Sustainability, Interior Design, and Comfort in Youth Travel Accommodations

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ABSTRACT

There are numerous claims for sustainability in design, design research, environmental ergonomics, and other areas about human-environment interaction. However high specificity of each area, fragmented research, and various approaches to sustainability have induced the need to discuss the relationship between sustainability, design, and human interaction with involving environment, especially in built environment. New trend of growing number of independent hostels in Lisbon calls for deep analysis of this system. The study of publications, both scientific and public, was made to understand the characteristics of it. This article emphasizes the relations among sustainability, interior design, comfort, and well-being, necessary to understand the end-user of these travel accommodations. The findings are contributing for development of survey to be carried out in second phase of research.

Keywords: Sustainability, Interior Design, Comfort, Well-being, Youth Travel Accommodations

INTRODUCTION

This paper is developed in ambit of an on-going Ph.D. research project related with sustainability, interior design, and well-being. It aims to explore and discuss the relationship between sustainability, interior design, and comfort in youth travel accommodations (YTA). While there is information available on each of the topics separately, there is still need for debate that would link them together. There was performed literature analysis crossing and interlinking the findings of such areas as environmental ethics, environmental psychology, and environmental ergonomics, which then were related to areas of research. There are various approaches to sustainability, but in this research, it is considered from the embracing systemic—ecological—point of view. Studies in environmental ethics show that the widespread concept of sustainable development (SD), which claims for equal balance between environmental, economic, and social issues, misses the basic meaning of ecology as a home system embracing all manmade systems. Besides, the new paradigm of flourishing beyond mere longevity—sustainability—has reinforced research

on comfort and well-being (WB).

Sequentially importance of environmental ergonomics along with other disciplines researching interaction between humans and their environments is extremely evident for the discipline of in interior design (ID), which is closely responsible for comfort and WB of users in indoors. The research also indicates that, besides environmental stimuli, there are subjective variables contributing for ones sense of comfort, consequently WB. These issues can be detected and addressed in ID through user-centered design (UCD)—focused on end users' needs, wants and limitations—along with universal design (UD)—aimed for design for all regardless their age, abilities, or status in life—approaches that are essential to evaluate/improve users' interactions with living environmental. Nevertheless growing number of population means decreasing availability of living space in dwellings, if one seeks for sustainable result. Thus, it is essential to minimize these areas and improve, or at least maintain, the livability. This is particularly important in YTA, due to recognized impact of built environment on ecosystem, especially in exploration phase, which can be best resolved in design stage. Therefore because of building and, still growing, tourism industries heavily affecting environment, this study expects to contribute for for user related issues in tools and methodologies, such as Portuguese LiderA system that evaluates sustainability of YTA.

SUSTAINABILITY

To understand how to evaluate sustainability in YTA, it is necessary first to understand what sustainability is. In this section the reader will be shortly guided through natural evolution of the various approaches to sustainability.

Etymology

Etymology of sustainability suggests that it comes from verb *sustain* meaning to maintain, to continue, to keep alive; and a noun *ability* suggesting a skill, a capacity and a power (physical/mental) to do something, thus we could sum up that sustainability indicates a capability to continue. Besides a capability or ability to continue, it certainly means change towards improvement, just as evolution works in nature, where flourishes and survives the best adapted to existing ecosystem. In the same time the term sustainable is demystified, as it had gained marketing value and replaced by illusory value of term *alternative* (Wood *in* chapman and Gant, 2007).

