention behavior	Re-experience	The process of repeating encounters, feelings and activities.	I would prefer VR preinstalled so you could have the headset and I have control over everything – *Hans, 14*
	Visit the physical Cultural heritage site	To access a physical or virtual place	Garibaldi no hahahaha bcz I saw the place. I saw his room my interest was lost, what's the point?! but Nora yes yes – *Caesar, 30*
	Purchase	To acquire by a payment	I am not interested in souvenirs – *Hermann, 50*

IV. FINDINGS

This section outlines some of the key findings that explore visitors' level of engagement and their intension behavior answering the two questions of the research. This allows the development of a comprehensive model generated from visitors' engagement in new service bonds (Virtual reality headsets) and traditional means of communications (Guiding Interpretation) simultaneously at archeological museums.

IV.1 Research question 1: **Service quality, trust in offerings and their influence on level of engagement**

RQ1: How does service quality and trust in offerings when using traditional and new service bonds simultaneously at archeological museums impact visitors' level of engagement?

IV.1.1 Service quality of device and interpretation on the level of engagement

Newness

Most of the visitors had a sense of curiosity which played an important role in motivating people to try and engage in these new types of technologies, Daisy (51) stated: *"I never tried it before, first experience, so I wanted to see what it is all about"*.

Whereas some analyses revealed that, *newness* of automated technological services, can leave in frustration those people who are not yet adapted to such novelty, hence lowering their attention, cognitive ability and consequently their level of engagement. For example, Hermann expressed his frustration when using new technologies that had too much animation and were automated, as he had no control over the pace of his virtual tour, nor had he control over the selection of his choices so he felt distressed because of his age.

"Interactive museums we saw: Paris, London, Madrid, Shanghai…, but it's always very hard [to control]…, and we don't have so much time and to… stop the animation. I mean our age.. I mean it's too much, so you start with one thing and then the next and then you turn and then OMG!" – Hermann (50)[1]

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[1] The number in brackets represent the age of the informants

Furthermore, Hans (24) supported his father by stating: *"if you want to experience something like this. It just has to be easy to use for the person in the museum, that's the most important thing!"*

Functionality

Functionality traits were addressed in people who were particularly motivated and interested in experiencing the traditional and NSB offering. Mia (63) Stated: "*this thing is very good but at the same time it is very heavy for us".* During her experience, Mia kept her hands on the headset and was not physically enjoying her tour, as she had to make an extra effort to concentrate on the interpretation that was given.

Further suggestions were given in order to improve the visualization in the virtual environment hence to increase the level of attention. Olivia (37) recommended the museum management to provide two options for people to select from when using VR headsets commented by a guide: the first option would be for people who are new to this service and prefer to sit on chairs that can turn 180 degrees so that the visualization of the virtual environment would be complete. The second option would be for people who are more familiar to these devises and prefer to stand up and check with more flexibility their virtual environment. Yu Yan (31) emphasized on the difficulties that she had when she was wearing the headset since she missed most of the visualizations that were displaced behind her, as she felt uncomfortable to turn around while sitting on chairs that were fixed to the ground, hence concurring on the two abovementioned options:

"But it was difficult to sit down and look around and you can't walk around, you would like to go around and to have a look around it's not easy to be sitting. I think there should be 2 options for sitting people and one for standing and walking around.

So if I am looking around, I can look around like this, and that's all, and I am looking 360 degrees but that would be difficult to see. So for example if you want to look at the things that are behind you, so you have to turn 180 degrees, I recommend the chairs to be more flexible and be able to turn 90 degrees and see everything."

These two options are necessary since some people might also experience motion sickness, as per Raphael (22): *"I felt dizzy when I was in the experience".*

The third functionality addressed the actual feel of presence in the virtual world, since some visitors didn't get a realistic feel of the virtual environment because:

First, the position of their eyesight was not well adapted:

"Hans: I am not that tall so the position of the view was too high for me, it didn't make me feel that I was there.

Hermann: it was not adapted to the position and even the look to from up to down, so you can't feel that you were inside, for me it was like a film! It did not give me this realistic feel!"

"Alice (20): Yeah exactly, I don't know how they take the pictures but maybe when people are a bit taller or shorter. I felt that I was taller than I should be when I looked inside there. So it was kind of weird!"

Second, some visitors didn't have the mobility freedom to wander around and go to certain points of interests**:**

"For me what was missing is that I wanted a bit to move around in the Virtual world yeah, I small movement to the right to the left, that was something that I wished to have. You were in a specific point of vision and you couldn't move around. And you can explore the 360 visual but you cannot move you are fixed".

And third some wished if they could zoom in and have a closer look at the objects exhibited in the museum:

"What would be great… I mean I am not answering the question you asked, but it would be great if there was the possibility to zoom in, in the aerial panoramic view because there is so much to see and you could zoom in this and there when you were saying like this was a temple and this was a thing… go a bit closer to the point of interest that would be great".

Throughout the data set, participants described the effects of the external environment on their feeling of presence in the virtual world. Some liked the fact that they could hear the noise of the real visitors of the archeological museum of Cagliari while touring virtually the museum of Garibaldi as it made it more realistic, Victor stated: "*Yes we felt as if we were inside yes, well there was a bit of noise in the actual museum but we were engaged in the environment and we were*

concentrated on what you were telling us. So we had the feeling as if we were in the museum". However, others felt confused as they were hearing people but couldn't see them, as Lina (24) mentioned: "*I got confused when people were walking by in reality and I was looking in the virtual world"*. Ethan (10) supported Lina's statement by saying: "It would feel more real if you added people walking around".

Aesthetic appreciation

Aesthetic appreciation of 3D reconstructions had positive responses to visitors experience as it brought intangible aspects of the experience back to life in a fun way, Alice (20) said: "Yeah! I really like the fact that you can see how the Roman houses were, the reconstruction, like if you go to the ruins now you don't really visualize what they look like and you can see them in these [device]. So if you were inside you get more accurately the history and you actually see what it used to look like as if you are walking inside I think it is fun to see things that doesn't exist anymore". Emma (45) also stated: "So I tried it in the gaming context, I never tried it in the touristic and I think it is a good idea because it is an opportunity to imagine the old world". Similarly, Lina (24) commented: "We felt as if we are 2000 years ago standing outside old buildings and it was quite interesting".

Not surprisingly, improving the quality of the image would make the experience more realistic, hence when the quality of the image is not good this would hinder the experience outcomes and the level of engagement, like in the case of Raphael (22):

"*To be honest at the beginning I was curious to see and experience but at the end I was bothered by the quality of the image and I had a headache*".

Some asked for more animation in the 3D reconstructed virtual environment: *"Maybe it would be fun to see some people walking around in the house that it used to be roman to see how they dressed",* while others attested that if that was the case, programmers should make sure that such virtual people would look realistic:

"*Eliza (24): I almost didn't feel it was a reconstruction, it felt really real, I think if you have to add people that they would have to seem real otherwise it would have taken you out of it.*

Daisy (51): I don't think it would have felt for me the same if there was animation of people in there. I liked it the way it was!"

Prior knowledge

Prior knowledge and expertise pointed out that they were main characteristics for a higher engagement: Lucas (47) works in the Information technology (IT) field:

> *"I like gadgets I am an IT so I like to touch and experience new technological stuff, when the first version of Oculus appeared, I bought the computer and an oculus when it was just reserved for developers. Further, when I am visiting international business fairs I deal with a lot of VR experiences but more for business purposes".*

Meaningfulness

The things that are meaningful for some are not for others!

Providing new *meaningful* experiences is challenging as it requires the acquisition of plenty of information to implement improvements. Our study revealed that when people perceived the experience useful it enhanced their interest, attention level and cognitive abilities. Emma (45) stated:

> "It's another experience when you go virtually and visit a museum, it's nice to have different kinds of manners to get in touch with the culture and with the new material to learn and discover".

Moreover, our findings revealed that not all types of virtual sets used in the context of archeological museums are useful. Selecting the right type of Virtual set when consuming digital heritage has an important significance and impact on the perception of meaningful experiences, as Hermann (50) expressed that seeing all the 3D reconstructed parts were much relevant in museums rather than seeing a full museum of Garibaldi in a 360 virtual tour:

> "[…] for me too, It's the best way to show how the buildings were [3D reconstruction] to have a better reality to these houses, now they are broken and to give them a life. The museum of Garibaldi was for me just to go around, it was too strange for me. It's not… I would not like to use it! For archeological things perhaps this animation film and live seen it would be perfect".

However, Frank (68) was delighted to visit the 360-tour inside Garibaldi museum and supported this initiative for providing him the comfort of his home in his future access to visit any museum since he has mobility problems due to his age.

> "I thought it could be a good idea for the future for me, if you can see other museums that you could sit at home and go to the museum. I don't know if it possible! [Impressed]"

On the other hand, Victor (49) expressed the need to see the real exhibits that are valuably rare, for this is the essence of the experience, hence his need to visit virtually cultural heritage sites would have more meaningful value if he could benefit from the information that are provided by the institution itself, therefore imparting to him a wider exposure to knowledge. He further defended his position by supporting the knowledgeable background of the guides as they might have additional insights that museums would not mention, and so he ended his statement by saying that both opinions were debatable.

> "When we visit a museum we really want to see the pieces, what I 'm trying to say is that when we go to museums is mainly to see the pieces. For me when I go to a museum I go to see things that I don't see every day. Often they are pieces that are rare, that were found during excavations. The inconvenience of this technology is sometimes, I state the example of Garibaldi's house, we can see sometimes billboards with some explanations and then we ask ourselves if we could have got closer to these billboards to read what was written. In addition to the oral interpretation that would have made a certain effect. Sometimes the oral interpretation gives some things that are of a guide's perspective while exploring a museum. This is the oral part, but the written explanation brings more elements that the guide doesn't provide… This is a reflection that I have between these two things between visiting a real museum and an audio guide. It's sure that sometimes the guide brings information that are not written. L'un et l'autre sont discutables! This is what I can say in a fast way".

Finally, Ethan (10) stated that the use of 3D reconstructed virtual environment could be of better use at archeological historical sites rather than at museums, since it enables us to better compare the original old times state with the actual new time one. Having the opportunity to use 3D

reconstruction at the site brings more meaningfulness to the experience as people, he stated, "*could compare what the rooms looked then and now*".

Service quality of interpretation

Finally, having the opportunity to experience Virtual Reality explained by a guide and joining the human and digital aspects together gave visitors the opportunity to interact and to have a personalized experience in which they can control the timing of their virtual visit together with their pace in each room they visited, and ultimately to skip the things that they were not interested in. As Raphael (22) put it:

> "When you have a guide it is better because you can interact and ask questions too, it's more interesting. I think if you take the virtual tour with audio guide registered you might miss some things and not look at things that would have been interesting. Plus, it gives life to the presentation when you go through a museum, it would be a little bit boring I think if you would listen only to the audio*".*

> "You have to have that [Guides interpretations] with it, definitely, it added to it [experience]". – Daisy (51)

> "It was good, you cannot say everything about Garibaldis' life, we would stay so much time in one room, I didn't know that his daughter wrote his memories so that was interesting". - Alice (20)

Findings also suggested that visitors expected the guide not just to aid them in understanding the virtual environment but also to walk them through the safety measures and explain about the probable side effects that visitors might encounter.

> "I think the problem when you are standing you get motion sickness when you move your head and you don't move in VR so I think maybe you could tell the person who has entered that he shouldn't move his head too much from the position that he is in".

Furthermore, offering the interpretation via actual guides could cause problems for some visitors who might not have a fluent level in secondary languages and this might impede their level of attention and engagement.

"If the guide spoke German it would be easier and positive way to have more information if you could ask like a guided tour, if you are interested in specific stuff not already recorded information".

Finally, immersive VR headset is mostly a single-user experience, since some of the fundamental issues of an immersive system is the dynamic visual perspective computed on the basis of the user's head position, which makes it hard for the tour guide to orient the visuals of all participants to the same point of interest when explaining. Emilia (65) brought up this challenging discourse.

"I wished if you had indicated for us like… Look to your right or look to your left. I kept on searching for a while for the Spanish tower that was supposed to be on top of the peninsula area and couldn't find it!"

IV.1.2 Trust in offerings on Level of engagement
Organizational level

Our findings revealed that mindfulness of organizational efforts played an important role in supporting the process of museum transformation implementation plan. Emma (45) stated:

"We feel that the museum is renewing itself, the museum is quite old it is from the 70s? And you see that in some part of the museum there are sections for the kids where they can have the opportunity to touch… You have screens as well so it makes you feel that this museum is getting modern. It created a positive impression we need this today and certainly if we come with kids".

Furthermore, organization should not miss the fact that many people still favour the traditional ways of communication "*Well for me I can live without all these technologies because I don't like too much change "Chloe (50)*. Hence some people believe that innovative technologies should not substitute the traditional ways but rather both should complement each other. On the other hand, for those people who don't mind technological encounters, Victor (49) pinpointed the question regarding the authenticity level of the 3D reconstructions that existed in the virtual environment.

"For me I can live with or without new technologies, I think technologies add new things to the experience for example the inside of the Roman house, we can have an idea of how the houses used to be, when we are in the site we cannot see this, we can just see only what remains and sometimes they are things that were rebuild from what remained in the site but we don't see it in the same way.

If we can trust the 3D reconstruction or not, of how it used to be, this is another question. To this matter, I cannot judge. But it is as well interesting to have an idea of how it used to be the inside of the Roman house".

This being stated, designers should base their reconstruction on reliable sources and include as much as possible details making the experience more trustable and authentic in order to engage better their audiences.

Providing the information in different languages was welcomed as an extra step in providing a good service for the visitors:

"I think it is good for us because we are English. You had all the explanation in English… Because I think that sometimes when we came we were like… How are we going to know? Is it going to be like a headset that we can listen to? But actually it was very clear all in English it was all really good!"

Suggestions from visitors demanding the provision of more 3D reconstructions inside archeological premises were obvious: "[…]Maybe more reconstruction of archeological buildings because there were few ones and they were actually great so maybe if there are more models it would be great (Raphael 22)".

Finally, Hermann (50) expressed his disappointment from the 360-tour inside a museum because he was not expecting to visit the entire museum.

"I was expecting the first thing the rebuilding of the houses, but the other parts Garibaldi, they were very… I didn't expect I would see the museum itself. And for this point, it's a new way to look around, but it's not the thing I like!"

Individual level

Individual level refers to the effort of the local guides in representing the image of the organization in its best (Pond, 1993).

This research found that visitors tend to be more trustful in local guides since they work under the supervision of the museum organization and they have access to all required documents for extending their knowledge; moreover they would have the opportunity to engage with experts in the field such as archeologists and learned speakers. As Lucas (47) stated:

"Yes, I trust you because I am in museum!"

