ON THE PRODUCTS AND EXPERIENCES THAT MAKE US HAPPY

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Abstract

The study of happiness is receiving increasing attention both in positive psychology and design. A key issue in current literature is the lack of empirical evidence linking products and happiness. We address this examining 87 reports of product-mediated happy experiences and analysing their relations to well-being. Six types of products with experiential attributes were reported to contribute more systematically to happiness. Digital devices and food are the two dominant products followed by vehicles, books, clothing & accessories and sport equipment. These products make us happy by creating: hedonic experiences in which we relieve stress, get rest and increase joy; and eudaimonic experiences in which we establish positive social relationships, develop self-identity, achieve personal growth and gain competence and autonomy. In such experiences, products acted as carriers of reflective meanings, and enablers of experiencing. These insights provide an initial mapping of the relationship between products and happiness and suggest approaches to designing products that can bring happy experiences.

Keywords: Happiness, Well-being, Experience design, User centred design, Human behaviour in design

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1 INTRODUCTION

It is increasingly evident that happy people are successful across many life domains such as marriage, friendship, career and physical health (Lyubomirsky et al., 2005). Sustaining or increasing happiness is obviously one of the major goals in life. Since the start of positive psychology (Seligman and Csikszentmihalyi, 2000), considerable progress has been made in understanding the dynamics of happiness and evidencing ways of achieving it.

In psychology, happiness has been defined as the "experience of joy, contentment, or positive well-being, combined with a sense that one's life is good, meaningful and worthwhile" (Lyubomirsky, 2007, p.32). About half of a person's happiness is attributed to genetics. Of the remaining 50%, it has been shown that only 10% of happiness is determined by factors such as money or living conditions, whereas, 40% is determined by how we think and act in everyday lives (Lyubomirsky et al., 2005). In other words, the pursuit of happiness is to achieve more positive experiences in life. As everyday experiences are inevitably shaped by products, it is impossible to neglect the influence that they have on our lives and the value that they bring to our well-being.

Despite the incredible proliferation of products, little is known in terms of their influence on happiness (Calvo and Peters, 2012; Helliwell et al., 2015). One reason for this is that happiness has not yet been adequately considered in the design cycle of products and technology. This may be due to the historical tendency of designers to stay clear of psychological aspects of the human being or to the insufficient support for designing happy products. Regardless of the reason, there is scope to further explore the opportunities and approaches to designing products that can bring happy experiences.

The emergence of positive design (Desmet and Pohlmeyer, 2013) has started to bring light to how happiness and well-being can be improved through the design of everyday things. For example, new frameworks (Desmet and Pohlmeyer, 2013; Hassenzahl, 2010) and approaches (Desmet and Hassenzahl, 2012; Hassenzahl et al., 2013) have been introduced to guide the design of pleasurable and meaningful experiences. However, it is still unclear if products can have long lasting effects on happiness, and empirical evidence regarding the impact of design is lacking (Pohlmeyer, 2013). Gathering such evidence is important, as studies investigating the relationships between material goods and well-being often tend to focus on the material value of products, overlooking the psychological benefits potentially brought by products (Desmet and Pohlmeyer, 2013). It is, therefore, important to conduct further research to understand the contribution of products to the everyday lives and well-being of people.

This paper presents an empirical study to investigate: the products that contribute to happiness, the experiences created by these products, and the roles that products play in creating happy experiences. In this paper, the term happiness is defined as reported above and it is used interchangeably with well-being.

2 BACKGROUND

2.1 Achieving Happiness from Experiences

Happiness as defined by Lyubomirsky (2007) includes both an hedonic component, which arises from the expereince of pleasure, and an eudaimonic component, which arises from self-actualisation and the fulfiment of human potential (Desmet and Hassenzahl, 2012; Ryan and Deci, 2001). Achieving hedonic happiness means receiving a balanced amount of pleasure and an overall satisfaction of life, as described in subjective well-being theories (Diener, 2000). Whereas achieving eudaimonic happiness means engaging in self-development, pursuing life goals, establishing positive relationships and actualising human potentials, as described in eudaimonic well-being theories (Deci and Ryan, 2000; Ryff and Keyes, 1995; Sheldon et al., 2001).