Historical Context

The idea about negative impact on environment as a result of human actions can be traced back long before actual perception of concerns about environment that grew along with urban/industrial development in end of 19th century and became more evident after World War II (Ferreira, 2003; Pinheiro, 2006; Wood, 2007). Consequently Sustainable Developments (SD) were defined as those, which places human beings in center of concern entitling them for healthy and productive life in balance with nature (UN/WCED, 1987). SD Strategy (SDS) - Agenda 21 (UN, 1992), reaffirmed in Johannesburg (UN, 2002), acknowledges economical, social and environmental issues, as three pillars of SD. European Union (EU) constantly updates EU SDS after first launch of it in 2001 (EC, n.d.), simultaneously encouraging development of National SDS for members of EU, which Portugal approved in 2007 [RCM n.° 109/2007] as National Strategy for Sustainable Development 2015 along with its implementation plan. However unfulfilled objectives that were set in the end of previous century, neglected environmental and social issues in shadow of economic struggles led to reaffirmation to previously set *to do list* in "Rio+20" conference (UN, 2012). These concerns encourage attempts to improve human well-being (UN, 2012; EPC, 2010), whereas considering the great weight of design process empowers the change of the paradigm where the concept of design, per se, should involve notion of sustainability (Chapman and Gant, 2007; Shedroff, 2009; Ceschin et al., 2010).

Sustainability and Design Ethics

Russ (2010) questions philosophy and values of designer (see also Papanek, 2011; McDonough and Braungart, 2009). Design reflects the core desires of our society, thus designers are responsible for bringing sustainable realities to our society. He questions most widespread concept of sustainability, which works with economical model of capitals, which offers sustainable outcome when social, economical and environmental issues are balanced equally among them, as if they were equally weighted. Instead another systemic embracing ecological model of

sustainability should be preferred. Etymology of term ecology allows to consider it as the knowledge or study of home environment (Online Etymology Dictionary, 2014), the other socio-economic systems should be seen as sub-systems of natural systems, without possibility to transfer the values from sub-systems to compensate loses of parent system (Berry, 1996). This embracing systemic view of sustainability has been evolving in last years to extent where mere idea of longevity that term sustainability doesn't satisfy the recently developing science of subjective well-being (SWB) and happiness (Diener, 2009; Diener et al., 2010). These developments already have influenced creation of new measurements of human success, for example, Happy Planet Index (nef, 2012; OECD, 2013). This index measures experienced WB and life expectancy, them multiplies it, in the end dividing by ecological footprint of the country. Russ (2010) criticizes utilitarian views of human-nature interactions, which see any other system as a means value for the sake of human benefit. It is natural for humans to act in their own interest, however, he questioning, if maybe ones subjective value can or has overpowered measured economical (objective) value, here specifically stressing the concept of ecology and impossibility to substitute natural systems with objective, economical values (Berry, 1996; Orr, 2002; Evans, 2005).

