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Unremarkable experiences –
DESIGNING THE USER EXPERIENCE OF ELEVATORS

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ABSTRACT

Elevators enable people and goods to be transported to great heights at substantial speeds. The feats required technologically for suspension, movement, controls and safety are no less than remarkable. This is increasingly so when considering the competing new heights of skyscrapers. Although technological accomplishments are becoming ever more extraordinary, for the sake of those using the technologies, there is also the need to counter this remarkableness and consider the unremarkable as an experiential design goal. Discourse in user experience (UX) has mainly focused on designing for positive, affective and memorable experiences. However, in the case of utilitarian technologies such as elevators often good or positive experiences go unnoticed. The current study's findings show just this. This article describes a study of UX with elevators using field observations and short interviews. Positive experiences were reflected in quantitative opinion scales related to the elevators under study. Negative experiences regarding previous elevator experiences were qualitatively recollected without prompting. The age and the detail of the recollected experiences suggest the significance negative (remarkable) events have on memory, influencing current and future impressions of elevator design. This calls for UX attention to be placed on designing for the unremarkable.

THAT'S REMARKABLE – UX PARADIGMS SO FAR

For decades now UX has been the subject of much discussion in the fields of design and human-design interaction (HDI). Attention has been placed on designing to elicit affect, or positive emotional experience in consumers (Hassenzahl, 2003; Jordan, 2000; Arhippainen, 2010). Often, the idea is to establish a consumer-product relationship (Gulden and Moestue, 2011), and on a deeper level, a consumer-brand attachment from which to base consumer preference, and future consumption (Hassenzahl, 2003; Jordan, 2000).

Many scholars have noted the multiplicity in definitions of UX (Arhippainen, 2010; Roto, Law, Vermeeren and Hoonhout, 2011). Roto et al. (2011) have described UX in terms of three main approaches as a: 1) phenomenon; 2) field of study; and 3) practice. The phenomenon approach covers issues such as parameters of how UX is described and defined, its conditions and implications. As a field of study UX is treated in terms of design methodologies and how these may impact experience. UX as a practice refers to evaluation techniques and methodologies. While many scholars and designers have emphasised characteristics which contribute to remarkable, exceptional, 'better than average'

experiences such as the "wow" factor, surprise and pleasure (Draper, 1999; Gaver, 2002; Gaver and Martin, 2000; Jordan, 1998; Mahlke and Thüring, 2007), others have discussed the nature of UX as accounting for the broader contributing factors of interactions (Hassenzahl and Tractinsky, 2006; Kuniavsky, 2003; McCarthy and Wright, 2004). They highlight the purpose of UX as acknowledging the role that dimensions such as time, context and the mind (experience) play in influencing matters such as usability, perceived usability, perceived usefulness, satisfaction and enjoyment (Davis, 1984; Tractinsky, Katz and Ikar, 2000).

One matter that the above mentioned approaches have in common is their emphasis on UX in terms of memorable, affective and remarkable experiences. This refers to experiences, prominent elements and design features that trigger some form of conscious emotion within the user. Through emotions people recall products, represent opinions (either negative or positive), and subsequently pre-evaluate future design encounters. Scholars and designers seem to ignore, however, the experiences with products that are designed to facilitate other interactions and experiences. These products are tools, often used by non-purchasers, quite literally embodying Heidegger's (1996) *handiness* and readiness-at-hand, which exist in systems and relationships with other equipment, never supposed to be experienced in and of themselves. The same may be said of experience, in terms of its conscious and unconscious components, in that it is not useful or desirable to be aware of all the interactions, encounters and information we are experiencing. Particularly in terms of elevator travel, good UX happens when all goes well and an elevator travelers stream of thought remains undisturbed from floor A to floor B.