Experience, having the potential to yield great expression of the true self, is valuable in providing enduring happiness (Carter and Gilovich, 2010, 2012; Van Boven and Gilovich, 2003). Hassenzahl (2010) has interpreted experience as "a story, emerging from the dialogue of a person with her or his world through action" (p. 8). When involved in an experience, people often engage themselves in a meaning-making process (Baumeister and Newman, 1994). That is to say if such process yields positive meanings such as achievement or self-esteem, happiness is more likely to be achieved through this experience. Experience, as it develops over time, can be characterised as *experience* or *experiencing*.

Experience refers to practical contacts and observations that we gathered in the past and it has a beginning and an end that may be named, while *experiencing* refers to the constant stream of 'self-talk' happening during the user-product interaction (Forlizzi and Battarbee, 2004; McCarthy and Wright, 2004). This distinction is important as the *experience*—or better the accumulation of *experiences*—often affects subsequent *experiencing* (Ortíz Nicolás and Aurisicchio, 2011). In the context of achieving happy experiences, it is thus important to distinguish what triggers happiness, be it the reflections from past experiences or activities involved in experiencing.

2.2 Designing Happiness Through Products

In design research, attention has been given to the hedonic component of happiness, i.e. the emotional aspects of happy experiences with products (Diefenbach et al., 2014; Mekler and Hornbæk, 2016). Demirbilek and Sener (2003), for example, have shown that product attributes conveying "fun" and "cuteness" can help convey a sense of happiness. Happiness is also often considered as one of the positive emotions (Desmet, 2012; Ortíz Nicolás et al., 2013). For example, Norman (2005) points out that emotions such as love and happiness are "critical to learning, curiosity and creative thought" and that "being happy broadens the thought processes and facilitates creative thinking". Clearly, positive emotions have great potential to improve well-being. However, positive emotions alone are not fully descriptive of happiness (Calvo and Peters, 2012), as they are often momentary forms of pleasure. It is when they co-occur with eudaimonic factors such as personal growth and meaning that they can trigger a greater expression of happiness and long-lasting flourishing.

Over recent years, the field of design has started to adopt a holistic understanding of happiness, emphasising the importance of considering both hedonic and eudaimonic aspects. Noticeable progress has been made in the development of things that can contribute to both a pleasurable and meaningful life. In his book *Experience Design*, Hassenzahl (2010) posits that the core of designing pleasurable and meaningful experiences is to put the resulting experiences in the fore, i.e. defining human needs and personal meanings before considering functional requirements. Possibility-driven design is an approach suggesting how to design such experiences (Desmet and Hassenzahl, 2012). Differently from the traditional problem-driven approach which typically starts with a problem to solve, possibility-driven design starts with exploring experiences with great potential to boost happiness and human flourishing. This approach has opened new opportunities and challenges to design for happiness. The positive design framework (Desmet and Pohlmeyer, 2013) further explores how design can contribute to well-being stating three positive design ingredients, i.e. design for pleasure, personal significance and virtue.

Products are an essential part of experience and their value has been extensively studied. In general terms, products shape human experience through the reflective meanings that they carry and the functions that they perform (Arhippainen and Tähti, 2003; Desmet and Hekkert, 2007; Hekkert and Schifferstein, 2008; Mahlke and Thüring, 2007; Ortíz Nicolás and Aurisicchio, 2011). In the context of design for happiness, Pohlmeyer (2012) has proposed four roles that a product may have in achieving well-being, i.e. source of pleasure or meaning, symbol of pleasure or meaning, enabler of happiness-enhancing activities, and promoter of behaviour change and positive thinking.

2.3 Research Gap

Despite growing research on happiness and design, there is still a lack of literature examining the influence of products on everyday experiences and well-being. Research is needed to explain what products make people happy, and understand the experiences resulting from such products, including the personal meaning that is relevant to well-being and the contextual factors of these experiences. To develop deeper understanding of the influence of products on happiness, their roles in shaping happy experiences also need to be further explored.

3 METHOD

A questionnaire study was designed to conduct an in-depth investigation of happy products and their associated experiences.

