PHOTOCOPYING PERMITTED BY LICENSE ONLY © 2016 INFORMA UK LIMITED, TRADING AS TAYLOR & FRANCIS GROUP PRINTED IN

'It's From My Grandma.' How Jewellery Becomes Singular

Petra Ahde-Deal KEA – Copenhagen School of Design & Technology, Copenhagen, Denmark

Heidi Paavilainen Aalto University, Helsinki, Finland

Ilpo Koskinen The Hong Kong Polytechnic University, Kowloon, Hong Kong

ABSTRACT Most objects in our lives are barely noticed and not much more than consumer goods. Some objects, however, become so important to people that they start to shape their understanding of their self. This paper looks at how some pieces of jewellery become parts of what we call the core self. The study collected stories about jewellery in Helsinki and Chicago between 2008 and 2010. The key process that transforms some pieces of jewellery to constituent parts of the self is family history and connections that some pieces create



between generations of women. We close the paper by arguing that design researchers need to pay more attention to social processes that turn some objects into heirlooms, rather than focus on consumption only.

KEYWORDS: jewellery, possessions, product attachment, Durkheim, self, family heirlooms

Introduction

This paper studies objects that are kept in the family for generations. It claims that there are objects that transcend the strictures of everyday life. Our key question is how these objects become so significant that they become irreplaceable parts of what Russell Belk called the core self, and how they define the selves of their possessors.

Design research has shown that many processes make objects meaningful. Most literature focuses on production or the point of purchase, however, and in rare cases on the learning period after purchase. This is true for Jordan's (1997, 2000) work in hedonic psychology on pleasure and products; Csikszentmihalyi and Roscherg-Halton's building on how objects become meaningful building on pragmatism and psychoanalysis (1981); behavioural and cognitive approaches (Mugge et al, 2005; Schifferstein and Zwartkruis-Pelgrim, 2008); and Forlizzi and Battarbee's work pragmatist work on experience (2004). This research has tried to understand how people relate to products while they are still in the commercial life cycle, or the honeymoon period with new products.

The problem with this literature is its tight connection to consumption and its underlying premise telling that design is tied to the market. If we follow a recent social turn of design (for example, Chapman, 2014; Keyte, 2013; Mattelmäki et al, 2014; Parmar, 2008), we see aspects of design that are difficult to fit into these frameworks. Ahde-Deal studied possessed jewellery as design objects, and saw how some objects gain the status of singularity over decades and sometimes centuries (Ahde-Deal, 2013; 'singularity' is from Kopytoff, 1986). Her study suggests that to fully understand product relationships, we need to understand those social processes in which objects get meaning beyond their design and their market value (see Chapman, 2014; Keyte, 2013). This paper reports one part of Ahde-Deal's study. It tells the story of those pieces that are kept in families for generations. The claim of our paper is that there indeed are design objects that transcend everyday life and become irreplaceable parts of the owner's sense of self, and these pieces may stay in families for generations. The significance of these pieces is that they provide a deviant case to the consumerist literature that dominates design writing about the value of objects.

Research on jewellery usually focuses on its historical, technical, artistic, or folkloristic qualities (for example, Holm, 2004; Summatavet, 2005; Untracht, 1982), and there is a small strand of research on digital jewellery (Wallace *et al*, 2007) and a few studies about how manufacturers create stories around jewellery (Cunningham, 2007; Parmar, 2008). Few studies focus on how jewellery gets personalized, but some sociologists have linked jewellery to status (see Simmel in Wolff, 1964) and identity (Nippert Eng, 2010). Holm (2004) has studied how jewellery was used in mourning in the 18th century. These studies have shown that jewellery is more than a commodity, yet it remains tied to its everyday uses which, as we shall argue, leaves a gap in understanding those pieces of jewellery that rise from daily concerns and achieve a status in which they become integrated into the owner's sense of self.