Sustainability and Design

Finding new sustainable patterns for consumption and production was set as one of crucial conditions towards SD. Resource reducing/conscious-use approaches based on *6-RE Philosophy* (Jensen and Remmen, 2006), acknowledges need to reduce impact on environment, nevertheless environmentally improved product is not beneficial unless it's economically viable and satisfies consumer needs (Tischner et al, 2000). Based on previously mentioned SD definition *sustainability* is understood as complex system where environmental, social, and economical issues/sub-issues must be evaluated and balanced (Manzini and Jégou, 2003; Crul and Diehl, 2006). Simultaneously it was challenged to transform from product-based to context-based (Vezzoli and Manzini, 2008) new scenarios of sustainable well-being (Chapman and Gant, 2007; Ceschin et al., 2010). For many years design has been moved by what human wants but does not need (Papanek, 2011). It is important to understand ecosystem that supports our existence along with understanding the weight and processes of consumerism (Ferreira, 2003). Most authors agree that 80% of responsibility for environmental impact (EI) goes to designers as it is determined at the design stage, not in moment of purchase, nor use, thus sustainable choices for consumers are pointless, if great part of these decisions were not already taken during process of design. Therefore suggesting that designers must shift the paradigm of consumer society. "*Sustainable design* [italic] is about criticism" (Chapman and Gant, 2007: p.4), encouraging designers to override lately made image of lazy somewhat cosmetic character of design by this empowering the healing of hungry trend-driven consumer society towards knowledge-driven, which implies taking risks of being criticized for radical (or not) design ethics, while stepping out of comfort zone, and ultimately questioning personas and themselves about the differences between sustainable and unsustainable design and if human behavior can be changed by designers. Furthermore one should try more to adapt to existing environment instead of the obsession for possessing and adjusting it for ones needs without awareness of consequences. Nevertheless designer single-handedly can't, nor has to change the world, but surely designer has political impact. Designers work as facilitators to steer for real long-term sustainable progress but do not suggest complete end of consuming, understanding that possessions for material things of our species excludes such utopia as non-consumption therefore balancing on the edge of overproduction of sustainable goods, which then would turn unsustainable. Designers ought to steer for 100% sustainable, even when there is discussion if 10% improvements towards sustainability can be considered sustainable or not, green or not, which in the same time can be off-putting or unhelpful and stimulating for further activities towards complete sustainability, if such exists. Eventually sustainable design is about reduction of impact, thus sustainable designer should strike where lies biggest impact instead of operating around its margins. Advocating interdisciplinary attitude and collaboration between theory and practice awakens consciousness of design research, practice and industry transferring it as well to consumers. Likewise positioned in core of change, sustainable design has a potential to navigate towards positive *eco-nomic* progress. Environmental movement in 1960s powered the change of paradigm of design where it was largely seen as process empowering business due to political and economical pressure even if early pioneers of this movement suggested that design could balance between economical growth, social equity and environment. Nevertheless until late, due to complexity of sustainable consumption and production plan, design had embraced eco-efficiency principles with rare tentative of effectiveness, likewise it is questioned if creation of well-being rather than goods or services could be a new reason of design. In 1st decade of this century Fuad-Luke (*in* Chapman and Gant, 2007: pp.18-55) pointed out the reports of UK Design Council that revealed the lack of engagement between sustainable design practice and theory despite growing amount of research-based, accessible and otherwise inspirational literature—this is not exclusive to UK—, from 100 lead somewhat iconic designers only 1 revealed that embraces sustainable design thinking, 5 admitted practicing or being interested in eco-design thinking, while 94 focused in other aspects of design, such as emotions,

innovation and others. This could be explained by lack of skills, influence for decision makers, ambition or complexity of relationship between designers, producers and consumers. Sequentially challenging design to deal with its professional and scientific field, in the same time, ironically, opening an opportunity for design to reinvent itself, the way it is being though and practiced. Appreciating what we already have seems to be one of critical components towards sustainability, as dissatisfaction of what we have "is a key driver of consumerism" (Walker *in* Chapman and Gant, 2007: p.59) which excessively leads to unsustainability; therefore re-appreciation of forgotten products due to uninviting appearance by re-using them, by adding a new lifetime is seen as very welcome towards *design for sustainability* (see also Bhamra and Lofthouse, 2007). Moreover this approach applied for human-made environments seems to be loaded of opportunities to re-value what is forgotten, embedding not only economical concerns by re-using what you already have, but also environmental concerns by re-using instead of search for raw resources, and finally social concern by re-valuing somewhat old-fashion product with great sentimental value.