THE REMARKABLE ELEVATING MACHINES – CROSS CONTEXT TRANSPORTATION PORTALS

Elevators have existed throughout history. They can be seen as early as ancient Egypt, enabling the construction of pyramids, originating as hoists and pulley systems. These systems developed into counter-weighted lifts, ascending rooms (see Figure 1 for the author's reproduction of Elisha Otis' safety elevator exhibited at the Crystal Palace Expo 1854), hydraulically powered industrial lifts and finally, various types of modern elevators commonly used today (Gray, 2002). The general purpose of elevators is to transport people and objects from one floor to the next, by ascending and descending. Elevator use varies greatly from leisure and commercial environments such as hotels, spas, shopping malls etc. to utilitarian contexts such as office buildings, car

parks, constructions sites, mines, residential structures (i.e. apartment buildings), as well as health and rehabilitation contexts (hospitals and medical centres). Each of these contexts imposes different physical, psychological and social dynamics on the user. Likewise, each architectural level possesses its own aesthetic qualities coupled with different sets of socio-psychological dynamics. Upon arriving at various levels, building users will inevitably find that the feeling of the space changes – ceilings exist at varying heights, floors are fitted with differing materials and the spatial purpose differs.
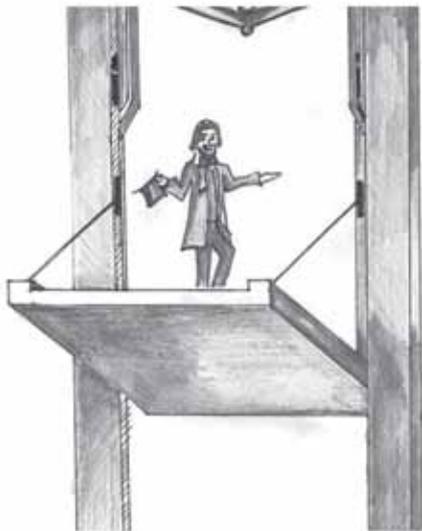
Fig. 1. Author's reproduction of Elisha Otis' safety elevator exhibited at the Crystal Palace Expo 1854

Thoughts and emotions in these environments are often driven by contextual factors, for instance, time (time of day – arriving or leaving), other people inside the building and other elevator users, social positioning (the person's role within the environment) and status in the surrounds (low level/ high level employee, tourist, customer etc.). Then most importantly, emotions are driven by the purpose and expected outcomes of being in the context (Berridge, 2009). Thus, every element of the designed environment should support the overall purpose of the structure and *experience* of the architectural design.

The purpose of an elevator is to physically transport people through this greater context, with the aim of supporting the architectural and spatial experiences. This entails that thought and interaction patterns which are initiated before elevator travel are not interrupted, and that attention is not drawn towards the mechanics and logistics

of the elevator itself. One way of looking at this is through Heidegger's (1996) discussions on *useful things* (tools) or more accurately, handiness in things ("readiness-to-hand"), and their existence not in and of themselves, but in their ability to be "something in order to" (p.69). He talks of materials and objects as *being* in relation to other entities:

These "things" never show themselves initially by themselves, in order then to fill out a room as a sum of real things. What we encounter as nearest to us, although we do not grasp it thematically, is the room, not as what is "between the four walls" in a geometrical, spatial sense, but rather as material for living… A totality of useful things is always already discovered before the individual useful thing."

(Heidegger 1996, p.69)

Thus, elevators are encountered as a part of a totality, the focus of our attention is on the use outcome, and the better the design works the less noticeable it is. A 'tool-being's' "first notable trait is its invisibility" (Harman, 2002, p.21). Heidegger's (1996) text can be interpreted technologically in terms of the tools themselves, as well as psycho-physiologically, in that humans are not consciously aware of all the processes that are occurring within them and around them, yet what is focused on is the goal, purpose of actions and overall concerns for well-being (Frijda, 1988; Ortony, Clore and Collins, 1988). As embodied beings we are constantly perceiving and experiencing our surroundings. Our neurological and cognitive systems are operating in parallel, sensing, perceiving, sorting and acting upon information received from our environment (Hekkert 2006; Rauterberg, 2010). It can be said that we have coinciding experiential processes – those which are conscious and represented to ourselves and may be passed on to others, and those which are unconscious, and not mentally represented (Chalmers, 2004; Searle, 1991). Winkielman and Berridge (2004) argue that emotions exist both in these conscious and unconscious forms, and that unconscious emotions subliminally affect our opinions of phenomena. Charles Sanders Peirce even notes that consciousness occurs in response to chaos, and that an "excited state (which is the conscious state) is a state of derangement, disturbance, disorder" (Peirce, 2009, p.81).