3.1 Data Collection

3.1.1 Participants and Procedure

The study was carried out online using the CrowdFlower platform (https://www.crowdflower.com/). A total of 100 participants (64 male, 36 female) completed the study. They were from 29 different countries (18 from Europe, 6 from the Americas, 4 from Asia and 1 from Africa). The average age was 34.5 years old (SD = 10.3). The educational level of participants was distributed as follows: high school (18%), graduate (59%) and post-graduate (23%). Participants were guided through a three-part questionnaire. First, they were given the introduction and consent form. If participants agreed to continue, they were asked to answer questions regarding happy products and happy experiences. Lastly, participants were asked to provide their demographic data, i.e. gender, age, nationality and education status.

3.1.2 Questionnaire Design

To collect data about happy products and happy experiences, we adopted the critical incident method, as it has been successfully used to observe characteristics of user experience (Hassenzahl et al., 2010, 2015; Mekler and Hornbæk, 2016; Müller et al., 2015; Partala and Kallinen, 2012; Tuch et al., 2013). In the questionnaire, participants were asked about: 1) their general view on happiness ("What does happiness mean to you"); 2) a product that typically brings happiness to them ("What is your happy product"); and 3) a happy experience ("What experience have you had with your happy product"). All three questions were open-ended. The first question was asked to set the context and let participants reflect on what happiness truly means to them thereby allowing this reflection to inform their subsequent answers. Responses to all questions were collected and analysed. We excluded responses which were blank and those which did not provide sufficient information, leaving 87 valid responses.

3.2 Data Analysis

Analysis involved two steps. First, we identified and categorised the types of products that participants reported to bring them happiness. Second, we derived themes of happy experiences following the thematic analysis process by Braun and Clarke (2006).

3.2.1 Categorising Happy Products

The process of categorising happy products was iterative. In the first iteration, an initial set of nine categories was derived. The development of the initial category left two responses not categorised, namely social media and WhatsApp. These responses were then reanalysed and categorised in the closest category, i.e. the mobile phones category. This is because social media and WhatsApp are often installed as mobile applications and share similar communication functions. In the second iteration, the data were aggregated to improve the distinctiveness of the categories. In particular, computers, mobile phones, video games and TV were classified as subcategories of a new digital devices category. This was driven by the fact that the functionality of these devices often overlaps. For example, a computer can be a hybrid of mobile phones, TV and game console. Eventually, six categories of products which people reported to bring happiness to them were derived.

3.2.2 Thematic Analysis of Experiences

Following the classification of happy products, a thematic analysis of the reported experiences was conducted. The analysis involved two researchers. Researcher 1 performed the main analysis guided by the six phases described in (Braun and Clarke, 2006), while researcher 2 was invited to evaluate the identified themes to ensure that they were clear. In the early phases, researcher 1 analysed the data and coded each experience report in terms of the personal meaning that was important to the user's happiness and well-being (e.g. connecting to friends and family, self-development). As a result of this coding work a set of initial themes emerged. Reanalysing the themes, it was found that differences existed between items within the same theme. Therefore, new themes were added, and a set of seven themes was established including 'relaxing', 'entertaining', 'connecting to loved ones', 'developing self-image', 'mastering the activity', 'learning new knowledge' and 'doing things freely'. Researcher 2 was then invited to evaluate the identified themes. He was given a random list of 60 reports and asked to either map the reports to existing themes or suggest new themes. The reviewing process showed some conflicts between researcher 1 and researcher 2. For example, the 'relaxing' theme was not distinctive enough

from the 'entertaining' theme. To respond to this conflict, the 'relaxing' theme was redefined and named as 'comfort'. After resolving the conflicts, we further defined each theme and paid attention to the naming of the seven themes. Since the analysis was data-driven, the names of the themes were informed by the terminology used by the participants as much as possible. When no suitable names could be found, we borrowed terms from psychological theories. For each theme, we identified the personal meaning relevant to happiness (e.g. connecting with family, entertainment), mapped the participants' activities onto productive, maintenance and leisure activities as proposed in (Csikszentmihalyi, 1997; Csikszentmihalyi and Graef, 1980; Kubey and Csikszentmihalyi, 1990; Larson et al., 1994), identified the contextual factors including *personal context* (the state of the user), *social context* (social aspects), *task context* (tasks, actions or activities that the user is engaged in), and/or *device context* (characteristics and conditions of the product) (Korhonen et al., 2010), and examined the dimensions of experience (*an experience* or *experiencing)* (Ortíz Nicolás and Aurisicchio, 2011) and the roles of products within the experiences.