Thoughts about Design Identity

Design is not luxurious nor new-generated ideas according to common fashion guidelines (Munari, 1993) but "conscious and intuitive effort to impose meaningful order" (Papanek, 2011: p.4), moreover it should improve WB (EPC, 2010) though maintain within basic system/bio-capacity limits (Ferreira, 2003). Buchanan (2010) believes design is not only privileged for design professionals but also reflects culture as a whole. Therefore in 21st century it will not maintain in paradigm of 20th century with the rules of ever-shifting styles and obsession that new is always better. Designers and individuals bare responsibility, however none "possesses all of the knowledge and wisdom required to understand the act of responsibility in this world" (Buchanan, 2010; p.16). He shares opinion that designers who do not realize their identity and values, that don't take themselves seriously, will not survive in the world, which is still dominated by engineering and business professionals. Nevertheless he states that there are more designers that got lost in their way than those that successfully influenced their clients and general public. He points out the dangerous choices to be made whether they are driven by individual vision of values or whatever the substitute for the old ideology of modernism may come in place. However recognizes the opportunity for designers to step in envisioning the future post-modern culture, besides states that it would rather be a culture of conversation and collaboration within framework than new agreement of ideological culture. Moreover, he suggests designers will help the individuals to be placed within ones immediate context, despite continuity of mass production for ideologically abstract consumer. Jonas (2010) is worried that design as a single discipline has still not gained it's place, and criticizes that other disciplines, including marketing, speak of design as a complementary substance of their own, not really a contribution by it's own for the culture, thus questioning how design itself could reach autonomy and why it has not yet. Though various authors have been promoting that design thinking should be a model for scientific research, author opposes it, saying that it cannot serve as basis for everything and anything else even if design is a cross-discipline and incorporates diverse professional subjects. Nonetheless design is future-oriented and is very changing in its very nature; it changes the world and is influenced by the changing world again, thus always and constantly evolving. Design could become disciplinary autonomous as a distinct co-system of economy, if it would transform its simple, sometimes naive purposes into generative purposes of values relative to the context of the general ecosystem. He offers methodology based on scenarios, where they are understood as envisioning the possible, probable, or preferable future or futures to be avoided and/or contain steps to achieve them. Jonas (2010) divides the design process in three main steps of (1) analysis, (2) projection and (3) synthesis, further explaining that in the first step should be made analytical scenarios, in the second phase – the context scenarios, finally, the third step is reserved for user scenarios. Moreover building scenarios requires constant open communication and participation of parties (for example, users, stakeholders and specialists among others) that influence and are influenced in context of this process, thus creating new information and knowledge. Design till now still is seen as part of the problem of global concern, however it can and must become a solution starting from reassessing the quality of world under profound ethical attention in order to shift its paradigm and improve overall well-being and transition towards sustainable society where as main driver is social innovation (Chapman and Gant, 2007; Bhamra and Lofthouse, 2007). Manzini argues that creative communities and collaborative networks blending together will create new vision of "sustainable multi-local society" (*in* Chapman and Gant, 2007: p.81), where phenomena of globalization will give new vibes to understanding local with enriching physical and socio-cultural resources in worldwide dimensions. He also refers to dissemination of information thanks to phenomenon of Internet of this kind of society. Moreover the idea of this new society requires rethinking systems, service-system design that would enable partner-based solutions enriched by skills and abilities of participants while improving their quality of life.

ERGONOMICS

The success of design is closely related to usability of any kind of product, therefore sustainability is depended from usability as it is from ergonomics applied in design process. The reason for that is close relationship between ergonomics and product usability (Green and Jordan, 2001).

Etymology

According to Pheasant (2001) Ergonomics, which comes from *ergos* – Greek word for work, and *nomos* – for natural law, was first used in contemporary discipline in July 8, 1949. He defined ergonomics as science of work, in broader sense of work as any purposeful human activity, though as he claimed throughout first half of century ergonomics has been about narrower sense of occupational activity related with design of tools and equipment. Nevertheless he assumed that concern with any human activity with artifacts or environments, naturally, meant that ergonomics is concerned with design.