On the other hand, Caesar (24) stated that he trusted the information provided by the guide, but to confirm the reliability he had to do more research:

"Yeah it was great, reliable, we don't know we have to check but I believe you!"

But in general visitors emphasized the importance of having a guide, in order to set the pace for their visit and to better focus their attention on things that they otherwise might have missed during their visit, hence bringing more life to the exhibits.

"No, I think that might depend on the guide. If you don't have a guide, a person telling you and putting you in today's story, yeah. We were just walking and looking and deciding by ourselves. And you were telling us what was here and what was there". - Lina, 24

"Yes of course, because your explanation bringing it to life as well with all the things you were telling us, and we were looking around trying to find all the things you were saying to us, I think it was good yes!"

Overall, these statements for service quality and trust in offering, which emerged from the interaction with traditional relational tactics and NSB simultaneously, illustrated in the examples above, resulted in providing the best practices and utile suggestions to the museum sector. These practices raised the attention and positively impacted the level of engagement of museum visitors. In Summary, offering new functional and aesthetically appreciated services along with meaningful interpretations to the customers can higher their level of engagement.

Furthermore, trust in organizational and individual efforts has shown to be effective in enhancing the level of engagement when people are mindful of these efforts, and are willing to provide their input and suggestions for improvements. The next section will answer the second research question.

IV.2 Research question 2: Level of engagement and intention behaviors

RQ2: How does the level of engagement influence behavioral intention to reuse, to visit physically the site and to purchase?

IV.2.1 Intention to reuse (re-experience) same service in other cultural heritage sites

More than ever, the findings suggested that people demanded to have novel experiences, Chloe (50) attested that she was engaged in the experience and declared her interest in using digital human interaction as she aspired for change and novel experiences:

"I am fed up of seeing only pieces! Well we visited Cyprus later Crete and then we went to a museum that was bigger we went to Rhodes, well it was not that interactive, well this interested me more! So yes, I would definitely repeat the virtual reality explained by a guide because it was new and fun".

IV.2.2 Intention to visit the physical site after the virtual experience

The Findings suggested that visitors would be more willing to use VR headsets after visiting the physical site to try and have an additional visual representation of how things used to be before. As Ema (51) from Germany stated:

"I was very excited to look around and to explore the things that we have just seen in reality before. Even though we already saw it my interest was still there to see it more, it was impressive for me!"

Having a satisfactory positive experience at the actually previously visited physical site would create a sense of loyalty and attachment, hence increasing the level of engagement in the virtual world. As Ema noted, she wanted to see more of the site, and the virtual reality enabled her to see the panoramic aerial views that she hadn't experienced during her physical one.

The findings also suggested that visiting the site virtually would sometimes satisfy visitors' curiosity and hence discourage them to visit the physical one. Chloe notes: "*Well my curiosity was satisfied, in my opinion I think I will not like the site of Nora after my virtual visit because we saw the panoramic view, it was more interesting than visiting the site on the ground, and I feel that if I go there I will be disappointed!*" Similarly Victor continues by saying that: *Sometimes what happen is that our satisfaction is fulfilled with what we have already seen, so going to the site itself is questionable".*

Furthermore, Elisa (24) expressed her disinterest in visiting the site since she had already seen it all.

"Probably not [visit physically the site] because since you have already seen it, it's like you have seen everything".

Moreover, the findings suggested that the level of engagement and intention to visits resides in the personal identification and in the interest and meaningfulness of the experience to the individual, as Emma (45) mentions:

"Garibaldi house no [not visit] because we don't know him, we don't relate! It was not meaningful to me. But we found the information useful".

Also, Hans (14) added by saying that the VR experience did not raise in him the need to go and visit the physical site.

"Well I am not that interested in that part of the history, I don't feel that I want to go. It's not because I was there in VR that I would go".

Another aspect of tourists' intention behavior is their time consideration and priority, like in the case of Wilhem (25), his choice of visiting the site would depend on his geographical location and time,

"I would because it looks very interesting but only if I had the time, and we are near to the site yes. It's not priority, it's not a must".

On the other hand, Olivia (37) noted that her experience inside the virtual world raised in her the intention to visit the physical site, since the sensorial aspect (e.g. touching the stones, smelling the air etc.) was missing in the experience.

"I think that it makes me want to go there in person, because I like actually seeing and when you visit you can have **things to touch** too".

IV.2.3 Intention to purchase in museum shops

The level of engagement with the human digital experience did not lead to an increase in visitors' shopping intention. Rather, tourists would be more willing to purchase objects in the museum shops when objects are perceived to be unique to the destination in question and cannot

be found in their own residential area. Four quotes from Ema (45), Domen (24), Hermann (50) and Lina (24) are stated below respectively:

- If I like a handcraft, I buy it yes, if it doesn't fit my interior, I won't buy it! I won't buy just to buy! I buy it if it is meaningful to me (Emma, 45)

- Yes, it depends, I don't usually buy from museum. I don't think it's because of what I saw virtually in the museum –Domen, 24

- I've seen the museum in Cabras and I didn't buy anything there hahahaha! I don't know the museum here. But I am not very interested to take these things at home. But perhaps if it is hard to find, something you can't see every day perhaps – Hermann, 50

- Maybe, it depends on what's in the shop - Lina, 24

In summary, in answer to research question number two, the findings suggested that the level of engagement increases the intention to re-experience the digital services provided, as visitors seek for novel and fun experiences. With respect to intention for physical visitations, it was shown to be more efficient after the visitation of the real heritage site. Visiting virtually the heritage site might satisfy the curiosity of the visitors hence lower the possibility to actually go and visit the real archeological heritage site. Finally, the intention to purchase in museum shops was not related to their level of engagement and satisfaction of the visitors' virtual experience.

V. DISCUSSION AND THEORETICAL CONTRIBUTION

Extant studies have primarily focused on separately studying either traditional relational tactics or new service bonds in the service industry. Yet, in contrast to the richness of these theoretical perspectives, the range of research designs for trust in organizational offerings, level of engagement and intention behavior for both traditional relational tactics (Local tour guide) and new technological service bonds (VR immersive headsets) offered as one service in museum studies, has been narrow. To consider under what conditions service experience gets to its uttermost, we examined the interaction between service quality and trust in service offerings (organizational and individual efforts) on the level of engagement (Prior knowledge/expertise, Motivation and Attention); also in the intention behavior to re-experience the digital-human experience, to purchase from the museum shop and finally to visit the physical cultural heritage site (Figure 4).

A thorough examination was undertaken on the effectiveness of simultaneously adopting both TRT and NSB in building relationships with customers in a typical hospitality context that is undergoing digitization. Hence, I started with two research questions seeking to explore the following: how would service experience with traditional and new service bonds as well as trust in organizational offerings, influence visitors' level of engagement with museums? And how would the level of engagement influence the behavioral intention to re-experience, visit the physical archeological site and purchase in museum shops?

Actually, Museum visitors were at the center of this research.

V.1 Theoretical and Managerial Contribution

This research makes several theoretical contributions to the growing body of research on digital transformation in the service industry and to the literature on both customer relationship management (CRM) and tourist behavior research. On one hand, this research adds to the current CRM literature by investigating the influence of NSB and traditional relational tactics simultaneously on the level of engagement and intention behavior. We also explored the trust concept that potentially influences the effects. On the other hand, this study enriches tourist behavior research because since it is conducted by using a sample of museum visitors.

The central theoretical contribution is a holistic model (Figure 3) that helps in the conceptualization and operationalization of key constructs that can be used to evaluate a user's

perception of technological features and his or her cognitive and affective responses to mixed immersive environments.

Figure 3: Model development
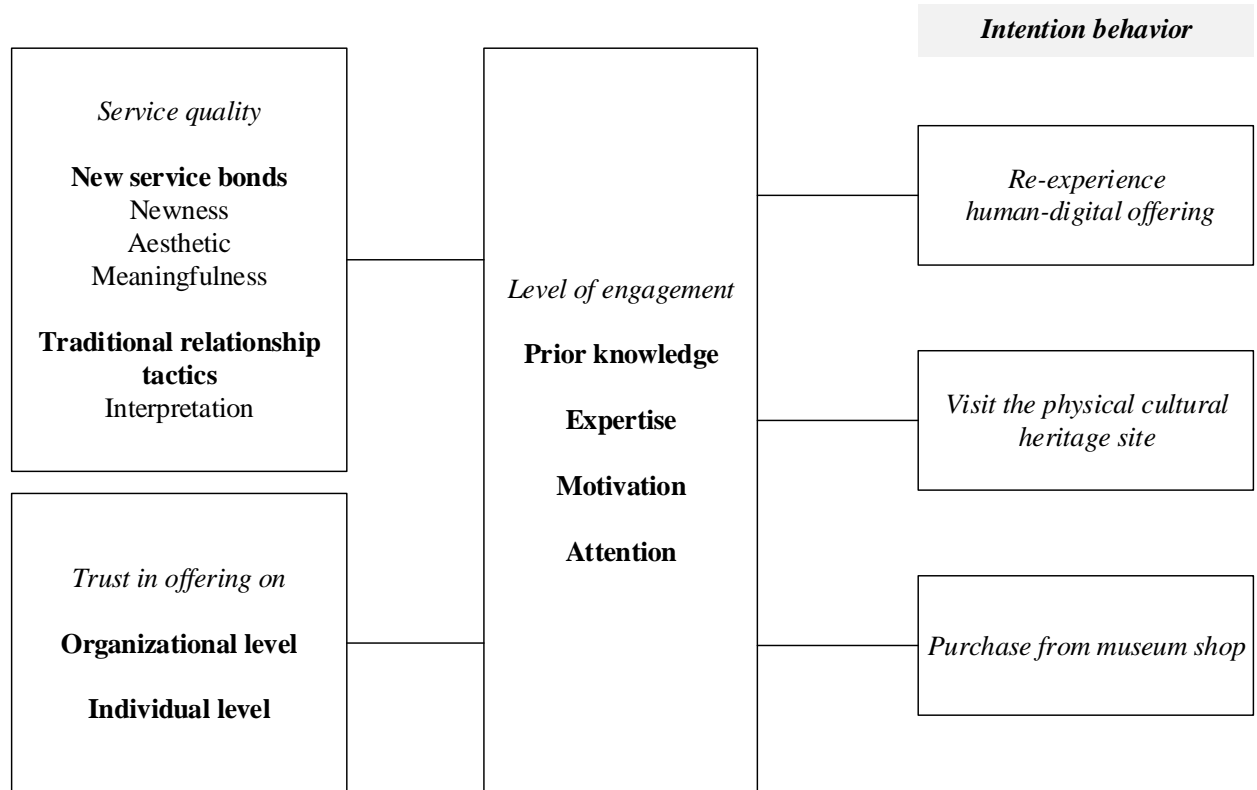
First, I started this study with the belief that, investing in and introducing new technological service bonds to tourism experiences and especially at museums that are undergoing digitization, is crucial to reinvigorate visitors' level of engagement and their intention behavior (Yovcheva, Buhalis, & Gatzidis, 2013). The findings of this study partially supported my primary belief and further expanded by suggesting that museum organizations need to look beyond the newness and the aesthetic representation of the product delivered, despite their importance in increasing engagement, and concentrate more on the characteristics or types of VR experiences offered in the right context. In other words, not all types of virtual sets used in the context of archeological museums are useful, thus selecting the right type of VR environment (e.g. 360-tour, panoramic, 3D reconstruction, etc.) when consuming digital heritage has a capital significance and impact on the meaningfulness perception of the experience and thus the level of engagement. These results echoes the findings of the study conducted by Im and Workman (2004) which showed that it is the

meaningfulness dimension rather than the novelty dimension that played a greater importance in explaining the link between market orientation and new product success.

Second, this work addresses critical aspects of the aesthetic representation and functionality of the experience. Researchers often refer that the creation of visitor's experiential value is tied to their aesthetic appreciation process and the actual usefulness of the devices (Chung, Lee, Kim, & Koo, 2018; Gefen et al., 2003, He, et al., 2018; Wang & Benbasat, 2005). This observation is supported by results showing that offering new functional and aesthetically appreciated services along with meaningful interpretations to the customers can increase their level of engagement. Thus Museum managers should consider the aesthetic aspect when introducing new technological devices thus providing virtual visitors the possibility to increase their sense of realistic presence and to have a better engagement with their virtual world. Moreover, regarding the guides' interpretations, the museum management should ensure proper trainings for local guides allowing them to have better control over the mechanism of the device and helping them to immerse their customers in the virtual experience. Moreover, guides should select the appropriate terminologies and train on using them, aiming at further orientation and imparting added value to the visitors.

Third, previous studies mainly relied on the reciprocity principle to explain the effect of relationships between the visitor and the organization, demonstrating that customers become more committed when they perceive an organization's relationship-building efforts (Siu et al., 2013). My results demonstrated that trust in organizational and individual efforts has shown to be effective in enhancing the level of engagement, when people are mindful of these efforts and are willing to provide their input and suggestions for improvements. Therefore, museum managements should dedicate an appropriate section on their website and social media streams, efficiently elaborating their digital transformation implementation process, thus engaging the community and their visitors in their efforts.

Fourth, this study provides three important insights regarding intention behaviors.

1- Intention to re-experience

Satisfaction and curiosity were the main factors that enticed visitors to re-experience the same digital offerings at the museum, hence promoting for a virtual edutainment environment (Addis, 2005). Museum managements should constantly entice the curiosity of their visitors by reaching and attracting through either social media streams or environmental settings that

are specified for the digital human interaction, such as making an appropriate interior design theme for the areas where the virtual experience will take place.

2- Intention to visit the physical site: The findings of this study challenged the notion that VR is an effective tool in creating intentions for real visitation (Carrozzino & Bergamasco, 2010). Conversely, this study argued and demonstrated that some visitors lost interest in visiting the physical site after seeing it virtually and specially in the 360-tour experience, as they felt as if it was a déjà vu. In fact, most tourists have limited time during their travel; hence they must be selective in their choices. Having the opportunity to experience a cultural heritage site virtually in an archeological museum where people tend to trust organizational efforts in providing reliable information through their local guides led to satisfying the curiosity of some visitors hence discouraging them from visiting the physical site.

Furthermore, with respect to intention for physical visitations, our findings also suggested that visitors would be more willing to use VR headsets after visiting the physical site to try and fill the gaps by having a different visual representation of how things used to be before, or use them in the cultural heritage site itself to compare directly.

In this sense, Managements should be smart in revealing their complete package of available information. To address this issue, museum managements should restrain from including the 360-tour experience in the VR choices, and concentrate on the exploration of the 3D reconstruction and panoramic aerial view, since those 2 options would enable the visitors to perceive things that they can't see during their physical visits hence making their experience as meaningful as expected.

Moreover, programmers should smartly limit the information provided in order to create enough curiosity as to entice people to take the initiative and proceed to visit the site.