As will be seen in the results of the study, positive experiences were *not* qualitatively articulated – remaining unrepresented and *unremarkable*. Negative experiences, were remembered and recalled – these were *remarkable*. Negative
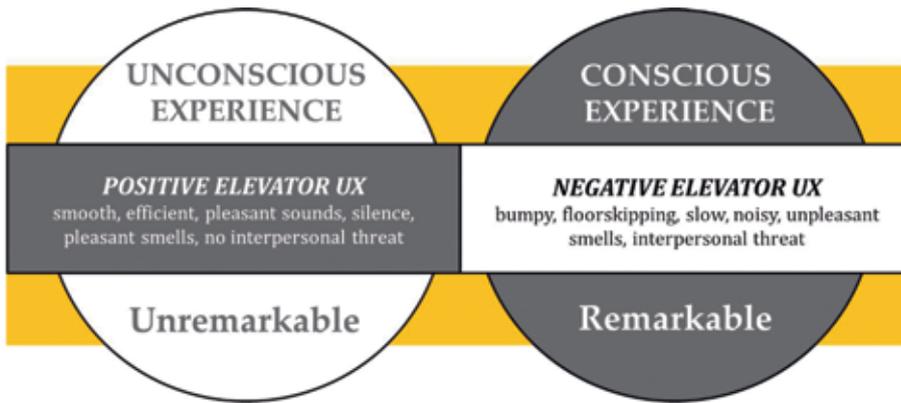
experiences were accompanied by emotions which enabled fast recall. Figure 2 demonstrates this relationship between perceived elements of elevator usage and representational and non-representational contents of experience.

With the above said, elevators are often small, enclosed spaces which move at speeds to substantial heights. These speeds and heights are only going to increase with time. This remarkableness plays on the psycho-physio dynamics of the people travelling in them. The task of countering this remarkableness is intensified when considering matters such as phobias (claustrophobia and acrophobia) and overall concern for safety which heighten the representation of emotions (Desmet and Hekkert, 2002; Frijda, 1988; Ortony et al., 1988). This poses a challenge for UX in relation to elevator design, as the design goal is that of the unremarkable – the seamless, smooth and efficient – in connection to a remarkable piece of technology.

Fig. 3. Elevator interiors – Building 1 (left) and Building 2 (right)

THE STUDY

The research was carried out in two high rise office buildings in Adelaide, Australia. These are two of Adelaide's tallest built structures, Building 1 comprising 31 floors (135 meters) and Building 2 comprising 26 floors (103 meters). Both were refurbished in 2007-08, including the fitting of new elevators from the same company and of similar style (see Figure 3). Elevator users included government and commercial office employees, legal practitioners, onsite maintenance, cleaning and security staff as well as couriers, visitors and commercial clients.

The data collection involved field observations from the ground floor lobbies and inside the elevator cars, as well as 44 short (two to five minutes) on-the-spot interviews. The interviews were supported by a questionnaire structure asking participants to respond to a range of multiple choice, opinion scale and open form questions. Observational attention was oriented towards interior design features in the building's ground floor lobbies, as well as the elevator cabins, control buttons, aesthetic experiences of sound, movement,

smell etc. Additional attention was placed on the social dynamics of people in the elevators – positioning and other interactional factors.

Forty-four people participated in the interview study - 22 women and 22 men, with ages ranging from 22 to 62 years of age (average age 42.6). Thirty-six participants were Australian, the rest were Indian, Congolese, Malaysian, Singaporean, Persian and English.

Three topics were covered in the questions. The first related to user characteristics: background (age, gender, language and cultural background) and mental factors (thinker type and emotional state). The second was linked to the elevator design itself, how the user evaluated it and suggestions for improvement. The third related to psychological and behavioural factors represented in attitudes towards security and safety, and habits users were consciously aware of. This structure can be seen in Figure 4.

According to this structure, interviews ranged from two to five minutes. Participants were first asked to provide background details: age, gender and nationality. This was followed by a quantitative evaluation (from one to five, meaning most satisfied) of the elevators' design properties: colours, pictures, space, speed, waiting time, shapes, control buttons, sound and location. Then participants were asked to give suggestions that came to mind regarding any of the above mentioned properties. Finally, participants were asked to rate their perceptions of security and safety in the elevators in question, and mention any kinds of habits they were aware of when using the elevators.