Historical Context

The first interactions between human and environments were documented in ancient Greece, medieval medicine, and later in Poland and Germany around beginning of 20th century. The modern understanding ergonomics initiated around time of World War II. In 2000 Wilson questioned if predictions success rate in ergonomics was sufficient considering the importance of it for human health and safety. He pointed out that the need for redefinition of purpose of being of ergonomics as a very broad discipline considering normal advances of it. At the time he believed ergonomics would benefit human interaction with objects, systems, environments and other humans. He argued ergonomics to be the primary multi-, inter-, cross-disciplinary inquiry in order to respond to needs of human well-being in 21st century. Nevertheless ergonomics should embrace more qualitative methods than in past. Finally, the overall goal of ergonomics, he stated, was to improve human well-being (Wilson, 2000). Though ergonomics has been struggling (evolving) between definitions, it was important to understand/improve human interaction with anything around them (Wilson, 2000). He defined ergonomics as “the theoretical and fundamental understanding of human behaviour and performance in purposeful interacting sociotechnical systems, and the application of that understanding to design of interactions in the context of real settings” (Wilson, 2000: p.560). He likewise refers that ergonomics—though research cognitive characteristics—have more similarities with anthropology than psychology due to approach to problem; furthermore, suggesting growing interest of ergonomists in ethnography because of preserved context of studied interaction. Wilson believed that instead of fixing on improving a human interaction with sole entity, ergonomics should concentrate more on understanding the interaction per se in order to design more complex systems; change focus from single interaction to systemic. Fourteen years later ergonomics is seen as systems discipline and profession with few of those who rather prefer to label it as having a systems-oriented perspective (Wilson, 2014). Nowadays he refers cognitive and physical interactions’ research loses value if emotional, motivational, environmental and other influences are not taken into account as well. Wilson draws parallels between good ergonomics and systems ergonomics defining that it “examines, accounts for and enhances the design of a system, and people’s interaction with it, rather than concentrating on an individual part of it” (2014: p.6), and refers to system as “inter-related or coupled activities or entities (…), with a joint purpose, links between entities (…) the whole [that] is usually greater (…) than the sum of the parts” (2014: p.6). He recognizes that design of human interaction with/within natural system is more important than designing natural system; moreover, he gradually recognizes natural system as a parent system of other socio-technological systems. However, it is more difficult to understand this parent-child or sibling-sibling systems when human element is present as it crosses the imaginary boundaries of each system/sub-system, thus distorting the distinctions. He recognizes a task analysis performed outwards may help to understand these boundaries in certain context. Nevertheless, qualitative methods carried outside laboratory environment will benefit more the systems ergonomics, though there might exist certain ethical limitations of such research/work. The interaction—main concern of modern ergonomics since its development—is in the basis of any system, thus he suggest the logical evolution from single interaction research towards system ergonomics. The purpose of ergonomics then is to optimize these interactions within/between systems/system’s entities. Further, he states that effort to understand human interaction with natural systems has been growing in past few years influenced by attempts to reach environmental sustainability, mostly driven by fear of consequences and potential impacts of long-term climate changes. Due to complexity of system, it is important to decide early the level of system to collect data from and level to which later to apply changes for. Though systems approach is very complex and might note improve all the issues identified, just asking the correct questions at the early phases of analysis can help to improve some level of system, even if not all of them are followed by solutions

in a period of a limited project (Wilson, 2014).

Ergonomics in Design

Ergonomics essentially is a design–oriented discipline, but ergonomists do not make design. Designers apply ergonomics and there are several factors affecting design, such as character of the design problem and of the product/system to be planned, the accessibility of required appropriate information, tactics for solution (information processing methods), individual issues (designer/specialist intelligence, training, experience, skill, personality) and project organization and management (Bridger, 1995) indicated that in order for designer to use ergonomics in project it is necessary to have or gain knowledge about human anatomy, physiology and psychology, because the range of ergonomics is very broad and it does not have boundaries just to one particular industry or application. However due do rapid growth of amount of information designer would benefit if involved in collaborative network or professionals covering the areas unknown (Chapman and Gant, 2007). Term user-centered design (UCD) appears in Donald Norman's research laboratory at the UCSD in the 1980s and it became commonly used after a co-authored book named: User-Centered System Design: New Perspectives on Human-Computer Interaction (Abras et al., 2004). UCD requires active involvement of users and clear understanding of users, task requirements, correct distribution of function between user and system, iteration of design solutions and multi - disciplinary teams. The five processes in following order are essential in human-centered design development process: planning the human centered design process, understanding and specifying the context of use, specifying the user/organization requirements, producing design and prototypes, performing user–based assessment. To relate the criteria of UCD, design solution must have: functional efficiency, ease of use (understandable), comfort, health and safety issues (Pheasant, 2001). Furthermore UCD and UD are admitted as some of many design activisms that could be assimilated within sustainable WB (Fuad-Luke *in* Chapman and Gant, 2007: pp.18-52).

INTERIOR DESIGN AND COMFORT

Today's perception of comfort is deeply interlinked with ID, as most of time urban citizens spend indoors, thus, evidently, very important to feel well in living environment. DeJean (2009), author of nine books on French literature, history and culture during 17th and 18th centuries and Trustee Professor at University of Pennsylvania, believes that despite differences of perception what comfort means it is shared belief of comfort as a birthright. So what does comfort means according to her findings?