4   FINDINGS

This section presents the types of products and experiences that make people happy, along with details of why and how they contribute to happiness.

4.1 Products That Make People Happy

Six categories of happy products were derived (Figure 1). Digital devices were found to be associated with productive activities such as working or studying and leisure activities such as socialising, consuming media or pursuing hobbies. Food, vehicles and clothing & accessories were often involved in maintenance activities such as eating, driving or dressing. Books and sport equipment usually appeared in leisure activities such as consuming media and pursuing hobbies.
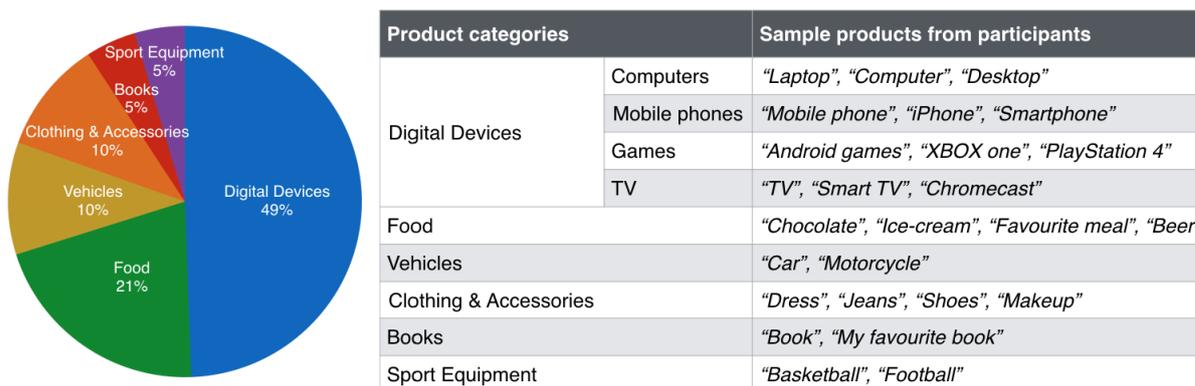
Product categories		Sample products from participants
Digital Devices	Computers	*"Laptop", "Computer", "Desktop"*
	Mobile phones	*"Mobile phone", "iPhone", "Smartphone"*
	Games	*"Android games", "XBOX one", "PlayStation 4"*
	TV	*"TV", "Smart TV", "Chromecast"*
Food		*"Chocolate", "Ice-cream", "Favourite meal", "Beer"*
Vehicles		*"Car", "Motorcycle"*
Clothing & Accessories		*"Dress", "Jeans", "Shoes", "Makeup"*
Books		*"Book", "My favourite book"*
Sport Equipment		*"Basketball", "Football"*

Figure 1. Products that make people happy

4.2 Products Bring Happiness Via Experiences

From the analysis of self-reported happy experiences, seven themes of experience were identified. Happy products have shown to be closely associated with multiple themes, and they play different roles in creating or facilitating such experiences. In this section, we first present details of the seven themes of experiences, then the routes from products to happy experiences, and lastly the roles of products in shaping experiences.

4.2.1 Themes of Happy Experiences

Table 1 summarises the identified themes of happy experiences. For each theme we present: a representative quote from participants; the personal meaning central to the user experience; the types of activities involved; and the relevant contextual factors. The first two themes were found to be more closely related to hedonic happiness, while the remaining five to eudaimonic happiness. Importantly themes can co-exist in a happy experience.