The 360-tour VR set could be useful in a museum context when the virtual world shows one part of the ruins indicating the location of the site where the object exhibited in the museum was found, thus in this case creating further curiosity for the visitors to deepen their knowledge related to this specific area of the country and increasing the possibility for them to go and visit the physical cultural heritage site.

3- The study of McIntyre (2010) revealed that visitors view museum shop spaces as an integral part of the experience during a visit. Shopping souvenir items helps in expanding the onsite and continued learning process, thus generating memories after the visit. The findings of this

study didn't show any relation between the level of engagement and satisfaction experience in the VR world and did not increase visitors' intentions to purchase. Rather, visitors were more willing to purchase objects in the museum shops when such objects were perceived to be unique to the destination in question and could not be found in their own residential area. However, we could not rule out the possibility that the nature of the virtual environment was not adequately built to create intention for visitors to shop hence this would influence my results. Therefore museum managements should take advantage of such important means of communication and include in their visual representation some of the items exhibited which could be found in the museum shops, hence influencing or increasing the possibility for the visitor to buy some souvenirs such as replicas of Nuragic, Phoenician, Roman and other époque jewelries. Therefore, in order to sell unique products to the visitors, museum managements should collaborate with the local community as well as local artists in the area and sell artifacts and handmade products inspired from the legends and themes exhibited at the museum (signature items that cannot be found in the premises of the museum); a careful consideration should be given to the size and weight of all objects sold, since most visitors and specially foreign tourists usually don't have enough space in their luggage.

V.2 Study Limitations and Future Research

The research findings provide robust support for our theoretical model and relationship. However, similar to other researches, the study is limited by few factors.

First, I opted for a qualitative research strategy; whereas future research could use a quantitative approach to better generalize my findings.

Second, this study focused on the effectiveness of using traditional and new service bonds in a museum context. It would be interesting if future studies would examine through a comparative study three sets of offerings:

* New service bond (VR) and human interpretation
* New service bond (VR) and audio recorded
* Tour guiding with pictures on screen

Lastly, testing the proposed relationships in other hospitality services settings can be beneficial.

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Appendix D: Interview protocol

- Why were you interested in trying VR headset?
- Is it your first experience?
- If not. Can you tell me more where and how was your prior experience
- Why are you repeating the visit?
- How often do you visit interactive museums? Why? What do you like more?
- With whom did you come? Did they try it as well
- What were your prior expectations?

System quality & content quality with devise
- How did you perceive the quality of the system?
- Aesthetically wise would you prefer more animation in Nora virtual set?
- Could you describe your emotions when you were using VR explained by guides?
- When you were visiting Giuseppe Garibaldi museum did you feel that you were present?

Service quality & content quality with guide interpretation
- Did you have any knowledge about the sites you have explored before the experience?
- How did you perceive the interpretation of the guide? (Meaningful, usefulness , reliable)
- Was the interpretation of the tour guide meaningful to you? In what way?
- Did you perceive the information provided as useful?
- How reliable was it?
- Did the guide manage to point out your attention to things that you would have not otherwise noticed?
- Can you remember how many rooms did you visit in Giuseppe Garibaldi's house?

Organizational effort
- How did you perceive the overall visit of Cagliari museum and how do you characterize this museum organizational efforts?
- What do you think could be improved?

Reuse Human/VR experience
- Would you consider using again VR explained by local tour guides in another archeological museum? Why?
- After visiting Giuseppe Garibaldi house virtually would you consider visiting the real place physically? Why?

Intention to shop
- After knowing more of Sardinia's history would you consider buying a souvenir from the museum shop to remember your experience?

Destination image
- How about recommending it?

Demographics:

Age		Education level		Nationality	
Gender		Maritial status		Field of work	

Antecedents and Impact of service providers and visitors' mindful behavior in hybrid organizations that co-create experiences

Keywords: co-creation, mindfulness, social entrepreneurship, agribusiness, sustainability, benefits, costs.

Abstract

In this study, we focus on social entrepreneurship research inside small scale organizational boundaries by examining its co-creative practices with mindfulness drawn from its producers and visitors to identify and capture value in sustainable development plans. To do so, we draw on the case of "Souk al Tayeb", a social enterprise (SE) in Lebanon that aims to protect and revive the culinary traditions by empowering small scale farmers, producers, cooks, underprivileged communities and providing them with necessary skills and know-how to allow them to become economically independent.

We explore visitors and producers mindful behavior in Social enterprises context. Drawing on interviews with main stakeholders (producers and visitors), a model of mindful behavior is presented. The findings show that when identity representation of service producers and visitors is prominent, or when service producers along with visitors believe in the message and product quality, psychological non-monetary returns are generated promoting mindful behavior from reciprocal parties and enhancing the participation in existing co-creational activities. Mindful Behavior, when co-creational activities are applied right, can lead to positive outcomes such as social desirability and at the same time may involve costs that could lead to social rejection.

I. INTRODUCTION

> "I discovered by accident that Michael and Souad [local farmers] are my neighbors, they live practically two blocks away from my home. I know how much time consuming there work is, and I know how much work they put into what they do, by waking up early in the morning to collect, wash the vegetables, cook them and later transport them and have all the energy to come here, prepare the installation, and serve the people with love and attention all day long, and finally having to clean everything and restart all over again!" - Farmers market visitor while he was eating with joy his delicious "Foul dish" for breakfast.

Recently, it is becoming clear that increasingly complex global challenges cannot simply be solved by new technology or governments alone, as current coordination mechanisms and problem-solving strategies appear insufficient to address all societal issues. The need for developing innovative solutions for managerial and societal development is increasingly evident! This is where, many developing countries are depending on the role of Social Enterprises (SE) as contributors for economic development and societal well-being. SEs include various types of organizations established to achieve a social mission, including conventional non-profits (NFPs), for-profit social enterprises, and hybrid legal forms. Some of these organizations are recurring to new organizational forms bridging management and development fields where co-creational activities are adopted to sustain their financial statuses, improve their livelihood and that of their community and by that accomplishing their missions (Nickerson, Black, & McCool, 2001).

Those missions wouldn't be successful without conscious and active citizens supporting movements and encouraging the development of new social practices that encourage cultural shift toward sustainability (Kralik, Visentin, & Van Loon, 2006). One of the attributes of consciousness in relation to people's activism, is mindfulness (Baer, 2003). Mindfulness is a fundamental notion of humanistic theories, as it is an attribute of consciousness long believed to promote psychological well-being (Brown & Ryan, 2003). In fact, when we are mindful, we are open to surprise, oriented in the present moment, sensitive to context, and above all, liberated from the tyranny of old mindsets (Langer, 1989).

The majority of research focusing on mindfulness of visitor's studies has recently largely prevailed (AMRA, 2018) with most examining the mindfulness construct from a psychological perspective by exploring organizational impact and influence on individual well-being (Aviles & Dent, 2015), ecological aspect (Amel, Manning & Scott, 2009) and cognitive disciplines (Sol & Wals, 2015). Mindfulness is often linked to established theories of attention, awareness and emotional intelligence (Schutte & Malouff, 2011; Woods & Moscardo, 2003) that involves a fundamental shift in the way we think about, and ultimately act on, local and global economic, social, and ecological crises (Carroll, 2016). However, despite the fact that mindfulness studies on the societal level revealed that it may increase action-taking for the common good, both individually and collectively (Wamsler, 2018), organizational scholars have accumulated little insight into how mindfulness in social enterprises impact the service experience and especially when these SE tend to benefit from co-creational activities.

To gain a better understanding of visitors' experiences, the present inductive study focus on social entrepreneurship research inside small scale organizational boundaries that co-create experiences for its visitors, it aims to examine whether co-creational activities are actually associated with customer mindfulness of service providers offerings to identify and capture value in sustainable development plans. To do so, we draw on the case of "Souk al Tayeb", a hybrid organization in Lebanon that aims to protect and revive the culinary traditions by empowering small scale farmers, producers, cooks, underprivileged communities and providing them with necessary skills and know-how to allow them to become economically independent. In particular, this article advances our understanding of mindfulness concept as an important factor that impact experiences and its application regarding management of visitors to social entrepreneurial studies. These insights are essential to a comprehensive view of the dynamics of interplay between the visitor self-awareness and SE organizational efforts.

The findings show that when visitor's and service providers identity representation is prominent, or when service providers and visitors believe in the message and product quality, psychological non-monetary returns are generated that promotes mindful behavior from reciprocal parties thus enhancing the co-production of existing co-creational activities. Mindful Behavior, when co-creational activities are applied right, can lead to positive outcomes such as social desirability and at the same time may involve costs that could lead to social rejection. The model makes an important contribution by advancing knowledge on: how co-creation and mindful

behavior of visitors influence social entrepreneurial efforts in providing good encounters and practices to overcome and manage cultural barriers in troubled changing environment in order to facilitate positive outcomes for the organization, and in turn the community. It extends current research by clarifying how mindfulness may facilitate or hinder customers' involvement in service production.

Moreover, this study would help service providers change strategies and implement platforms for co-creating unique experiences, allowing visitors to become more physically and emotionally engaged in the process. Consideration of all such aspects is vital to research of both mindfulness and its opposite state mindlessness known to represent the state in which a lack of mind or consciousness is marked.

The literature review first defines the concepts of Mindful behavior and experiences. We then refer to literature on Social Enterprise and their recent direction to co-create activities is discussed, highlighting the interplay between visitors and managerial role in value creation. Thereby establishing our focus on the way social entrepreneurship organizations approach this type of work, with opportunities for delegates to discuss the issues and consider their own practice.

II. THEORETICAL BACKGROUND

II.1 Mindfulness

Mindfulness is often linked to established theories of attention, awareness and emotional intelligence (Schutte & Malouff, 2011; Woods & Moscardo, 2003) which involves a fundamental shift in the way we think about, and ultimately act on, local and global economic, social, and ecological crises (Carroll 2016).

There are a number of different pathways to mindfulness resulting from different combinations of personal and situational attributes. More specifically, mindfulness is associated with: Novel, unfamiliar, unexpected situations or environments; Situations that have high personal relevance to the individual; Situations that are varied, dynamic, and changing; Multisensory stimulation; Personal cognitive ability (Sternberg, 2000); Situations where the individual is in control and responsible for decisions; and Situations where other individuals act mindfully and communicate (Carson & Langer, 2006; Houston and Turner, 2007; Kreiger, 2005; Moscardo, 2009; Thomas, 2006).

Prior research on mindfulness has focused on three areas: the individual, organizational and societal levels.

First, the individual level studies revealed that mindfulness may increase human potential through reduction of stress (Chiesa & Serretti, 2009), compassion (Grimes et al., 2013; Miller et al., 2012) and empathy (Davis, 1996/2018). Langer's (1989) work has concentrated on the outcomes of two approaches and has sought to identify the conditions that predispose people to take either a mindful or mindless approach. The theory has been applied in a number of areas, and the evidence have consistently showed that mindfulness is associated with a range of positive outcomes including better decision making, more effective learning, improved mental and physical health, better memory for the details of a situation, enhanced feelings of self-worth, more effective responses to crises, greater creativity, positive evaluations of experiences and positive affective or emotional responses to situations (Carson & Langer, 2006). Moreover, Moscardo (2009), proposed that tourists are more likely to be mindful if they have a predisposition to mindfulness as a cognitive style, high levels of interest in the place or experience focus, a social role in the situation that requires decision making, and low levels of fatigue.

Second, the organizational level studies have revealed that mindfulness may increase collective human potential, through improved leadership decision taking, organizational learning and compassion for others within and outside the organization and moralized ethical leadership (Fehr et al., 2014). Goodman et al. (2018), identified 5 sub-themes with human occupation: occupational presence; occupational awareness; occupational engagement; occupational well-being; and occupational fulfillment.

And finally, the societal level, mindfulness studies revealed that it may increase action-taking for the common good, both individually and collectively (Wamsler, 2018).

This study will focus particularly on the individual and societal level and their effect on organizational performance in co-creating experiences.

II.2 Social Entrepreneurship and in particular hybrid organizations role in building sustainable practices.

The concept of social entrepreneurship (SE) as a field of research is a relatively recent phenomenon that is reshaping the way we think about social value creation (Nicholls, 2008).

Despite the current challenges of establishing such a young field of study, academic interest has been considerable.

This study will follow Dees highlights, Dees (2017, p.4) highlighted on the role of social entrepreneurs as change agents since they look for the most effective methods of serving their social missions, by:

• "*Adopting a mission to create and sustain social value (not just private value),*

• *Recognizing and relentlessly pursuing new opportunities to serve that mission,*

• *Engaging in a process of continuous innovation, adaptation, and learning,*

• *Acting boldly without being limited by resources currently in hand, and*

• *Exhibiting a heightened sense of accountability to the constituencies served and for the outcomes created.*"

While a single definition has yet to emerge, Austin, Stevenson, and Wei-Skillern, (2006, p.2) defined SE as an: "innovative, social value creating activity that can occur within or across the nonprofit, business or government sectors". Moreover, Zahra, Gedajlovic, Neubaum, and Shulman, (2009) elaborated that '*Social entrepreneurship encompasses the activities and processes undertaken to discover, define, and exploit opportunities in order to enhance social wealth by creating new ventures or managing existing organizations in an innovative manner'*.

Mainly, SE face increased public expectations as they emerged as a consequence of societal dissatisfaction with the inability of government and firms to address long-standing issues (Haigh, Walker, Bacq, & Kickul, 2015), they tend to be developed and get internationalized during political and economic transitions. In this respect, they play a larger role in addressing troubling social, economic, and environmental issues to reconfigure solutions to community problems and deliver sustainable new innovative social values (Letaifa, 2016; Mirvis, Herrera, Googins, & Albareda, 2016; Nicholls, 2008; Porter & Kramer, 2011).

SE encompasses a wide range of activities: enterprising individuals devoted to making a difference; hybrid organizations or social purpose business ventures dedicated to adding for-profit motivations to the nonprofit sector; new types of philanthropists supporting venture capital-like 'investment' portfolios; and nonprofit organizations that are reinventing themselves by drawing on lessons learned from the business world. (Hockerts, Mair, & Robinson, 2006).

Recent years have brought remarkable growth in hybrid organizations. Hybrid organizations are mainly organizations that operate at the intersection of the social and commercial sectors, they

pursue a social mission and engage at the same time in commercial activities to sustain their operations by selling products or services (Pache & Santos, 2013; Battilana, Sengul, Pache, & Model, 2015), they include microfinance institutions, businesses that sells fair trade products, and companies that sell affordable products in developing countries (Santos, Pache, & Birkholz, 2015). Hybrid organizations combine institutional logics in their efforts to generate innovative solutions to complex problems. Due to institutional complexity they face unintended paradoxes and challenges of pursuing frequently conflicting goals which may impede their efforts (Jay, 2013; Wry & York, 2017). This is why, organizing the process in which hybrid organization function is essential, by defining its activities, structures, processes and meanings by which organizations make sense of and combine multiple organizational forms (Battilana et al., 2012).