Etymology

The words in todays English 'comfort' and 'comfortable' as comes from French *'réconfort'* meaning help or assistance. Soon were invented words *commode* and *commodité* that became known as "well-being in one's surroundings" (DeJean, 2009). Soon after also the English architects spoke of convenient things as 'commodities'. Overall the word comfort became public after 1678, with various publications in French press regarding to women's fashion world. Suddenly architects started to pay attention to private rooms, especially interior architecture, where individuals actually lived instead of just public spaces and representation rooms. Architects start to focus on family life, friendship and relaxation.

Historical Context

DeJean (2009) refers a time from 1670-1765 as an age of comfort driven by architects, craftsmen and inhabitants of Paris, thus in this time the concepts of home and life were reinvented. It was the age when most architects of the time understood the unseen importance of residential architecture and when most representative creations of time draw the basic ideas in our description of comfort. In the beginning of this age the wealthiest people had no considerations for comfort, privacy, not practical considerations such as lighting, heating, and storage space in their huge houses designed by their architects; all that counted before, was magnificence and majesty, with no promotion of comfort or convenience whatsoever. The houses of wealthiest started to change with a change of human behavior, with second residences where their lifestyle was more casual hidden from public representation and obligatory protocols. However, the idea of dream home nowadays is completely different of what it was before these changes.

While he gives credit to visionary architects, designers, and some of most brilliant craftsmen of all time for inventing the concept of comfort, she recognizes that many aspects of today's definition of comfort we know because of female clientele they transformed their houses for. Thus by the middle of 18th century the size of rooms decreased as number of them increased adding a specific use function to each of them. Connected rooms in row by carefully planed doors became past, as this layout of house did not allow any privacy, such concept didn't exist before. These architects created truly private rooms, a space only for alone time, where 'private' space initially was defined as opposite to public, later gained a more simple explanation as 'living' space. The term private space at this point by definition meant comfortable. Then was introduced societal rooms, kind of social space, semi-public zone, where instead of public rooms, where you would receive people you wanted to impress, influential people of society, here you would meet with your friends. Though todays homes tend to have only one social room, mostly called living room, DeJean (2009) argues that this space is torn between display and comfort, thus triple space system had, in his opinion, notable advantages, such as having public space for official invitees to display your status, having social space for family members and private space for alone time and connection with your inner self. Taking privacy seriously and since the bedroom became private the call bell became a tool to summon the servant to private bedroom, giving a control of when you want to share your privacy. It showed up in French homes in early 18th century, while began to be seen in English homes only in late 18th century and German houses even later, in 1830s. Due to this architectural invention, also the servants' lives improved, giving them certain autonomy of not being always there but at short call. Despite admired new concept of private space, there were who argued that people does not meet anymore, they live separated, eat separated and don't meet in big public spaces on daily basis (DeJean, 2009).

ID, Sustainability and WB

Beyond subsystem of architecture or creation of internal space, Interior Design (ID) embraces multi-disciplinary practices (IDEA, 2007) leading to innovative system (Lawson, 2005) planning approach, solving multifaceted challenge – design towards sustainability. Besides Lawson (2005) reminds the existing gap between designers and end-users in projects where the paying client (usually exists information gap between clients and end-users as well, therefore misinterpreted objectives for design) is not the end-user, this results in misunderstood needs assessment and can eventually lead to design failure, if designer was not paying too much attention to user needs. Furthermore ID is changing paradigm provoked to move beyond vulnerable "green" environmentalism and ecological thinking design towards embracing wide range of disciplinary and theoretical domains with critical ecological design thinking of interaction between individuals and environments that sustain them (IDEA, 2010). Regardless on-going investigation in architecture and design (mostly product related) towards sustainability (Ceschin et al., 2010), ID, as discipline, has crucial research issues to solve, mainly related to WB in human habitats (IDEA, 2007: Jones, 2008, Kleinman et al., 2012).