RESULTS

Overall the elevator experiences obtained directly prior to the interviews were positive, this was reflected in the overall opinion ratings (from one to five – five meaning most positive) – Building 1 (B1) receiving 3.8 and Building 2 (B2) receiving 3.6. Participants were most satisfied with the locations of the elevators (B1=4.3; B2=4.2), the control buttons (B1=3.9; B2=4), the speed (B1=4; B2=3.8) and the space (B1=4.1; B2=3.7). They were least satisfied with the colours (B1=3.3; B2=3.2) and the sounds (B1=3.5; B2=3.4). Regarding the qualitative design suggestions, the factor of waiting time received the most comments (25%) relating to faster and shorter waiting times and the need to adjust call logic. Then colours (23%) were noted as needing to be brighter, cheerful and lighter with better lighting. Music, a factor which was missing in the studied elevators, was noted in 16% of the comments as desirable, particularly soothing, light and positive music. Sound (14%) was also mentioned in regards to the ability to hear the news on the television monitors, and eliminate the sounds of wind and scraping metal in the elevator towers. Participants suggested that the speed should be faster (11%), and in the other comments (11%) that there should be larger information screens and real people answering emergency calls. This leads to the observation of the correlation between feelings of security and safety, and evaluations of the control button design with a co-efficient reliability =,767 between security and safety, which produced a 2-tailed Pearson correlation with control buttons at ,467.

Opinions regarding safety (B1=4.2; B2=3.9) and security (B1=4.1; B2=4.2) were favourable in the evaluation of the elevators in question. An obvious reason for this is due to the newness of the elevators at the time of the interviews. However, what was additionally noted were accounts of incidents that occurred in the previous elevators at the sites.

Fig. 4. Interview design
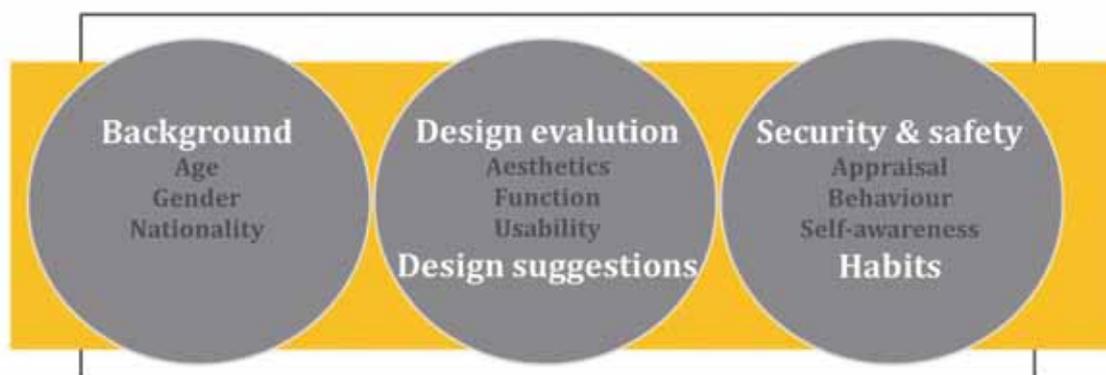
The detail and emotion of the recollections are what drew attention to the importance of examining positive UX in terms of non-remarkable experiences.

INVISIBILITY IN UX – AN UN-REPRESENTED STORY

When participants reasoned positive opinions they mostly referred to things that had not happened, i.e., operation and mechanical problems, interpersonal tensions etc. One 49 year old man had disclosed that he "rarely threatened by other individuals (although possibly not vice versa)". In other words, his comfort lay in his ability to intimidate others. A 41 year old man had stated that he had "never been involved in a lift failing." Another participant, a 23 year old woman mentioned that she had experienced "no previous trouble with lifts." and that the current elevators "seemed quite new." One 36 year old man explained that he had given both the security factor and the safety factor scores of five because he had "never had a bad experience yet."