Table 1. Themes of happy experiences

Theme	Example	Personal meaning	Activities involved	Context
Comfort	*"After a hard-working day, Friday, took a dinner in a good place, returned home, took a big cup of tea and a big chocolate." (P89)*	Felt relaxed or recovered from negative mood	Maintenance activities (eating) Leisure activities (watching TV, reading, hobbies)	Follow a demanding activity or task; the individual is tired or in a negative mood and wants to get rest or relieve stress
Entertaining	*"Weekends at home, friends and me play games together. I feel excited and passionate." (P96)*	Felt entertained and pleased	Maintenance activities (eating, dressing, driving) Leisure activities (games and sports, hobbies)	Take place in a casual environment; the individual is in good mood and looks for joy and excitement
Connecting to loved ones	*"Because of a hot chocolate I met my husband. I associated it with love since then." (P8)*	Felt connected to meaningful people	Maintenance activities (eating, dressing, driving) Leisure activities (games and sports, hobbies, socialising)	The individual spends time with known people and enjoys the time together; a product triggers reminiscences of positive social experiences
Developing self-image	*"Wearing a beautiful vintage dress from the 1950s to attend a fancy event, and feeling happy and confident in my appearance. I enjoyed getting compliments about my look, but what was more important was feeling happy about my own self-image." (P38)*	Felt confident and became more satisfied with the current self	Maintenance activities (taking care of the body, dressing)	The individual receives compliments from others; the individual possesses meaningful accessories; signals of personal achievements appear
Mastering the activity	*"What I needed, I can get it through the help of PC." (P63)*	Felt competent in the current activity	Productive activities (working, studying) Maintenance activities (driving) Leisure activities (games and sports, hobbies)	The individual is skilled enough for the current activity; the individual is supported to handle a difficult activity or task
Learning new knowledge	*"Learn something via the internet; take online lectures; know how the world works." (P82)*	Felt a sense of curiosity and self-development	Productive activities (working, studying) Leisure activities (reading)	The individual desires to gain new knowledge
Doing things freely	*"I made a pleasant trip using my vehicle which gave me freedom to go to the places I wanted." (P78)*	Felt a sense of self-determination	Productive activities (working, studying) Maintenance activities (driving)	The individual is given freedom to make choices

4.2.2 Routes from Products to Happy Experiences and Vice Versa

Our results have shown various routes from products to different themes of experiences and vice versa (see Figure 2). The thickness of the grey lines depicts the frequency of route occurrence. The height of the bar represents the frequency of product and experience occurrence. For example, digital devices take 49% of all reported products and the theme 'connecting to loved ones' appeared more frequently than all other themes.

The results show that each happy product can create or facilitate multiple themes of experiences. As shown in Figure 2, digital devices have routes to all themes of experiences. Vehicles come after digital devices with routes to five themes. The other types of happy products have routes to at least two or three themes of experiences. The routes from food to happy experiences are now considered as an example. Food can create a connecting experience to loved ones, e.g. "*When my whole family and I go to a restaurant that serves my favourite food*" (P26). It can also create a comfort experience, e.g. "*During the summer when I am in town, I buy an ice-cream to [refresh], and I am happy*" (P57). The routes from vehicles to happy experiences are also considered. For example, a vehicle can create a connecting experience by providing a place where a family undertakes activities together. It may also induce feelings of autonomy in the driver. Additionally, it can entertain someone who drives for enjoyment.

Furthermore, each happy experience can be achieved through multiple products. As shown in Figure 2, the theme 'connecting to loved ones' was found to be associated with all product types, whereas the other themes with two to four types of products only. For example, the theme 'connecting to loved ones' can be achieved through food, e.g. "*Pizza has a taste that leaves us excited, makes us happy, and joins the family for unforgettable moments*" (P22), and digital devices, e.g. "*Whenever I got text from someone special it made me happy and connected to that special person*" (P68), as well as other types of happy products.
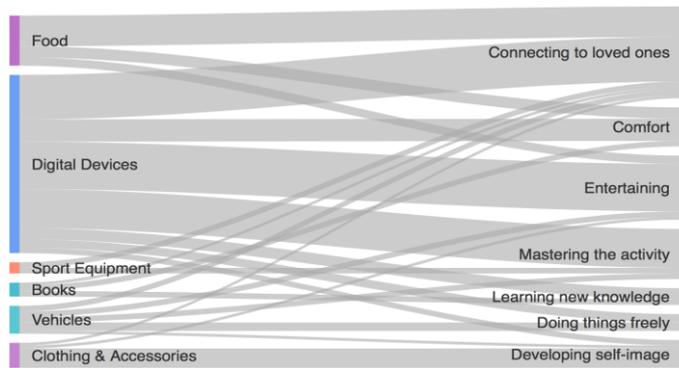
Figure 2. Routes from products to happy experiences and vice versa

4.2.3 Roles of Products in Experiences

This section presents results about how products shape happy experiences. Products were found to create or facilitate happy experiences as: 1) carriers of past meaningful experiences; and 2) enablers of experiencing present interactions or events.