Crucially, the outcomes generated from the interactions between different socio-economic actors in SE environment, create multidimensional values that eventually engender social transformation, reflecting healthier impact on the welfare of the society and delivering values (Alvord, Brown, & Letts, 2004; Letaifa, 2016).

However, the process of solving social problems is neither bottom-up nor top-down but relies on a circular multi-actor collaborative perspective (Letaifa, 2016). The following section will discuss current thought on the mechanism by which value is created from service experiences.

II.3 Co-creation in service experiences: Joining culture and love of food

Understanding service experiences is pivotal to articulate how visitors derive value from their activities (Chen, Prebensen, & Uysal, 2018). Pine and Gilmore (1998) applied the term experience economy to express the ever growing demand to design richer experiences for their customers/visitors and to emphasize on the centrality of experiential value as a generator of economic value. They have proposed a model where they have sorted experiences into four broad categories: Entertainment (passive, absorptive customer participation), educational events (where customers engage and learn new things), Escapist (involvement of the mind in entertainment), and esthetic (appreciating environmental sensorial beauty), to where they fall along the spectrum of two dimensions: The first dimension corresponds to customer participation (active vs passive) and the second dimension describes the connection, or environmental relationship that unites customers with the event or performance (immersive vs absorptive modes of experiences). In this sense, offering experiences seemed to be a way for producers to survive in the ever competitive

future and tourism operators seek winning strategies capable of perpetuating their market share (Ritchie & Crouch, 2003).

In today's service environment, we see that modern consumers want context related, authentic experience concepts (Gilmore & Pine, 2007) where they can learn through engaged observation of other cultures (Mathisen, 2013); they are increasingly motivated by creativity and more meaningful, life lasting experiences (Richards & Marques, 2012), and tend to seek a balance between control by the experience stager and self-determined activity with its spontaneity, freedom and self-expression (Binkhorst & Dekker, 2009). Usually, experience includes various elements, and it provides an emotionally, physically, intellectually and spiritually mixed feeling (Shaw & Ivens, 2002).

Most services involve encounters with service providers and visitors of destinations, so there has been renewed attention to the management of creating emotions in person to person encounters (Lazarus, 2006). As such, Carbonell, Rodríguez-Escudero, & Pujari, (2009) study revealed that organizations achieve greater effectiveness such as faster market response rate when using co-creational activities.

To understand Value co-creation we need to understand that it is the core concept of service-dominant logic (SDL). Vargo and Lusch (2008) developed a synthesis of SDL calling for a major shift towards service thinking. SDL is a delivery process based on the principles of purpose, collaboration and contribution that can be defined as involving the producers, consumers, suppliers and stakeholders of a focal service system (Payne, Storback & Frow, 2008; Prahalad & Ramaswamy, 2004; Vargo & Lusch, 2008, 2016, 2017).These groups integrate various types of resources (operant vs. operand resources), where they interact, negotiate, cooperate, communicate and collaborate, with each other through sharing these resources to establish a system of co-created value and mutual benefits with greater reciprocated value for all participants involved (Chandler &Vargo, 2001; Rong-Da Liang, 2017).

In this context, a growing number of theoretical and empirical studies have examined co-creation values and experiences (Bertella, 2014; Binkhorst & Den Dekker, 2009; Binkhorst & Den Dekker, 2009; Brodie, Hollebeek, & Smith, 2011; Cabiddu, Carlo, & Piccoli, 2014; Campos et al., 2015; Cova & Dalli, 2009; De Jager, 2009; Galvagno & Dalli, 2014; Mathisen, 2013; Rong-Da Liang, 2017; So et al., 2016; Vargo & Lusch, 2008; Verhoef, Reinartz, & Krafft, 2010) to advocate that one of the main routes to reach business sustainability is by a stronger focus on the customer

(Gentile, Spiller & Noci, 2007). Co-creation is defined as the process of value creation that emerges from the interaction of both customers and consumer, which in turn may influence the service experience (Grönroos, 2011). One prominent strategy for companies to capture customers' need is to actively engage them in the service delivery (Payne et al., 2008). As such, business literature has long found value creation and co-creation to be directly linked to long-term profitability and business success (Schaltegger & Wagner, 2017; Vargo & Lusch, 2017). Involving visitors in activities that meet their interests and capture their attention is found to be very important for co-creation and adding value to their experience (Andrades & Dimanche, 2014; Binkhorst, 2009).

Minkiewicz, Evans, & Bridson (2014) propose three meaningful dimensions can be discerned in the co-creation of experience: co-production (customers' active participation in forming their heritage experience), engagement (cognitive immersion into the experience and heartening the sense of involvement or identification with the offerings), and personalization (ability to tailor a service or product to meet individual customers 'specific interest, needs or preferences).

Additionally, Grönroos, & Voima (2013) identifies three spheres of value co-creation: the provider, consumer, and joint spheres. They describe how each sphere is responsible for facilitating in the production of mutual values. Co-creation outcomes may depend on certain identity representation that the producer and the consumer possess where they can jointly integrate their personal resources to create intrinsic-specific values.

Moreover, recent empirical research shows co-created services reveal their potential to strengthen customer relationships when service delivery is successfully implemented (Chan, Yim, & Lam, 2010; Witell et al. 2011), enriches tourist experiences (Prebensen & Foss, 2011; So et al., 2016), augment their satisfaction (Grissemann & Stokburger-Sauer, 2012), and boost experience memorability (Campos et al., 2017). In parallel with such findings, organizations, even destinations, have extensively implemented co-creation strategies to connect with their customers at various stages of consumption including pre- (Andrades & Dimanche, 2014), during (Volo, 2009) and post-consumption (Binkhorst & Den Dekker, 2009; Neuhofer, Buhalis & Ladkin, 2012). However, we still don't know how mindfulness in social enterprises impact the service experience and especially when SE tend to benefit from co-creational activities and understand the dynamics of interplay between the visitor self-awareness and SE organizational efforts.

III. METHODOLOGY

Recently, increasing financial strains on family farms have put pressure on these businesses to look outside agriculture as a means to sustain the operation (Nickerson et al., 2001). As a result, many farmers have turned to social enterprises, as a means of diversification that could solve their problems and enhance their quality of life (Nickerson et al., 2001; Ollenburg & Buckley, 2007) since social enterprises idealistic values can be translated into valuable economic assets, and especially if the products sold in the market or restaurants are of ecological environmental benefits and adopt ethical practices that aims to achieve objectives with sustainable agriculture in terms of the triple bottom line (Clifford and Dixon, 2006).

To explore the research question, I developed a grounded theory in the setting of social enterprises in Lebanon since the effects of the Lebanese post-war (1975–1990) economic crisis, and the economic policies favored the tertiary sector (services) over the primary and secondary sectors leaving farmers with less support from the government and more from social entrepreneurial work. Moreover, the social enterprise selected "Souk el tayeb" engendered in co-creational activities to attract more visitors to its businesses entities. This setting was thus perceived as pertinent to my research question studied. In the next section, I briefly present the field of "Souk el Tayeb" and its history and explain how data were collected and analyzed

III.1 Research context/ Case selection: "Souk el Tayeb case study"

Souk el Tayeb (farmers market) decided to venture in agri-business and tourism projects gathering people from different communities around the protection of a common culinary heritage. As managing to participate in agribusiness activities helps in preserving the customs and the unique traits of rural lifestyle, increasing awareness and, especially as related to food production (Everett & Aitchison, 2008; Ollenburg & Buckley, 2007).

Souk el Tayeb is neither a pure for-profit enterprise nor a non-profit charity, but rather a hybrid structure situated in the middle east (Lebanon) which was first and foremost a social business with a primary non-profit arm (farmers market) and gradually expanding to include an income-generating venture (farmers kitchen).

The overarching vision driving Souk el Tayeb was the idea that food was a basic and important common denominator and hence could help bring together fractured communities and promote unity around common respect for food, land, and agricultural traditions.

In January 2010, Mouzawak and Codsi (CEO's) jointly launched "Tawlet" (Arabic word for table), a farmers kitchen that would generate a steady income for producers, particularly women, as well as Souk el Tayeb, while maintaining the core values of their social business. With Tawlet, the idea was to create a permanent space where producers from remote villages could cook their cuisine, local dishes, and specialties, and make them available to city clientele. Mouzawak conceived of Tawlet

> *"as more than just a restaurant; it is a space that provides opportunities for producers and farmers, particularly women living in remote villages, to share with others their food traditions and culture, in addition to earning a revenue or income."* For Codsi *"Tawlet is a for-profit extension of Souk el Tayeb, but essentially retains the same non-profit soul."*

Their mission was operationalized through four action items, including:

1) Supporting small-scale farmers and producers.

2) Launching local community-level development initiatives.

3) Conducting advocacy, research and education about food traditions and heritage and on living an organic and healthy lifestyle.

4) Creating a platform and space bringing people from different regions and of various beliefs around a shared goal.

In parallel, Mouzawak and Codsi complemented their vision with a set of 10 core values, including quality, respect, transparency, accountability, responsibility towards others, environmental awareness, community service, passionate leadership, commitment, innovation and creativity. The mission is altogether centered on values, yet agnostic about what's possible under those values, and utterly pragmatic about growth.

From a customer standpoint, Mouzawak and Codsi followed an unorthodox perspective in that they did not recognize a customer base, but rather a "family base", with no differentiation between consumer and producer. It was an extension of the same philosophy that viewed all stakeholders (suppliers, intermediaries, and customer) as "family members" that were invested in the same project, thus creating what Codsi called a "virtuous circle."

> *"It's not just about an exchange. It's about complementarity. There's a win-win situation in anything you do in life, and we're building a family. We tapped onto something important which is food, tradition, life,*

authenticity, which are issues that touch people's hearts and that we happen to believe are also crucial for coexistence and nation-building".[2]

The main effect of this initiative have created bases for joint believe in one purpose, to co-produce by collaborating all together and contributing in establishing better system for co-created value delivery. The market and Restaurant have created a multi-sensory dining experience for their visitors, where they may watch the entire meal preparation process while the chefs and producers interacts with them and prepares the menu they want, letting them play the role of co-producers (Figure 4).

Today, Souk el Tayeb operates two (soon three) farmers' markets, five restaurants, four bed and breakfasts, and a UNHCR-sponsored capacity building program benefitting Palestinian and Syrian refugees. Tawlet more importantly attested to the fact that the social entrepreneurs held themselves accountable to their core constituency in their new revenue generating ventures hence staying in tune with the social side of their mission and striking a delicate balance between upholding the original vision and goal while generating an income and a sustainable source of revenue. Due to Souk el Tayeb success story, it has been listed on Trip advisor as one of the 10 best things to do in Beirut, and this has rushed the market and restaurant with visitors from all over the world.

Codsi considered Tawlet as an opportunity to tackle the challenge of sustainability head on, while remaining as inspired and committed to the core mission and guiding values of Souk el Tayeb.

III.2 Research design and data collection

In this research we sought to understand the experiences on how co-creation and mindfulness of visitors influence social entrepreneurial efforts in providing good tourism encounters and practices to overcome and manage cultural barriers in troubled changing environment.

A grounded theory approach was used to better understand the unexplored phenomenon of mindfulness in co-creating experiences in SE agribusiness environment. Sampling considerations were based on the notion that broad sampling helps to generate new theoretical insights (Glaser & Strauss, 2017; Strauss & Corbin, 1998).

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[2] http://www.soukeltayeb.com/wp-content/uploads/2012/04/ECADIM-SOUK-EL-TAYEB-10.pdf

Figure 4: Souk el Tayeb market and the co-production service delivery

Chia (2003) claimed that researchers who seek to throw fresh light onto the reality of organizational life should concentrate their efforts on examining how individuals construct meanings, intentions and interpretations to make sense of the world. Moreover, Gummesson (2006) questions the mainstream choice of approaches and suggests that qualitative rather than quantitative inquiry may represent a more relevant alternative direction in marketing research.

Additionally, Gilmore and Carson (1996) discuss the advantages of using integrative qualitative methods in service-marketing-management context, combining the notion of integrative research methodology with the idea of a stream of research, or investigations that build on earlier studies and explicitly allow the researcher to develop in distinctive stages throughout the process.

III.3 Data Collection

Between June and August 2018, I was based at Souk el Tayeb, a social enterprise in Lebanon (Middle East) as part of a study on hybrid organizations. I spent 5 days per week at the organization, normally from 12pm till 5pm. During this period I was partially a participant and partially an observer. For the first month, I concentrated on observation, spending time in different parts of the organization and attending staff and board meetings in an effort to learn about the core issues and challenges Souk el Tayeb faced. I then began to take specific tasks. I conducted formal and informal interviews with a range of actors in Souk el Tayeb, and its visitors. The study was conducted openly, with each actor interviewed aware of the nature and purpose of the study.

To achieve both depth and breadth to gain representation of concepts (Corbin & Strauss, 1990), a large number of the market and restaurant visitors were sampled to represent the central characteristics of co-creational services experiences outcomes.

It was agreed that we would use the organizational real name. It was also agreed to preserve anonymity when attributing quotations, so this is why all names in this study have been changed.

I began data collection, my intention was to conduct a study on hybrid organizations, focusing on the challenges and opportunities the organization face when co-creating activities with producers and visitors. Specific attention was given to the mindful behavior of the visitors and service providers in order to answer how sociocultural attributes and mindfulness of the visitors influence social entrepreneurial efforts and practices to overcome and manage cultural barriers in troubled changing environment and by that facilitate positive outcomes for the organization.

Interviews. All participants were approached during their experience or on their way out of the market/restaurant, leaving us to concentrate the analysis on the on-site experiences since co-creational core experiences lies in experiences that visitors participate in at the destination.

68 formal interviews with a wide range of actors were conducted. Informants included members of Souk el Tayeb CEO (1 interview) (See Appendix G, translated from Arabic to English); members of the local community- Lebanese chefs (5 Interviews) (See Appendix H, translated from Arabic to English), customers (locals and tourists) (62 interviews) (See Appendix F translated from Arabic or French to English).

In all, 68 interviews were digitally recorded with 62 visitors (32 woman, 30 men) from various nationalities and background interviewed in the market and the restaurant, 5 (woman) chefs and the CEO (men) (See demographic table in Appendix I, J, K). Given the relatively large number of visitors, we used data saturation as a trigger to stop further data collection (Glaser & Strauss, 2017). We found that by the time we interviewed the 42th visitor, much of the information was repetitive. Interview with the visitors lasted about 10 minutes, on average, and followed a semi-structured interview.

The interview protocol comprised questions about mindfulness and co-creation.