Negative opinions were rationalized according to fears and past experiences. A 55 year old man admitted that he was "scared of heights…" and possessed a "fear of lifts falling." Likewise, a 35 year old woman mentioned that she did not move once inside the elevator, for fear of it falling. A 37 year old woman said that if she is travelling late at night it was "not secure." And finally, a 28 year old woman claimed that the "lifts in [B1] were quite temperamental. I've had quite a few bumpy rides." A 36 year old man who had told of feeling safe in the elevators, went on to explain that there should be more security down in the basement and foyer. He said that there was a lot of "riffraff" who come and loiter in the building's spaces. A 43 year old man who had given two for security and one for safety explained that when he travels in the elevators, they often drop several floors at a time. Similarly, a 46 year old woman, who had given five for security and four (and in brackets one) for safety, told of how the elevators sometimes dropped four floors per time. A 58 year old woman who had given a score of three for both factors, similarly to the above mentioned 36 year old man, mentioned that she had a lot of doubts about the basement. She told of how she had an insecure feeling about who would be down there. But regarding the elevators, she stated that all of her negative experiences related to the former elevators.

Participants were eager to represent their concerns and negative past experiences, often blending experiences in the previous elevators with the current elevators in the establishments. These participants described phobias, analysed elevator security and recalled moments when they felt personally threatened. The same 58 year old female

participant mentioned above gave an emotional account of how she had been trapped in an elevator and needed to communicate with non-local help-staff. In her recollection she described needing to clearly identify the building's name and address of the elevator in order for help staff to assist her. The lack of on-site staff and absence of a security post (in B2) seemed to impact the way people approached the study, and focused on specific negative elements which coincided with this absence or invisibility of another component – the human element.

WHY "KILLER DESIGN" IS NOT ALWAYS GOOD DESIGN – CONCLUDING DISCUSSION

In cases such as this one, no conscious and remarkable experience of the past in particular, was good UX. The only concrete experiences which were represented by participants in this study were negative. Elevators were referred to positively not in terms of what they did, but what they did not do. Elevators were evaluated positively because they did not jam, fail or compromise users' safety. Otherwise, the experience of elevator travel went unnoticed and was unremarkable.

This poses a challenge to UX discourse which has quite often focused on pleasurable and remarkable design (Blythe, Overbeeke, Monk and Wright, 2003; Deterding, Sicart, Nacke, O'Hara and Dixon, 2011; Jordan, 2000). Designing for no (conscious) emotion, or no conscious experience is not typically discussed. Scholars of design experience (Desmet, 2002; Desmet and Hekkert, 2002; Hekkert, 2006) and consciousness alike (Chalmers, 2004; Searle, 1991) acknowledge the role of unconscious emotions and experience in connection to the mind-body relationship. As embodied beings, humans constantly receive and process environmental and contextual information through the senses and nervous system. The neural system and unconscious mind constantly monitor what happens around our bodies. They are on the watch for factors which may threaten our physical safety and well-being (Frijda, 1988; Hekkert, 2006).

In this case, in which the UX of elevator travel was under investigation, the presence of represented (conscious) emotions indicated that something was wrong. Positive elevator UX existed on an unconscious level, i.e., if all functioned well, the elevator interaction remained unremarkable, and most experiential elements unconscious, aptly fitting with Heidegger's (1996) idea of handiness and "something in order to" (p.69) support a totality. Information received during usage should remain unrepresented or

unremarkable. Bumpy elevator operation, floor-skipping, slowness, noise and threats to safety and security, interrupt the experience of totality and draws attention to individual objects and components, which should remain invisible. This generates a sense of disorder or chaos that Peirce (2009) claims is experience, whereby breaking down means visibility (von Duuglas-Ittu, 2009). Due to the nature of negative emotions, and their evolutionary role in protecting our well-being, negative experiences are easiest to access, remember and represent in preparation for action towards oncoming phenomena (Brosch, 2013; Hekkert, 2006; Kensinger, 2009). Elevator travel entails a completely embodied experience, remarkable or unremarkable. By setting foot in an elevator cab, we place complete trust in the machinery to transport us safely, as it is not just an experience at risk, but our lives. Yet, if the transaction were to be thought of on this level each time we entered a cab, elevator travel would be filled with anxiety if not completely avoided. Rather than focusing on the element of "something extra", extraordinary interactions and events to be remembered, we should also be prepared to emphasise the significance of the unremarkable.

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