In Figure 3 (a), the solid line illustrates the former case in which: something meaningful happened in the past; a product becomes associated with the story; and the product brings happiness to future interactions because of the meaning it carries, e.g. *"Because of a hot chocolate I met my husband. I associated it with love since then"* (P8). Additionally, in Figure 3 (a) the dotted line illustrates the latter case in which a product contributes to happiness by enabling a current experience, e.g. *"I talked to a long-lost childhood friend using Skype on my laptop. It was a truly happy experience"* (P71). Figure 3 (b) shows examples of how these two roles were played by each product type.
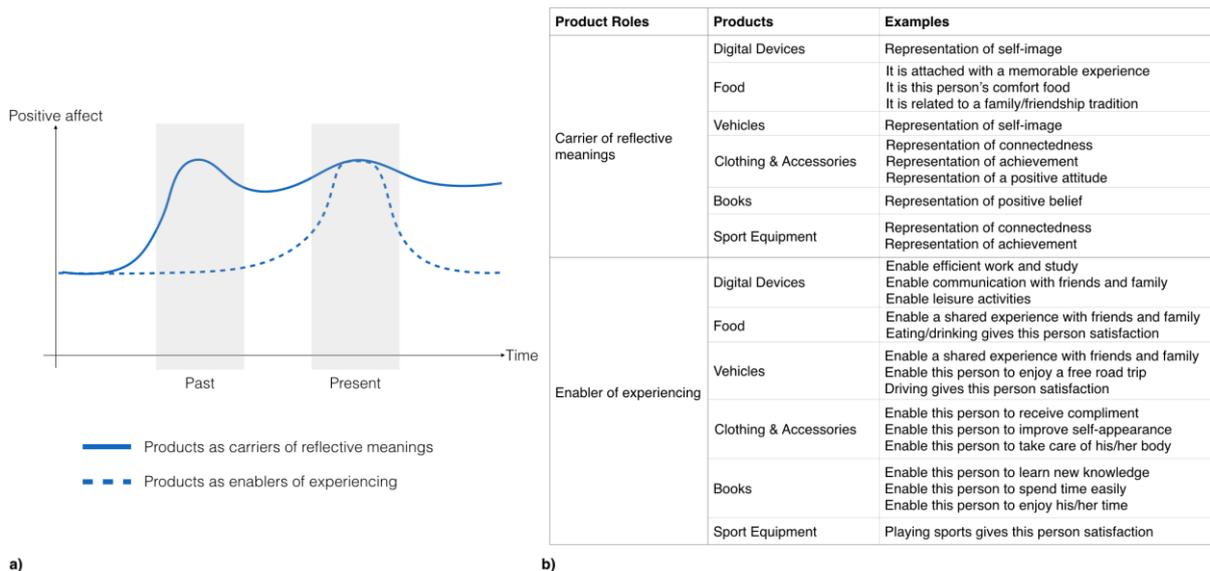

Product Roles	Products	Examples
Carrier of reflective meanings	Digital Devices	Representation of self-image
	Food	It is attached with a memorable experience It is this person's comfort food It is related to a family/friendship tradition
	Vehicles	Representation of self-image
	Clothing & Accessories	Representation of connectedness Representation of achievement Representation of a positive attitude
	Books	Representation of positive belief
	Sport Equipment	Representation of connectedness Representation of achievement
Enabler of experiencing	Digital Devices	Enable efficient work and study Enable communication with friends and family Enable leisure activities
	Food	Enable a shared experience with friends and family Eating/drinking gives this person satisfaction
	Vehicles	Enable a shared experience with friends and family Enable this person to enjoy a free road trip Driving gives this person satisfaction
	Clothing & Accessories	Enable this person to receive compliment Enable this person to improve self-appearance Enable this person to take care of his/her body
	Books	Enable this person to learn new knowledge Enable this person to spend time easily Enable this person to enjoy his/her time
	Sport Equipment	Playing sports gives this person satisfaction