Field diary. In addition to the formal interviews outlined above, dozens of informal interviews were conducted with members of Souk el Tayeb, chefs and its visitors. I took handwritten notes that were recorded in a field diary. Informants were more franc when talking informally than

during interviews. Moreover, I kept recording detailed key incidents, observations, conversations and interactions as they happen and updating them daily to the field diary.

Print media. Souk el Tayeb keeps a library of archival material which comprises newspapers and copies of relevant press clippings articles from sources. The data were incorporated to the analysis, providing important information about the practices of the organization.

III.4 Data analysis

Because the research question focused on situational occurrences, the units of analysis was the mindful behavior during co-creational activities in SE spaces. I analyzed the data using a grounded theory approach (Strauss & Corbin, 1998). The first phase of the analysis consisted of an open coding through which I identified concepts and dimensions in the data and grouped them into categories. In this phase, with the help of my supervisor, the interviews were read several times and words or sentences were marked according to codes that emerged from the texts (e.g., "Belief in organization mission", "identity representation"). The second phase was axial coding which means I had to search for relationships among the categories formed in order to group similar conceptual codes and relate them to higher-order themes. I constantly moved back and forth between the data available, the patterns emerging from the interview data and mindfulness and co-creational activity service literature. This helped later in formulating a model explaining the higher levels of conceptualization and connecting the themes to formulate the propositions. Figure 5 summarizes the process, showing first-order categories, second-order themes and finally the aggregated theoretical dimensions.

The first part identifies the antecedent of mindfulness, the second results identified the psychological non-monetary returns, and their mediation on mindful behavior and our last part addressed the benefits and costs of mindful behavior.

Figure 5: Data Structure.

First-Order Codes
Co-creational concepts

Second order themes

Aggregate dimension

- Experimental- Curiosity
- Follow healthy lifestyle
- Entertainment- creativity
- To get involved in co-production

→ Self-exploration

- Long for authenticity
- Idiosyncratic association

→ Origine/customs

Identity representation

- Support the mission/message
- Convey truthful information (org/farmers)

→ Advocate

- Recommendation
- Loyal customers (repetitive purchase of same product)

→ Believe in service/ product quality

Perceive meaningfulness

- Compassion
- Appreciation friendliness- attachment
- Nostalgia

→ Emotions

- Feel of contribution
- Heart warmth (feel free to talk about personal experiences)
- Improve mental and health
- pride

→ Self-worth

Psychological non-monetary returns

- Engagement
- Taking a further step: personalization

→ Attention

- Sacrificing personal time
- Co-production and collaboration: Trying to know better the producers
- Being closely involved
- Honesty (authenticity: giving personal opinion advice)

→ Personal endeavor

- Knowledge of efforts done by farmers and SE: (service quality, service delivery)
- Knowledge exchange

→ Awareness

Mindful behavior

- Relationship value: Meet with people that have similar concerns
- recognition

→ Responsible behavior

- Contribution and being involved
- Acting upon own values, power of sharing
- Commitment and trust

→ Willingness to change the situation

Benefits

- Social desirability
- Lack of trust
- Lack of knowledge

→ Social rejection

- Use of sustainable enviromnetal practices
- Better orientation

→ Higher expectation

- Competition
- Situational factors: Weather conditions

→ External environment

costs

IV. FINDINGS

This section presents aspects of mindfulness, namely: antecedents, the experience itself and the outcome and potential benefits and costs. We show that the inception of mindful behavior is associated with both identity representation and with perceived meaningfulness of the co-creative services being offered. We then describe the interrelation of experiences generated from mindful behavior toward visitors, service providers.

Lastly, we present the outcomes and possible benefits and costs of mindfulness. To illustrate the relationships between these aspects of mindful behavior, the text includes testimonies and additional illustrations are provided in tables adjoin. The findings are followed by propositions and development of a model of the relationships between aspects of mindfulness after the co-creational service experience. We conclude with implications of our findings for both theory and practice.

IV.1 Antecedents of Mindfulness: Identity representation and meaningfulness

We aim to understand whether co-creational activities are actually associated with customer mindfulness of service providers' offerings to identify and capture value in social sustainable development plans. In order to do this, a look on the antecedents of mindful behavior of participants to act upon and be part of the movement in Social Entrepreneurial realm is essential. The data reveal that mindfulness is related to customers and providers "identity representation" additionally to the "meaningfulness" of their experiences.

IV.1.1 Identity representation.

Visitors and service providers mindful behavior is associated with two identity characteristics: their personal self-exploration, along with their origins and customs.

Identity representation refers to the evaluation of how people saw themselves, wanted to be seen by the community, and were seen by others. Their personal *self-exploration*, *origins and customs* played an essential role in exploring the tension between the private and the public image intended to be shown.

1.1.1 Self-exploration

Self-exploration refers to the examination and analysis of one's own unrealized spiritual or intellectual capacities. In this case, mainly visitors of this hybrid organization expressed the need to be "Experimental", they were curious to get to know the producers, enjoy their time by learning a new dish, since they mainly followed a healthy lifestyle and most importantly cared enough to

get involved in the service co-production and contribution in the activities offered! (See jointly the illustrations in table 6). On the other hand, Chefs or service providers were exploring their hospitality skills, and enjoying their time by getting to know new people from another part of the country.

1.1.2 Origins and Customs

Another identity representation characteristic are the ***Origins and Customs*** that visitors and producers expressed about. People mainly act all mindful when they tend to long for authenticity, and when they associate between themselves and the person they are in contact with (for example if they already know each other like the example stated in table 6 or have the same age, place of residence etc.), by that building common ground for interaction. Table 6 presents illustrations of "identity representation" theme taken from field notes and the interviews.

Table 6: Identity representation illustrative quotes

Themes	Illustrative quotes
Identity representation	
Self-exploration	Experimental: I am very open to new experiences, I really like new experiences, well this is why I have also tried and followed several places they organize, but I have my preferences, and this place is where I like to come very often, because I like the fact of the surprise not knowing what to eat, discover things you don't know explained by lovely ladies that comes from different parts of the country. I usually go with the flow! Pick the things that I don't know! - *Marc from Lebanon*.
	Curiosity: Well because I am doing a research about the Lebanese cuisine, and to come and see the local organic food market that is in fact the only organic market in town, and we are planning on visiting the restaurant Tawlet available in the other site and meet the chef for more detailed view - *Nicolas from France.*
	well I've seen it on a few you tube videos so bloggers that sort of thing coming and saying it's a really good thing to do in Beirut, and that what draw my attention to it and I just really like food market so I am curious to see, so why not! – *Joseph from UK*
	Follow healthy lifestyle: It's a way of living, how we eat healthy and we make attention to things we eat, and Souk el Tayeb market met our needs by producing the right products done in a high standard. Plus, I was interested to get to know the local products and the work exposed and buy some products that are fresher and healthier than the ones that you can find in the supermarket. I try to follow my mission and try as much as possible to eat food not been sprayed - *Anna Lebanese living in Sweden.*
	Entertainment and creativity: Very nice, because first we don't have much markets and when we travel and you cross a market you directly enter so why locally we don't have this? Second it's open air, it's really beautiful, you learn new stuff and get to explore nice smells and colors and I got to learn the existence of vegetables that I never heard about before, it's very interesting, enriching experience. You get to have interaction as well with other visitors that mainly have the same interest and employees tend to exchange their business cards with you - *Alex from Lebanon*.
	To get involved in co-production: the food is really good, we support the Lebanese production and specially if it is the work of woman themselves, the work that she has put lot of effort and time to make, like the "Fatyir" and "Mankish" were all done by her from step zero, and I think that we in the Golf always miss food markets - *Amira from Kuwait*.
Origins and customs	Long for authenticity: you find products that you won't find in the market that are healthy and it make us go back to old memories, because most of the stuff that you can find here were done in the traditional way. It gather up everything and you feel like you're home - Michel from Lebanon.

Idiosyncratic association: I discovered by accident that Mikael and Souad (local farmers) are my neighbors, they live practically two blocks away from my home. I know how much time consuming there work is, and I know how much work they put into what they do, by waking up early in the morning to collect, wash the vegetables, cook them and later transport them and have all the energy to come here, prepare the installation, and serve the people with love and attention all day long, and finally having to clean everything and restart all over again!" - *Rouwein from Lebanon.*

IV.1.2 Perceive meaningfulness.

The findings also showed that having meaningfulness generated from co-creational experiences is associated with willingness of producers and the visitors alike to "***Advocate"*** for the mission and the message they believe in. Moreover, producers play an essential role in creating mindful behavior in visitors by conveying truthful information leading them to "***Believe in service/product quality***" which enhances the probability of recommending mindfully their experience and committing by staying loyal as an outcome of meaningful interaction.

Table 7 presents illustrations of "Perceived meaningfulness" theme taken for field notes and the interviews.

Table 7: Perceived meaningfulness illustrative quotes

Themes	Illustrative quotes
Perceived meaningfulness	
Advocate	Support the mission/message. I think it is a great concept since in my daily life even in Paris I always buy locally grown vegetables and fruits to help local farmers, short production chains and I avoid supermarkets as much as I can - *Maya from Lebanon but studying in Paris.*
	Convey truthful information: When we eat we know this is more natural and is made by "real hands", there is not like so much eeuuu big business behind, or maybe there is hehehe and we don't know hehehe, I am kidding! It is totally respected and related! - *Fouad from Lebanon.*
	I do my best to explain well to my visitors the steps in details of how we deal with my baby's hahaha. I mean by that my products. […] Having the urge to explain gives me great pleasure that I am contributing in creating a better future for the health of our kids. Knowing what you are eating is essential! We have to go back to our roots and eat simple again! - *Chef Souad from Lebanon.*
Believe in service quality	Recommendation: it's excellent, it's an experience that should be replicated by other organizations of similar missions because it is socially responsible! - *Marwan from Lebanon.*
	Yeah we will recommend it, well because it is an improvement than having nothing, but I think it still has a way to go in term of getting to be international standards, just because it is in Lebanon that doesn't mean it couldn't be first class! - *Juanito from Mexico.*
	Loyal customers (repetitive purchase of same product): we mainly go to the same places every time, the woman that prepares the "Manakish" on the Saj oven and we go to another woman that sells the products we buy for our home, she mainly doesn't add any sugar to her products, all natural products without any additives added. I don't recall her name! but I go directly to her stand. We come mainly to the same people because we were impressed with their products - *Caroline from Lebanon.*

IV.2 Psychological non-monetary returns

IV.2.1 Emotional aspects

When visitors and service providers described identity representation, they referred to psychological non-monetary returns for the commercial yet social interaction that occurred between both parties, and by that, expressed genuine "***emotional aspects***" like compassion, attachment and nostalgia (illustrations in table 8).

IV.2.1 Self-worth

The second component, "***Self-worth***", refers to when people strive to maintain and achieve positive self-regards (Sedikides, Gaertner, & Toguchi, 2003 p.74). The data suggest that feelings of contribution furnishes improvement of mental wellbeing. From the visitor perspective, they feel that they are promoting social inclusion by supporting local products and the producers of underprivileged communities; and from the producers perspective, they contribute by offering distinguished healthy products, supporting environmental sustainability and caring for the wellbeing of the society.

All of these contributions create heart warmth for both consumer and producers to jointly open the conversation toward a joined goal which is improving the wellbeing of the society. Out of which feeling of pride is generated. Table 8 presents illustrations of "Psychological non-monetary returns" theme taken for field notes and the interviews.

Table 8: Psychological non-monetary returns illustrative quotes

Themes	Illustrative quotes
Psychological non-monetary returns	
Emotions	Compassion: what really moved me I thought that I am happy that someone is taking this initiative yeah! - *Mounir from Lebanon*.
	Nostalgia: for me I remember the times when my grandmother used to prepare bread on the "Saj oven" and every time I come to the woman who sells "Mankoushe" and smell the aroma I remember her. Every single time! - *Caroline from Lebanon*.
	I am from the generation that saw Lebanon in its better economic aspect and its worst, the beautiful thing about this market is that this place is leading us back to those wealthy days - *Rouwein from Lebanon*
	In a way it kinda reminded me of our grandmothers cooking, some of the dishes , We are Iranian and some of the dishes like the spinach one it was tasty and even the rice, the way the rice was kinda like kinda comforting for me. I felt very mmm… for the first time being in an unfamiliar city, I felt really kinda of relaxed and comfortable - *Anahita From Iran living in the USA*.
Self-worth	Feel of contribution: I didn't feel that my contribution to the farmers was equivalent to their contribution in providing me with things that would benefit me on the long run, which is my health! I am gaining more from the products delivered. Plus, I felt that I was learning new stuff rather than helping, for me it was mainly educational rather than feeling compassionate and other stuff! - *Alex from Lebanon*.

Heart warmth: I went and talked with the woman and you can instantly tell much about the passion they put into their work and how much they care, even I tasted something on the other side and the person didn't speak English we had to communicate, we managed you know to pay, and that was really touched me and found it funny to know what people were passionate about what they are selling and how friendly and hospitable they are - *Joseph from UK.*

Pride: yeah that helped a lot, because the food the way it is displayed, you see everything and having someone behind the counter that is welcoming, is not just like there! [mimicking the chef] "Hi my name is Rima, I cooked this!" You feel that she is proud of what she did! - *Richard from France.*

Reputation: I like to try new stuff and it appeared that the formula is better compared to other restaurants and I know it is not related to your question but the echo (reputation) in the community was very much positive – *Joseph from Lebanon.*

IV.3 Mindful behavior

Finding suggest that mindful behavior involves several dimensions (Table 9): Attention, Personal endeavor and Awareness.

IV.3.1 Attention

Attention is a psychological phenomenon that occurs usually during experiences. Our findings revealed that co-creation is a strategic dimension that enhances visitors' state of mindfulness and engagement.

Engaging visitors in meaningful experiences that meets their needs, interests and capture their attention is found to be important for co-creational activities and by that enhancing mindful behaviors. Daan from the Netherland, expressed his consideration and appreciation of Chef Leila's work and was asking much detailed questions related to the dish that she was preparing at the restaurant, during his interview Daan said:

"Chef Leila took great pain to teach me exactly how to prepare "Kishk dish". She was so clear with her instructions, you can directly know from her sense of humor and smile on her face that food was her passion. I was so triggered by the taste of this dish that I have never heard about before! This activated my curiosity and pushed me to be more attentive to what Leila was explaining to us! Being able to reproduce this dish later in the Netherland would be my eternal memory taken from her and this place!"

This example illustrates that most meaningful memories originate when people interact in new environments with things that are mainly interesting at the first place for them. These interactions increase the attention, engagement and strengthen the emotions, feelings and the acquisition of

new knowledge that Daan expressed about when he said that he is going to remember Leila's dish when he is going to reproduce it!