Comfort, human-environment interaction and ID

Nowadays comfort in build environment is mostly considered as thermal comfort, however it depends on individual subjective characteristics as well (Vink and Hallbeck, 2012). When talking about ones comfort zone, it is called a personal space and it can be defined as moveable hidden borderline around one. To avoid unnecessary stress, others should not invade this imaginary line; it regulates the proximity (Hall, [1966] 1990) of one's interaction with others; it can be compared to bubble which changes shape and size depending to situation one finds oneself. The size and shape of this hidden border besides surroundings may be influenced by cultural background and also with whom this interaction may occur. Nevertheless there are other individual variables affecting these limits, such as: gender and expectations of interaction. The lack of personal space may result in inability to function and complete average tasks. The existence of a semi-private space can encourage the interaction between individuals. Likewise, the layout of a room/equipment can evoke significant effect on communications, depending of type of layout a designer choses, it could keep individuals apart, most often by facing them to opposite direction, or promote interaction between people, mostly, by creating layout design that faces individuals towards each other (Roberts and Russell, 2002). A passive response to an external stimulus provokes physical and/or psychological stress. Autonomic nervous system gives the fastest response preparing one to encounter or escape, endocrine system response of releasing hormone adrenalin among others is slower but lasts longer, immune system gives a systematic response as a result of collected information from various mechanisms of body to fight off the diseases. Persisting stress overtime can lead to the loss of energy and hormones, eventually leading to collapse. Consequently human wish to

control environment can be explained by wish to diminish possible stress stimuli as a survival mechanism. Travel can cause stress through short or long distances, not only because of the journey itself but the emotional effects of being away from home (your comfort zone, your unique private space), but having to experience other issues such as cultural expectations, communication barriers, fears about safety among others Roberts and Russell, 2002).

YOUTH TRAVEL ACCOMMODATIONS (YTA)

In worldwide level youth hostels are represented by Hostelling International (HI), formerly known as International Youth Hostel Federation (IYHF), which is "the only global network of Youth Hostel Associations" (hihostels, 2013). HI as IYHF at the time was formed in 1932 with main focus on travellers', youth, and students' budget accommodations. The HI network offers over 4000 hostels and more than 35 million annual overnight stays. HI believes that youth hostels has fundamental role in development of youth, offering international travel experience, test of capabilities of survival in alien environment, profoundly working with socialization issues of youth travellers. In European level youth hostels are represented by European Union Federation of Youth Hostels Associations (EUFED), it represents 17 Youth Hostel Associations, 15 countries and 1700 youth hostels, having "20 million annual overnight stays within Europe" (EUFED, 2013).

YTA and sustainability

IYHF and EUFED established "The IYHF Environmental Charter" in 1990's and since then have encouraged the member associations to contribute to realization of seven main aims regarding: consumption, recycling, pollution, energy conservation, transport, nature, and environmental education (EUFED, 2013). The HI sustainable tourism initiative currently is called "Say HI to the World" along with "HI Sustainability Charter" in partnership with The Global sustainable Tourism Council (GSTC), which aims for recognizable accomplishments in three main areas of sustainability concept: social, ecological, and economical. These criteria should make a minimum basis for members associations. So far HI has 283 environmentally certified youth hostels.

YTA in Portugal

Portugal has fifty-seven state official youth hostels represented by the Portuguese Youth Hostel Association *MOVIJOVEM – Pousadas de Juventude* (Pousadas de Juventude, 2013), though none of them is yet certified by HI-Q standards for accessibility, comfort, cleanliness, security and privacy (hihostels, 2013). There are three official state youth hostels in Lisbon area but none in area of historical centre (Pousadas de Juventude, 2013). Nevertheless in 2011 *MOVIJOVEM* have compromised to implement various projects to reduce the consumption of resources without loss of comfort and signed protocol for measurement of ecological footprint, reductions of emissions with *Querqus* – National Association for Conservation of Environment.