Figure 3. How products create happy experiences

5 DISCUSSION

Happy products: products that bring happiness

Six types of products were found to lead to happy experiences, namely digital devices, food, vehicles, clothing & accessories, books and sport equipment. Among these, digital devices, vehicles, books and sporting goods are types of experiential products (Guevarra and Howell, 2015). This is a class of possessions in between material items and life experiences that is purchased 'to have in order to do' (Guevarra and Howell, 2015). These products are designed to create and enhance experiences. For example, digital devices such as laptop computers and mobile phones allow users to utilise and develop new skills and knowledge, and connect to family and friends while offering rich multisensory and interactive experiences. Similarly, vehicles such as cars allow drivers and their family to have pleasant travel experiences. In general, digital devices are unveiled as social and developmental material

possessions that play a significant role in product-mediated happy experiences due to their hybrid functionality and ubiquitous features. This result reinforces the impact of technology on well-being (Calvo and Peters, 2012) and makes us ponder how technology can enhance traditional experiences. Although food and clothing & accessories have been traditionally perceived as material possessions serving utilitarian purposes (Guevarra and Howell, 2015), our results challenge this perspective indicating that these items can also be seen as experiential products. For example, clothing items such as a boutique dress and vintage shoes are goods which were found to support the need for identity expression.

Happy experiences: themes of user experiences that make people happy

The themes of happy experiences identified in this research have shown consistency with psychological happiness theories. They make people happier by evoking positive emotions (Deci and Ryan, 2012; Lyubomirsky and Layous, 2013) and help people be successful in aspects such as positive relations with others, environmental mastery, personal growth, purpose in life, self-acceptance and autonomy (Ryan and Deci, 2000; Ryff and Keyes, 1995). Broadly speaking, 'comfort' and 'entertaining' are closely related to eliciting positive emotions, 'connecting to loved ones' to positive relationships, 'mastering the activity' to environmental mastery, 'developing self-image' to self-acceptance, 'learning new knowledge' to purpose in life, and 'doing things freely' to autonomy. Although each theme of experience focuses on one aspect only, it may also include others. For example, 'connecting to loved ones' can lead to positive emotions, and 'learning new knowledge' can contribute to environmental mastery. Furthermore, the themes of experience align well also with the psychological needs identified by Sheldon et al. (2001). For example, 'comfort and 'entertaining' fulfil the need for pleasure-stimulation, 'connecting to loved ones' for relatedness, 'developing self-image' for self-esteem, 'mastering the activity' and 'learning new knowledge' for competence, and 'doing freely' for autonomy. Our data also confirm the conclusion by Sheldon et al. (2001) that relatedness and competence are among the most salient needs in a satisfying event, but it also suggests that pleasure-stimulation has significant importance in product-mediated happy experiences.

Design insights: designing products to facilitate happy experiences

Each of the products identified in this research can create or facilitate multiple themes of experiences. This result offers two insights to design for well-being. First, we need to investigate the routes between products and experiences with the aim to maximise products' positive impact. Second, we need to explore new routes with the aim to create new possibilities of designing happiness. The results also indicate that each happy experience can be achieved through different products. This result is valuable as it gives designers the flexibility to choose alternative design directions depending on end-users' preferences and requirements. However, it is noteworthy that this is relevant to designing experiences rather than specific products as experience design offers the opportunity to specify and integrate multiple experiential products. For example, in the design of a restaurant eating experience it can be imagined that along with food, digital devices can also be used as design elements to satisfy psychological needs for relatedness and entertainment. Finally, the results suggest that to understand how to create happy experiences it is important to enable meaning-making through design by learning from past and present experiences.

The main limitation of this research is related to the data collection method. The quality of the data collected with the critical incident method is highly dependent on participants' willingness to write a complete story, which is often difficult to guarantee. Despite this, the critical incident method is believed to be the most suitable one for the current stage of research, as it helped collect rich user experiences and gave users flexibility to report from their own perspectives and using their own words.

6 CONCLUSION

This paper has presented an empirical study to classify happy products, and investigate the resulting experiences. We found evidence that six types of products with experiential value create or facilitate happy experiences. Although happiness is subjective and can be achieved in different ways, we identified seven themes of happy experiences. These experiences explain how products make people happier and psychologically healthier. This result provides not only guidelines for making design decisions, but also inspirations for creating possibilities to enhance everyday lives. Moreover, we found that products play two major roles in happy experiences: carriers of meanings from past memorable experiences; and enablers of present experiences. This study expands our understanding of everyday

product-mediated experiences that make us happy. The results of this research support further exploration of happy products to develop further understanding of their positive impact on people's lives.

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