IV.3.2 Personal endeavor.

During my period attending at the restaurant and after the shift was over I managed to accompany Mona the Palestinian refugee chef to the bus station where she told me this story that I managed to write it in my field notes:

> "So there I was in the restaurant, a foreign woman approaches me and taste my "Makloube dish"… I usually love to watch the reactions on peoples' faces after they taste it, this gives me a sense of accomplishment… Mainly most of the visitors would look satisfied, but this one in fact looked happy at first and later started crying… She later explained to me that she specifically visited this restaurant when she knew that I was from Palestine and wanted to learn "Makloube" dish as it reminded her of her mom that was originally from Palestine but emigrated when she was young to the states running to a safer environment during 1948 war. Her mom, even though continued her studies and later got married to an American guy she managed to share with her children the positive image of Palestine through her stories and food. Sharing the same background of being displaced and me being a refugee in this country, made me relate to her story. After telling me her story, I shared with her my longing of having this sense of home feeling that everybody else has! Our conversation got deeper. I usually don't engage in small talks with my customers but with this girl I felt more intimate and we decided to stay in touch and till this day we communicate and I send her some recipes and advices on social media of course with the help of my daughter since I am horrible with technology hahaha."

This example illustrated that mindful behavior involves sometimes employees to deviate from the friendly but at the same time distant service interaction. In this case, the SE organizational climate is friendly and flexible, the fact that co-creational activities existed, created the ground for customers to:

1- Connect, in this case Mona's idiosyncratic association with having Palestinian roots, being displaced and sharing the longing of home,

2- Express sincere frank emotions, share personal stories, and

3- Build a personal relationship in which special effort are obvious.

The visitor took upon her to participate in the cooking class after knowing Mona's residency status. As per Mona being mindful of the girls situation urged her to get closer to her and do things that she wouldn't do on a normal shift, like telling about her personal life and adding a customer to her social media platform.

IV.3.3 Awareness

Awareness is the state or condition of being aware, having knowledge and consciousness. Our data suggest that mindfulness is associated with the level of providers and visitors' awareness of organizational efforts before or even after their service experience. Abigail from the UK but live in Dubai expressed her appreciation of organizational service delivery in using business as a force of good to sustain their social mission, stating:

> "I think it is very cool! I personally think that using business as a force for good, this type of charity , I am very much for that, if you can turn it into a profitable business concept and make money for charity that way, without putting it in peoples faces, and obviously I am with direct full donations as well but I think this is a more sustainable concept in a way if you could actually generate demand for whatever things you are doing you have a sustainable flow of donations that don't rely on just asking people to give money."

Further, Chef Leila from Syria expressed her gratitude and expressed by acknowledging how much she was lucky to have this opportunity to sustain her family after her displacement:

> "This organization offered me a source of hope for the future, it made me feel a sense of belonging, I am lucky to have met "Mr. Mouzawak" and the team. What motivated me to come here was mainly the mission of this organization which calls for unity and sustainability, two things that we unfortunately miss and long for in this part of the world!"

Moreover, Yasmin from Iran but lives in the USA expressed her mindful joyful thoughts regarding the organizational efforts in creating opportunities and empowering underprivileged woman living in this society:

> "It makes you very happy, this organization is making an effort to reach out to these communities and people who have been driven away from their homes and have

nothing by allowing them to be part of this space. It can recreate a sense of home

and community for these people."

Table 9 presents additional illustrations of "Mindful behavior" theme taken for field notes and

interviews.

Table 9: Mindful behaviour illustrative quotes

Themes	Illustrative quotes
Mindful behavior	
Attention	Engagement: Very nice they explained everything they were very nice and kind, they are proud to be here, they explain what they cooked, they explain the ingredients, and today's Chef had a perfect French. She is so adorable we even did a photo with her. She is very nice! - *Richard from France*
Personal endeavor	Sacrificing personal time and Being closely involved: No it is not my first time, and I follow it in all its festivals and I come regularly every Saturday here to check and buy the different Lebanese delicious products - *Mrs. Charabati from Kuwait lives in Lebanon.*
	Co-production and collaboration: Trying to know better the producers.
	Yeah the lady that was selling juice told us about the juice, the guy about the spices we saw. I liked the fact that you can sample the little things, because this is why people come to taste different products different tastes and this kinda makes the first step into communicating with the producers- *Luka from Slovania*
	Honesty (authenticity: giving personal opinion advice): So you know, when I was preparing my dish and explaining in details and with excitement my secret extra ingredient that I add to enhance the flavor… I noticed the unpleasant facial expression of one of the visitors. She eventually tasted the dish and later approached me privately and gave me her personal opinion to substitute one ingredient with another. At first her honesty chocked me as I was so certain that this dish would meet the expectations of everybody, but later I had to swallow my pride thanked her and took the opportunity to try later her suggestion, and to my surprise it was amazing! Sometimes accepting people's honest feedback can generate better outcomes - *Chef Mira from Lebanon.*
	Because they are honest with their products we are coming back and supporting them - *Zeina from Lebanon.*
Awareness	Knowledge of efforts done by producers and SE: What really moved me I thought that I am happy that someone is taking this initiative yeah! - *Anna mom from Lebanon.*
	It makes you very happy, this organization is making an effort to reach out to these communities and people who have been driven away from their homes and have nothing by allowing them to be part of this space. It can recreate a sense of home and community for these people - *Yasmina from Iran/USA.*
	Trust in producers: yes it is good it shows that the things that they buy is really organic and they are seasonal so you don't come buy and take the same things all over again - *Farah from Lebanon.*

IV.4 Benefits and costs of mindful behavior

The data indicated that mindful behavior generated during co-creational activities in hybrid

organization had some benefits and costs.

IV.4.1 Benefits

Our data revealed that mindful behavior can induce "*socially responsible behavior*" and motivate

the will of people to "*change a situation*" and create social benefits. Social benefits are private

benefits gained by individuals directly involved in a transaction together with the external benefits gained by third parties not directly involved in the transaction (Langer, 1989).

4.1.1 Social Responsible Behavior

This behavior reflects the ethical framework and the obligation of an entity, organization or individual, to act for the benefit of society at large. As Marwan from Lebanon stated:

> "It's excellent, it's an experience that should be replicated by other organizations
> of similar missions because it is socially responsible!"

Moreover, mindful behavior have created social relationship values where it enhanced the union of people with similar interest.

> "It's what we do every Saturday, we come with our friends to the souk to get the
> fresh vegetables, and sandwiches because we know it's our healthiest option –
> Anna's mom from Lebanon".

Additionally to recognizing and acknowledging the achievement, service and merits of the producers. Elie from Lebanon, expressed his dissatisfaction with the government work in addressing this social issue and conveyed his token of appreciation to this social enterprise work in supporting local farmers in a sustainable manner:

> "In my opinion this mission should be the government initiative but I am happy
> that there is a private sector that is handling this, because everything they are doing,
> they are trying as much as possible to take out the decentralization that exist in
> Beirut. They are bringing the farmers to the center[downtown] so they can sustain
> themselves and be able to spend in their area. All these people that are working in
> the rural areas are brought here and this is really good!"

4.1.2 Willingness to change the situation

Being mindful of farmers, chefs and organizational efforts contributes to a higher involvement, the following example explains how Azar expressed the need to empower woman in the work field.

> "Azar: Also it is so lovely that these woman are standing by because I feel like in
> the US like you could probably talk about this a lot more of it when you confront
> problems working in the kitchen, as if there are some really aggressive man who
> are running things even though woman are cooking in the house, so bridging the

gap between cooking in the house and cooking in a restaurant is like such an
amazing thing that is very hard to achieve.

Yasmin: Yeah because they say that a woman should cook in a house and when it's
kinda in a professional environment it is usually a man that's a chef, you know?!
Like bringing this home cooks empowers more the woman. It's really pretty!"

Moreover, willingness to change creates a sense of commitment and trust. Caroline attested:
"I come here willingly, all my experience is so positive mainly I know if I want to buy pickles I
take it from here, if I want been or even "Mouaajanet", "Foul"; "Foul" is really good here in souk
el Tayeb it's the most delicious foul you could get from here. And these kind of stuff you know…
Table 10 presents additional illustrations of "Benefits of a mindful behavior" theme taken for field
notes and the interviews.

Table 10: Benefits of mindful behaviour

Themes	Illustration quotes
Benefits	
Socially Responsible Behavior	Relationship value: Because they are honest with their products we are coming back and supporting them - *Zeina from Lebanon*
	Now we as people we consider ourselves as humanitarians, we like to contribute to a lot of causes and Souk el Tayeb is one of them. Because humanitarian act doesn't get separated from each other – *Mrs. Charabati from Kuwait.*
	Meet people with similar interest: As if you are coming home and the people that we are meeting have same interest, we feel in a good environment – *Joseph from Lebanon*
	Recognition: Personally I find it really good, the quality service should be consistent and not to deteriorate and stay affordable – *Juanitto from Mexico.*
Willingness to change	Contribution and being involved: to try and get involved in Souk el Tayeb in every aspect of it, I am a regular visitor, I come a couple of times a month, and I usually come with my friends – *Mounir from Lebanon.*
	Acting upon own values, power of sharing: it's a great initiative and it's a pity that there are no other NGO other than "Souk el Tayeb" that are doing this!- *Mounir from Lebanon*
	Commitment and trust: No on the contrary, I place my hands in cold water [expression that means trust completely] , since I like all Lebanese food, I have no curiosities to fill, and the organization are making sure to remain providing a high level of services and quality- *Joseph from Lebanon.*

IV.4.2 Costs

It is true that mindful behavior has proved that it could generate positive results for social cohesion.
However, social desirability behaviors, social rejection, having higher expectations and external
factors could affect the authenticity of the experience provided and yield negative outcomes.

4.2.1 Social desirability

Although the term looks positive, social desirability refers to the tendency of someone to project a favorable image of himself/herself by reporting answers that deem to be more sociably acceptable over reporting socially desirable behaviors and underreporting socially undesirable behaviors. Which in fact showed that it impeded the development of authentic service:

> "These days, all what youngsters want to do is to post their outings and movement on the internet, and I understand them, because I have two young girls and they as well follow these trends… So… I had this girl that assisted to my cooking class, she approached me with good intentions and explained to me that she has a lot of people that follow her on social media and wanted to share my story with them for support, she was so pretty for the camera hahaha, I was documented all the way through the one hour and half, I felt like a star! Hahaha… Despite the fact that I always tend to show the best of what I have, this time I felt that I needed to look perfect and be careful to what I was doing and saying because the video was on and I felt the need to present myself and to the people that were watching her streaming in a professional way. I didn't feel that our interaction was genuine as at some point I was going with the flow with what she was asking me and I was telling the things that she wanted to hear and not the things I convey usually. In brief, I was not myself!" – Chef Rima from Lebanon

This illustration shows that despite the good intentions of advocating the mission to others, being mindful did not create for the producers a genuine service as the producer was deliberately editing the responses to more socially acceptable ones.

4.2.2 Social rejection

Visitors mindful behavior would yield beneficial outcomes if acted upon discreetly, the findings revealed that when visitors reveal verbally their psychological non-monetary return (In this example compassion and feeling of contribution), this might create a sense of undervalue for the producer that might affect negatively the co-creation service delivery and lead to distant, cold, standardized service, another example provided by Chef Leila from Lebanon:

"So there was this guy that enters to the restaurant greeting everyone. So I assumed he was famous, but I didn't know him as I don't spend much time on the TV. He approaches me, introduces himself and started asking me at first general information about where do I come from and what are we going to prepare. Later during the process he started asking more personal questions like how much do we earn per month from this organization, which in fact… I didn't feel like answering him, but to be polite I was changing the subject. Like I understand that people sometimes perceive the cooking classes to be a bit expensive, coming here with the aim of supporting our work, but his approach was offensive and snobby! I recall during this particular case. I did not give the best I had, I felt a bit offended, cold and distant!"

This example illustrated that even though this guy showed in this case mindful behavior dimensions: paying attention to the chef's work and personal endeavor by coming and participating to the class to try and create a connection with the chef, the selection of his question concerning meeting ends was not accepted by Leila and broke the interaction between them. Failing to address your counterpart linearly or with an air of superiority would create a sense of misinterpretation and destroy interpersonal relationship.

4.2.3 Lack of trust

Trust is defined as a key element in partnering and a central factor in contributing to positive interpersonal relationships, because, the deep-seated human need to understand his social surroundings is remarkably complicated and human behavior is not always predictable (Covey, 1989; Fox, 1974). Trusting people reduces their perceived social complexity, and that rules out the risk of undesirable behaviors on the part of the trusted party (Luhmann, 2000). The following example is a discussion between Anna and her mom from Lebanon regarding trust in product authenticity:

Anna: This morning my grandmother asked me: Are you sure it's organic? Just because they say it's an organic market doesn't mean it's true.

Anna's mom: The core of it is to introduce trust to the Lebanese society because they are the basis. So you cannot just rely on the foreigners. It's full of foreigners. My kids are all foreigners.

Anna: also from the supermarket when I buy Biomass product [Organic food brand]. I one time brought to a friend organic products when I was doing grocery for him. As we don't really need to wash the products as well as the other stuff. Just with clean water and it will be fine! He replied, are you sure? Just because it says organic doesn't mean that it is organic. Doesn't mean it's not straight.

Anna's mom: Trust and awareness are a big deal and validating that it is really truly is a must. So maybe some filming some Instagram on actually how they get it from the ground, from the producers how they plant it...? Ok it could be like a fast movie, I could see it happening, in order to build that trust! They could place this video in the airport for example, it's getting such an influx and maybe a stand or like a juice and then an introduction pamphlet of souk el Tayeb"

4.2.4 Higher expectations

Facing conflicting goals. Pierre and Lynn perceived the initiative of this hybrid organization to be capitalist as it attracts the wealthier community.

"Pierre: You should change the customers, the problem is that the initiative is good but we need to recuperate it from capitalism from this kind of initiative, it's very good but it is to the profit of capitalism, the customers are mostly bourgeois, just have a look, you have this table in the center, these young people, young bourgeois Lebanese.
Lynn: I agree with Pierre, It is quite bourgeois it is not at all for middle class, 30 USD, I found it expensive for Lebanon, not too expensive, it is the normal price range, but it is expensive if you are a middle class worker you cannot afford it.
Researcher: but as you know it is an NGO, it's not capitalist, so basically all the money will go back to the community.
Pierre: I donno I would like to see that, I am not sure. Just because it is a NGO that it is not recuperated by capitalism."

Moreover, Anna attested her disappointment in not following a responsible waste management

supporting sustainable environmental practices that falls down to the same principles of the markets mission.