Findings at this moment indicate that in Portugal according to Decree Law n. º39/2008 touristic enterprises include hotel establishments and seven other typologies, which has state mandatory classification system. Local municipality according to the Decree Law n. º39/2008 is responsible for licensing the hostel. The independent hostel establishment in Portugal can integrate in category of *Local Lodging* [Alojamento Local – Portaria n. º 517 of June 25, 2008] that includes (1) Housing – unit of lodging is understood as autonomous building, (2) Apartment – unit of lodging is autonomous fraction of a building, (3) Accommodation Establishment (AE) – unit of lodging is composed of rooms. In this case hostel usually closer to designation of AE and due to fact that Local Lodging is not considered a touristic enterprise it does not have permission for a specific classification system as one (Art. 3º), however AE should respect basic safety requirements, which obliges that electrical and gas installations fulfill legal norms. Likewise a plan of property indicating the units of lodging is requested, and if the capacity of AE is equal or exceeds fifty people a project and equipment installation against fire risks is too. The capacity of AE is established by number of fixed beds installed in units of lodging. The AE should be installed in well conserved building connected to public communications. Each unit of lodging should have direct access to exterior to assure adequate ventilation conditions, besides which it should also provide security system that guaranties privacy of users. AE should also provide at least one sanitary installation for each three rooms. AE should always gather the requirements of hygiene and cleanliness.

In last few years several independent hostels of Lisbon have been awarded by "Hoscars"—a kind of Oscars for hostels according to hostelworld.com reviews—and many of them maintain throughout the years in the list of Top 10 (hostelworld, 2014).

FINAL THOUGHTS ON SUSTAINABLITY, ID, AND COMFORT IN YTA

Though apparently youth is always connected, western societies have become disconnected from nature and more individualistic (Berry, 1966; Diener, 2009; nef, 2012; Kairos Future, 2013). It is time to reinvent the way we interact with each other and natural systems. It is time to rethink prosperity without growth (Jackson, 2009). It is time to approach design from ecological embracing point of view (Van de Ryn, 2007). Concept of comfortable well-being as a convenience in living space spread in Europe during eighteenth century (DeJean, 2009), along with the concept of private space. Newell (1995) pointed out that privacy—a concept studied by many disciplines—is lacking an agreement on its definitions. Despite discussed by human-centered, place-centered, and human-environment interaction researching disciplines, author noted that term/concept of privacy isn't present in all cultures. When relating human-environment interaction the complexity of the privacy concept is evident when one seeks for refuge in bedroom in the moment of stress, as a place where to regain the personal strengths, refill energies in a private space in order to function in public. Being alone in a private space is important for ones reflection and awareness of the world, however a person is not living in a vacuum, thus interaction is required in order to have anything to reflect upon. An invasion of privacy was mentioned as "the loss of control over information or being the object of unwanted attention". Author saw that philosophers, psychologists, sociologists, lawyers and politicians saw privacy from different perspectives but all agreed on its importance in human existence and development. Nevertheless she believed the privacy should be accessible by every man rather than just wealthy part of society. Though she recognizes the difficulty to provide privacy in limited space, referring to creative solutions in search for privacy in student dormitories where it is more limited access. Likewise she reflects on findings about restoratives characteristics of natural environments for privacy search and stress reduction. Author believes that "a voluntary and temporary condition of separation from public domain" (Newell, 1995: pp. 100) would cover the need and responsibility for choices of privacy. The privacy issue is particularly important in hostels as these establishments usually are with more shared areas than other travel accommodations. Along with need to evaluate dwellings for various reasons (Pinheiro, 2006, 2010, 2012; Amole, 2009), there is a growing need to explore the links between subjective well-being and travel experience (McCabe and Johnson (2013). In last years the importance of Youth Travel have been recognized and the interest in this kind of human-environment interactions is growing and the issues related to these travel accommodations, comfort and well-being should be paid more attention than before UNWTO, WYSE (2011). Though tourism in Portugal was recognized as one of the main development strategies PENT (2011), the youth travel accommodations are jet to be explored. This study should contribute for this system, primarily by exploring it and defining its characteristics, and secondary aim to improve it by contributing for national sustainability evaluation LiderA system that currently already has an application for hotels (Pinheiro, 2012).

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