Not meeting these expectations would create a sense of dissatisfaction and loss of trust:

"One thing that I would love to see is: No more plastic bags!!, I don't think there is any reason for them to have plastic bags whatsoever! That would be huge improvement, I think it would be very responsible if they set up a stand that sells those type of shopping bags and get rid of the plastic, I went to one store and I said

to the woman: why can't you just put it for me in a paper bag? And she said well you won't be able to carry it! And I said no, and then she's like, well these plastic bags are biodegradable, but they are not that biodegradable at the end of the day, let's face it! So I think they have a responsibility toward plastic production and I think they should be more aware of that!

4.2.5   External environment

External environments can affect negatively mindful behavior of visitors as it could distract their attention from the main mission followed. External environments can be divided into 6 components: Competition, economic landscape, consumer taste, regulation, environment and technology.

The findings outlined that some of these components where that the visitors of the market for example found the products to be expensive and supported at times locally produced products to support the local economy. As Juanitto expressed:

> "We did sometimes [buy local not organic products], but you can find better prices somewhere else."

Furthermore, regarding consumer taste, Mounir addressed his taste preference that inhibited him from being mindful at the first place "I don't eat organic all the time, I differentiate between organic and local, I like more the local, I don't like much organic, I find them different for me – Mounir from Lebanon"

This example also support the fact that believing in the product and service at the first place enhances the sense of mindful behavior.

Table 11 presents illustrations of "Costs of mindful behavior" theme taken for field notes and the interviews.
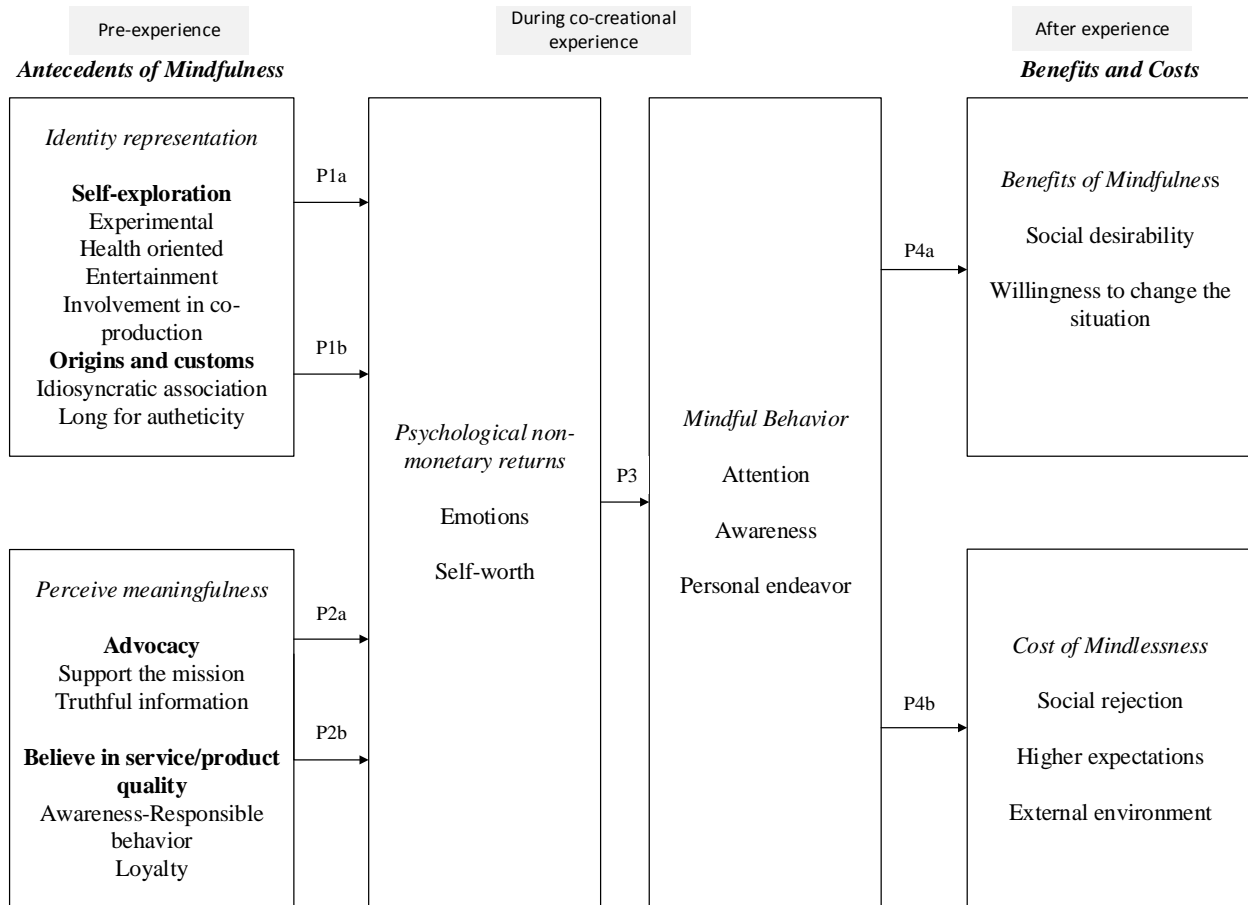
Table 11: Costs of Mindfulness illustrative quotes

Themes	Illustration quotes
Costs	
Social desirability	The comments on Instagram were all positive last year, but although last year I stayed in Lebanon a longer period, I didn't have the opportunity to come here because I was lodging in Bhamdoun [village in mount Lebanon] and unfortunately I couldn't visit. I wish you could come and do the same in the mountains because all the Kuwaiti people are there in the summer! All the areas like Aalay, Bhamdoun, Falougha etc. [more villages' names in Mount Lebanon]- *Farah from Kuwait.*
	If we didn't discover it by mistake we knew about it, I like these types of markets, I would have brought with me my wife and children and more people, and I have social media account and a cultural agenda but I never crossed this market on any of my social media accounts, why there is no marketing for this market?- *Fouad from Lebanon*
Social rejection	Snobby and bourgeoisie: Pierre: You should change the customers, the problem is that the initiative is good but we need to recuperate it from capitalism from this kind of initiative, it's very good but it is to the profit of capitalism, the customers are mostly bourgeois, just have a look, you have this table in the center, these young people, young bourgeois Lebanese
	Lynn: I agree with Pierre, It is quite bourgeois it is not at all for middle class, 30 usd , I found it expensive for Lebanon, not too expensive, it is the normal price range, but it is expensive if you are a middle class worker you cannot afford it.
	Researcher: but as you know it is an NGO, it's not capitalist, so basically all the money will go back to the community.
	Pierre: I donno I would like to see that, I am not sure. Just because it is a NGO that it is not recuperated by capitalism.
	snobby: M. I think I am satisfied in general but what I find difficult is to diversify a little bit the market you get the impression that it is for a very specific type of society and that's a bit tricky, it's not about the Lebanese it's about the level of wealth- *Juanito from Mexico*
	I wish it could be affordable for everyone like somebody who is not from the middle class, like they have another place in Gevinor [name of a hotel] we go there but it is the same people- *Anna mom from Lebanon.*
Lack of trust	Is it true?! [being organic] – *Fouad from Lebanon.*
	Especially if you have gone to other organic markets in other countries, like I said just to make sure it is purely organic have a variety, some of have really good quality because they're claiming that, what it is really is, it should be meet the criteria, I don't know how I feel about the farmers but to me it's commercialized in a way – *Manuela from Mexico.*
Higher expectation	I can speak for myself I always look at them in terms of continuous improvement and bench marking against others so, we pretty much set a standard that is really high so it is a bit critical sometimes. I think another thing would be interesting is to create awareness about the mission, so there is no awareness whatsoever, so if you haven't told us what the mission is! – *Juanitto from Mexico*
	Sustainable environmental practices one thing that I would love to see is no more plastic bags, I don't think there is any reason for them to have plastic bags whatsoever that would be huge improvement! I think it would be very responsible if they set up a stand that sells those type of shopping bags and get rid of the plastic, I went to one store and I said to the woman: why can't you just put it for me in a paper bag? And she said well you won't be able to carry it! And I said no, and then she's like, well these plastic bags are biodegradable but they are not that biodegradable at the end of the day, let's face it. So I think they have a responsibility toward plastic production and I think they should be more aware of that!
	All these people that are working in the rural areas are brought here and this is really good, and especially for the people who are selling recycled glass from the south – *Elie from Lebanon.*
External environment	Competition: We did sometimes, but you can find better prices somewhere else.
	Weather condition: now only if they want to sell more and attract people to stay longer in a comfortable environment. Put some coolers!

V. DEVELOPING A MODEL FOR CO-CREATIONAL MINDFUL SERVICES

This section presents propositions, based on the findings, regarding the connections among co-creational service experience and mindful behaviors aspects. The theoretical model is presented in Figure 6.

Figure 6: Model of mindful behaviour in co-creational service experiences

Pre-experience	During co-creational experience	After experience
Antecedents of Mindfulness		*Benefits and Costs*

Identity representation

Self-exploration
Experimental
Health oriented
Entertainment
Involvement in co-production
Origins and customs
Idiosyncratic association
Long for autheticity

P1a
P1b

Psychological non-monetary returns

Emotions

Self-worth

P3

Mindful Behavior

Attention

Awareness

Personal endeavor

P4a

Benefits of Mindfulness

Social desirability

Willingness to change the situation

Perceive meaningfulness

Advocacy
Support the mission
Truthful information

Believe in service/product quality
Awareness-Responsible behavior
Loyalty

P2a
P2b

P4b

Cost of Mindlessness

Social rejection

Higher expectations

External environment

The first part of the model addresses the relationship between identity representation and the perceived meaningfulness of co-creational experiences, on the formation of psychological non-monetary return forms of mindfulness namely, emotions and self-worth.

Grönroos, & Voima (2013) identifies three spheres of value co-creation: the provider, consumer, and joint spheres. They describe how each sphere is responsible for facilitating in the production of mutual values. Co-creation outcomes may depend on certain identity representation that the producer and the consumer possess where they can jointly integrate their personal resources to create intrinsic-specific values.

The data suggest that self-exploration and the origin and customs in the co-creational activities amplifies the connectedness of relationship between the service provider and consumers creating psychological non-monetary returns namely genuine emotions and Self-worth. We present the following propositions:

Proposition 1a. Self-exploration increases visitor sense of psychological non-monetary returns
Proposition 1b. Origins and Customs increases sense of psychological non-monetary returns

Perceiving the meaningfulness of the message provided is expected to affect psychological non-monetary returns as high level of identification, natural emotions are reflected. Our data demonstrated how the meaningfulness of service provided from both actors increases psychological non-monetary return: the visitors to the market and restaurants expressed compassion, attachment and nostalgia, as per the producers they expressed sense of contribution and feel of pride. This effect is presented in the following propositions:

Proposition 2a. Being an advocate of the mission increases the sense of psychological non-monetary returns
Proposition 2b. Belief in quality of service increases the sense of psychological non-monetary returns.

The next part of the model addresses the relationship between the non-monetary psychological returns and the expression of mindful behavior. Our data revealed that the genuine emotions and self-worth outcomes generated during co-creational activities have the power to generate action.

Attention, Awareness and personal endeavor as per examples shown in the previous section gave rise to mindful behavior as an outcome of co-creational activities. The following proposition addresses the effect of psychological non-monetary returns on mindful behavior.

Proposition 3. Psychological non-monetary return of visitors and service providers increases their Attention, Awareness and their personal endeavor.

Lastly, the model addresses the impact of mindful behavior on the service experience as a whole, addressing its benefits (willingness to change and acting socially responsible) and its costs leading to social rejection, higher expectations and lack of trust in organization.

Proposition 4a. Mindful behavior is positively related to socially responsible behavior and willingness to change
Proposition 4b. Mindful behavior is positively related to social rejection and sense of unauthenticity

The Findings suggest that mindful behavior in co-creational activities is associated with an influence of identity representation when the perception of the service experienced seems meaningful to all parties involved. Mindfulness is experienced through psychological non-monetary return aspects such as genuine emotions and self-worth and can contribute in enhancing the awareness and attention and push people to act upon their values and their personal endeavors.

In expressing mindful behavior beneficial as per costs outcomes were evident on service experience. I posit that identity representation and the perceived meaningfulness of the message intended to convey increases psychological non-monetary returns (Proposition 1 and 2). The psychological non-monetary returns, in turn, increase mindful behavior (Proposition 3), which may involve, beneficial as per costs that are due to personal, organizational and social practices (proposition 4).

VI. DISCUSSION

The study integrates psychology into organizational research of co-creational service experiences, taken from different actors, the producer and the consumer, inside hybrid organization, defined as an emerging form of community wealth building that combine features of for profit and non-profit companies (Battiliana & Dorado, 2010; Pache & Santos, 2013). This study focuses specifically on the interrelation of co-creational practices and mindful behavior, the antecedents, and the impacts (benefits and costs) identifying specific pattern of logic combinations, thereby providing clues about how social enterprises work could be sustained. A thorough examination of service providers and consumer behavior in hybrids (Souk el Tayeb case in Lebanon) allowed me to discover the ways in which the organization can successfully navigate their understanding on the outcomes of co-creational activities generated from mindful behaviors of service providers and visitors, enabling them to recalibrate and reorient their experiences. In doing so, this study makes a series of important contributions to research on mindful behavior in co-creational studies, emotional labor studies and organizational settings studies.

Below I elaborate on each of these findings and discuss our contributions to the emergent literature.

VI.1 Theoretical contribution

Mindful behavior in co-creational studies

In this study, I sought to understand whether co-creational activities are actually associated with customer mindfulness of visitors and service providers' offerings to identify and capture value in sustainable development plans, addressing a knowledge gap in mindful behavior and consumer behavior theory.

Mindfulness is defined as a fundamental notion of humanistic theories, as it is an attribute of consciousness long believed to promote psychological well-being (Brown & Ryan, 2003). Although previous research on mindful behavior has recently prevailed (AMRA, 2018), such literature often lacked a cohesive approach to understanding how mindful behavior of both the visitor and the service provider can impact the outcomes generated from co-creational service experiences at hybrid organizations. I therefore, began with a research question seeking to explore the process in which mindful behavior is formed. From its antecedents, to the experience it and finally the outcomes (see Figure 6). We studied the case of "Souk el Tayeb" a hybrid organization in Lebanon.

Previous work on mindful behavior tended to focus on the positive outcomes covering three areas: the individual, organizational and societal (Grimes et al., 2013 Schutte & Malouff, 2011; Woods & Moscardo, 2003; Wamsler, 2018). However, to the best of my knowledge, first, this study is the first attempt to study these two concepts (Co-creation and mindfulness), and second it is the first to highlight on the negative outcomes of mindful behavior when co-creating experiences.

This study seeks to align some initial insights with understanding among scholars that visitors are more likely to be mindful if they have a predisposition to mindfulness as a cognitive style, high levels of interest in the place or experience focus (Moscardo, 2009), our study demonstrated that individual representation and meaningfulness of experience increases psychological non-monetary return, by supporting and advocating the mission and activities of the organization.

Whereas most prior research has focused on the individual level antecedents to mindful behavior (Butler & Gray, 2006), this study concentrates on the direct relation of non-psychological returns on mindful behavior, theorizing that psychological non-monetary returns impact directly the dimensions of mindful behavior- namely, Awareness, attention and personal endeavor, and can have some consequence on the outcomes of service experience at the end. This finding aligns with prior research of mindfulness studies revealing that it may increase action-taking for the common good, both individually and collectively (Wamsler, 2018).

Further, the findings challenged the notion that the outcome of mindfulness construct are mainly positive (Carson & Langer, 2006). Previous studies has linked mindful behavior to be associated with a range of positive outcomes including better decision making, more effective learning, improved mental and physical health, better memory for the details of a situation, enhanced feelings of self-worth, more effective responses to crises, greater creativity, positive evaluations of experiences and positive affective or emotional responses to situations (Carson & Langer, 2006). Instead, this study argued and demonstrated through findings from interviews done with visitors and producers that the very nature of mindful behavior when co-creating experiences may involve, beneficial as per costs that are due to personal, organizational and social practices.

Emotional labor studies

This study also makes several important theoretical contributions to emotional labor in co-creational activities literature. Studies have explored the personality construct of mindfulness (Giluk, 2009; Goodman et al., 2018; Langer & Moldoveanu, 2000). Our findings sheds new light on documenting service providers and consumers mindful behavior toward each other describing their experiences during co-creational activities at social enterprises and specifically in hybrid organization. It extends current research by clarifying how organizational context may facilitate or hinder customers' involvement in service production.

Organizational settings

Moreover, the model makes an important contribution by advancing knowledge on: how co-creation and mindful behavior of visitors influence social entrepreneurial efforts in providing good encounters and practices to overcome and manage cultural barriers in troubled changing environment in order be aware of the negative outcomes generated form mindful behavior and by that facilitate positive outcomes for the organization, and in turn the community.

Finally, this study would help service providers change strategies and implement platforms for co-creating unique experiences, allowing visitors to become more physically and emotionally engaged in the process. Consideration of all such aspects is vital to research of both mindfulness and mindlessness,- defined by Bodner & Langer, (2001, p1): "When in a mindless state, an individual operates much like a robot; thoughts, emotions, and behaviors (hereafter just behaviors) are determined by 'programmed' routines based on distinctions and associations learned in the past"

VI.2 Limitations and future research

Of course, as is the case with any work, despite the present contributions, this study has limitations that suggest direction for future research.

First, the study results are specific to one type of Social enterprise (hybrid) where organizational culture is friendly when it comes to people's interaction. These findings cannot be generalized to other types of organizational cultures. Thus future research should focus studying the mindful construct and co-creational experiences in different organizational cultural aspects. It would be

interesting if the evaluation of mindful behavior would change in other types of enterprises that co-creates experiences to its customers.

Second, we opted a qualitative research strategy; however, the next step would be to use a quantitative approach to better generalize our findings.

Third, while the present study concentrated on visitors and service producers that attend the market and the restaurants, this research did not fully take into account the equal social classes' representation, as most of the 62 Visitors had wealthy economic status (gaining more than 3000 USD per month). Mindful behavior in co-creational service experience would be better understood if all social classes were represented equally.

And finally, it might be desirable to explore the responses of organizations to the negative outcomes of mindfulness in co-creational activities.

Thanking you for your constructive feedback

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Appendix E: Consent for participation and Interview protocol

Consent for participation in a research interview

I agree to participate in a research project led by Christelle Traboulsi from the University of Cagliari, Italy. The purpose of this document is to specify the terms of my participation in the project through being interviewed.

1. I have been given sufficient information about this research project. The purpose of my participation as an interviewee in this project has been explained to me and is clear.

2. My participation as an interviewee in this project is voluntary. There is no explicit or implicit coercion whatsoever to participate.

3. Participation involves being interviewed by (a) researcher(s) from the University of Cagliari. The interview will last approximately 15 minutes. I allow the researcher(s) to take written notes during the interview. I also may allow the recording (by audio/video tape) of the interview. It is clear to me that in case I do not want the interview to be taped I am at any point of time fully entitled to withdraw from participation.

4. I have the right not to answer any of the questions. If I feel uncomfortable in any way during the interview session, I have the right to withdraw from the interview.

5. I have been given the explicit guarantees that, if I wish so, the researcher will not identify me by name or function in any reports using information obtained from this interview, and that my confidentiality as a participant in this study will remain secure. In all cases subsequent uses of records and data will be subject to standard data use policies at the EUI (Data Protection Policy).

6. I have read and understood the points and statements of this form. I have had all my questions answered to my satisfaction, and I voluntarily agree to participate in this study.

7. I have been given a copy of this consent form co-signed by the interviewer.

_____ _____
Participant's Signature   Date

_____ _____
Researcher's Signature   Date

For further information,
Please contact: Prof. Francesca Cabiddu
[fcabiddu@unica.it]

Appendix F: Interview Protocol with visitors
Oral introduction:
Warm greeting…
(Introduce myself)
I am here today to try to meet a lot of people to talk about their overall experience at Souk el Tayeb market to assess the process used inside the organization for implementing improvements. I'm really glad I'm meeting with you because I could have a pretty good idea of what the reality is! I would like to explain the process of how the process goes. I'm recording so I can actually talk to you instead of taking notes, we transcribe our discussion, than go through them to bring out themes, to learn from what is going on. I would like to assure that your name will never be associated with the research, I take very seriously responsibility to protect the identity of people. Moreover, it's important for people to be honest or we are not going to learn anything. (With a big smiley face).

1. Why were you interested in visiting Souk el Tayeb market/ cooking class at Souk el Tayeb?
2. Is it your first visit?
3. If no, how often do you visit the market?
4. With whom did you come?
5. How did you come upon it?
6. What were your prior expectations?
7. Do you consider yourself as an experimental person?
8. Do you follow a healthy lifestyle?
9. Can you walk me through your visit?
10. What do you think of Souk el Tayeb mission?
11. How much did you feel involved in the mission?
12. Can you describe in details your interaction with the farmers/ chefs? (Service quality, product quality, chef's know-how, attention, orientation, value, personalization, entertaining etc.)
13. What were the personal benefits/costs involved from this interaction?
14. Can you describe your emotions during your experience? How did you feel? Why?
15. How did you perceive the overall visit of Souk el Tayeb and why?
16. What do you think could be improved?
17. Would you repeat? Why?
18. How about recommending it?
19. If yes, in which way would will you contribute?
20. What will you take with you as a memory from here?

Demographics:

Age		Level of education		Marital status	
Sex		Field of work		Income	

Appendix G: Interview protocol with CEO

1. Could you explain about the beginning of Souk el Tayeb?
   a. What is your mission?
   b. What are the core value?
   c. How do you select your farmers? (Criteria, approach)
2. Explain about your growth
3. Why did you decide to co-create?
4. How your customers and producers perceived the idea?
5. What were main concerns and difficulties faced?
   a. With producers
   b. Visitors of market and restaurant
6. How are you solving them?
7. What are the marketing strategies followed?
8. Where do you see yourself in 5 years?

Appendix H: Interview protocol with Chefs

1. How did you come upon Souk el Tayeb?
2. How did you find the approach taken?
3. How long have you been working together?
4. Tell me more about yourself (Where do you live? What do you do? What are your customs? And what are you most famous for?)
5. What do this organization means to you?
6. Describe your job and your visitors
7. Describe, with many details as possible, how do you perceive a successful interaction with your visitors and what is your technic to keep them engaged? (How does your personality reflect in your service job? How do the customer react?)
8. How do you feel about it?
9. Describe, with many details as possible, when you were providing the service and felt that the visitors were not engaged. (Do you usually ask the visitors the source of their trouble?)
10. How did you react and feel?
11. What could be improved? What do you suggest?
12. Where do you see yourself in 5 years?

Appendix I: Demographic sample representation

Appendix J: Visitors of Farmers market

Interviews Souk el Tayeb	Names	Duration (minutes)	Age	Gender	Nationality	Education level	Occupation	Martial status	Income per month
ST1	Charabati	7:06	50	Female	Kuwait lives in Lebanon	Bachelor	Interior design	Married	2000
ST2	Julie	10:39	32	Female	France	Bachelor	Social worker	Single	1000
	Nicolas		40	Male	France	School	Restaurant owner	Single	6000
ST3	Afaf	12:21	53	Female	Qatar	Bachelor	housewife	Married	3000+
ST4	Anna	10:15	23	Female	Lebanon living in Sweeden	Bachelor	Student	Single	No Incom
	Anna mom		55	Female	Lebanon	Bachelor	Realestate	Married	3000+
ST5	Zeina	5:36	54	Female	Lebanon	Bachelor	Lanscape architect	Married	N/A
ST6	Alex	8:27	50	Male	Lebanon	School	N/A	Single	2001-300
	Caroline		46	Female	Lebanon	Bachelor	N/A	Single	2001-300
ST7	Michel	9:26	58	Male	Lebanon	Bachelor	Civil engenering	Married	2001-300
	Lena		53	Female	Lebanon	Bachelor	Engerering	Married	2001-300
ST8	Rouwein	8:59	58	Male	Lebanon	Masters	Engenering	Divorced	3000 usd
ST9	Fouad	7:00	25	Male	Lebanon	Bachelor	Digital marketing	Single	2000
	Marwan		38	Male	Lebanon	Bachelor	Doctor	Married	N/A
ST10	Joseph	7:37	27	Male	UK	Masters	lawyer	Single	3000+
ST11	Juanitto	15:40	48	Male	Mexico	Masters	Executive director	Married	3000+
	Manuella		35	Female	Mexico	Masters	Movie producer	Married	3000+
ST12	Daisy	5:32	30	Female	UK	Bachelor	Finance	Single	N/A
ST13	Luka	9:46	34	Male	Slovenia	Masters	Architecture	Single	2001-300
	Jan		37	Male	Slovenia	Masters	Sports marketing	Single	3000+
	Niko		36	Male	Slovenia	Masters	Marketing	Single	2001-300
ST14	Leila	6:15	59	Female	Lebanon	Bachelor	Teacher	Married	3000+
	Layal		49	Female	Canada	Bachelor	Finance	Divorced	3000+
ST15	Mounir	6:09	24	Male	Lebanon	Bachelor	Agriculture engeneer	Single	2000

ST16	Abeer	4:48	21	Female	Bahrain	Bachelor	Student	Single	0
ST17	Amirah	8:22	56	Female	Kuwait	Bachelor	Director service department	Married	3000+
	Farah		27	Female	Kuwait	Bachelor	Engeneer	Single	3000+
	Jaber		15	Male	Kuwait	School	Student	Single	0
ST18	Firas	4:44	18	Male	Lebanon	Bachelor	Student	Single	0
	Sarah		27	Female	Lebanon	Bachelor	Management consulting	Single	2001-300

Appendix K: Visitors of "Tawlet" restaurant

Tawlet	**Names**	**Duration (minutes)**	**Age**	**Gender**	**Nationality**	**Education level**	**Occupation**	**Martial status**	**Income**
Tawlet1	Joseph	5:54	56	Male	Lebanon	Bachelor	Company owner	Divorced	3000+
Tawlet2	Angela	6:06	31	Female	Lebanon	Bachelor	Bankers	Single	2400
	Marc		36	Male	Lebanon	Masters	Bankers	Single	2400
Tawlet3	Charbil	5:01	38	Male	Lebanon	Masters	Architect	Married	1500
Tawlet4	Richard	14:50	32	Male	France	Master	Advertising company	Single	3000+
	Francoise		32	Female	France	Master	Architect	Single	3000+
Tawlet5	Jessica	9:33	26	Female	Lebanon	Bachelor	Trainee lawyer	Single	0
	Ricardo		45	Male	Italian	Bachelor	Event manager	Single	3000+
Tawlet6	Antoine	6:31	67	Male	Lebanon	Bachelor	Traider	Married	N/A
	Louis		27	Male	French	Master	Unemployed	Single	N/A
	Marie		25	Female	French	Master	Unemployed	Single	N/A
Tawlet7	Daan	5:04	53	Male	Netherland	Bachelor	Company director	Married	3000+
Tawlet8	Micheline	6:50	36	Female	Lebanon	Bachelor	Gallerist	Married	3000+
	Tony		46	Male	Lebanon	Bachelor	Director of supply chain	Married	3000+
Tawlet9	Yasmin	13:31	23	Female	Iran/USA	Bachelor	N/A	Single	2000
	Azar		26	Female	Iran/USA	Bachelor	N/A	Single	3000+
	Anahita		28	Female	Iran/USA	PhD	Student	Single	1500
Tawlet10	Charlotte	7:05	23	Female	France	Master	Student	Single	0
Tawlet11	Maya	6:50	21	Female	Lebanon living in France	Bachelor	Student	Single	1001-200
Tawlet12	Veronique	7:55	34	Female	France	Master	Not working	Married	0

	Names	Duration	Age	Gender	Nationality	Education	Occupation	Civil Status	Income
	Chloe		36	Female	France	Bachelor	General manager	Married	3000+
Tawlet13	Elie	5:12	53	Male	Lebanon	Bachelor	Architecture	Divorced	3000+
Tawlet14	Michael	2:49	48	Male	Lebanon	Master	Waste management	Divorced	3000+
Tawlet15	Pedro	10:19	38	Male	Brazil	Bachelor	Civil servant	Seperated	3000+
	David		41	Male	USA	Bachelor	Film	Married	3000+
Tawlet16	Walid	3:48	54	Male	Lebanon	Bachelor		Married	3000+
Tawlet 17	Paul	3:52	55	Male	Lebanon	Bachelor	Communication manager	Married	3000+
	Nivine		50	Female	Lebanon	Bachelor	Nurse	Married	3000+
Tawlet18	Lynn	10:28	51	Female	Lebanon	Bachelor	Psychology	Married	Under100
	Pierre		46	Male	France	PhD	Sociology	Married	1001-200
Tawlet19	Evlyn	7:17	26	Female	UK live in Dubai	Master	Consultent	Single	3000+
	Abigail		27	Female	UK live in Dubai	School	Exacutive assistante	Single	3000+

Appendix L: Demographic representation of local producers

	Names	Duration (minutes)	Age	Gender	Nationality	Working with ST
Chef 1	Souad	10:15	56	Woman	Lebanese	2 years
Chef 2	Mona	9:03	48	Woman	Palestinian	1 year
Chef 3	Leila	8:26	58	Woman	Syrian	2 years
Chef 4	Mira	11:23	45	Woman	Lebanese	6 months
Chef 5	Rima	9:47	55	Woman	Lebanese	3 years