Possessions and the Core Self

In a classic paper exploring the relationship between possessions and sense of self, Russell Belk quotes William James, who claimed that it is impossible to understand a human being without studying what kinds of meanings he attaches to his possessions:

In its widest possible sense, however, a man's Self is the sum total of all that he CAN call his, not only his body and his psychic powers, but his clothes and his house, his wife and children, his ancestors and friends, his reputation and works, his lands and horses, and yacht and bank-account. All these things give him the same emotions. If they wax and prosper, he feels triumphant; if they dwindle and die away, he feels cast down, not necessarily in the same degree for each thing, but in much the same way for all. (James, 1890: 291–292, emphasis in original)

Building on James, Belk ventures to study some of the possessions that define the extended self. These comprise the body, internal processes, ideas, and experiences, and those persons, places, and things to which one feels attached, as well as special cases like collections, money, pets, homes, interiors, and other people. These possessions can be visualized as a series of concentric layers around the core self, and he separates four of these layers: individual, family, community, and group (Belk, 1988: 152).

In contrast to ordinary attachments, Belk also talks about how some objects become attached to the core self (Belk, 1988: 153). He leaves the core self undefined, but he speculates that there is an inverse relationship between the individual's core self and his need to acquire, save and care for possessions (Belk, 1988: 159). For him, the core self appears to consist of those identities that define the

person's sense of the self that he cannot help using when defining himself and his role and line of action in social situations.

How can some object become integrated into this core self?

Our answer to this question suggests a process that connects these pieces to family history. These connections are grounded in sentimental attachments to ancestors and descendants (often not yet born). These sentiments are powerful, but too complex to be understandable and to be explainable as such, so something external is needed to make them visible. In this regard, they function the same way as the totemic symbols studied by the French sociologist Emile Durkheim (1964; esp. 219–220), Just as the Australian Aboriginal clans he studied attributed their sense of power of belonging to a clan to its totemic symbol, the women we studied used jewellery as a symbol that connected them to the family line that went beyond their individual life. With their jewellery, women were able to tell stories about their mothers, grandmothers, and other family members. Due in part to this reason, jewellery is handed down in families for generations through a set of rules that are designed to keep the stories alive for the next generation (Ahde-Deal, 2013: 128–139).

In contrast to most objects that remain commodities which are replaceable, women define who they are through these pieces. They become singular. If they are lost, people may feel sad, but more importantly they may also feel that they have lost a part of themselves and feel guilty that they have failed to maintain the family line from ancestors to descendants. The theoretical significance of these objects is that they provide a deviant case for theories that reduce the meaning of objects to commercial activities, including branding, advertising and price, but also to those theories that link their meaning to social communication, art, or craftsmanship. Through a close analysis of these objects, we learn to see how things get meaning from their relationship to the self rather than from forces external to it.

Table 1. Materials and methods.

Method/tool	Research participants	Description of material	Finding research participants	Gathered by
Narratives (the pilot data)	464 stories from Finnish women	Handwritings, typed texts, few images	Participants entered a writing competition through newspa- per ads	Kalevala Women's Association for the purpose of preserving Finnish oral history
The probe- enhanced interviews (min data)	28 women: 13 from the Chicago area, 15 from the Helsinki area	Self-documentation kits for nine days and interviews. Sketches, handwritten stories, photos and audio files	Snowball sampling	The first author of this paper building upon the pilot data

The Design Journal

Data and Methods

This paper is based on two different data sets. Both looked into the reasons why people possess and wear jewellery, but both were very diverse (see Table 1). In the first data set women wrote about their experiences with their jewellery. The data for this pilot study was narrative and gathered by a Finnish organization *Kalevala Women's Association* to preserve local oral history. The pilot study had the benefit of breadth: there were 464 stories in the corpus. The large number of stories, as well as their diversity, allowed us to build initial assumptions that were then examined with the main study. A lot of the stories in the pilot study were about memories, powers and social practices, creating a solid hypothesis for subsequent study. The pilot, however, lacked both visual information and interaction with research participants, and there was no chance to present follow-up questions.

Both these points were considered when designing the main study, which built on empathic foundations (Mattelmäki et al, 2014). First, data was gathered by using cultural probes (see for example Mattelmäki, 2006). As we were interested in personal issues, which are never easy to approach, the probes were meant to sensitize women to the interviews (see Figure 1). Second, the main author interviewed the participants. The women were asked to open their

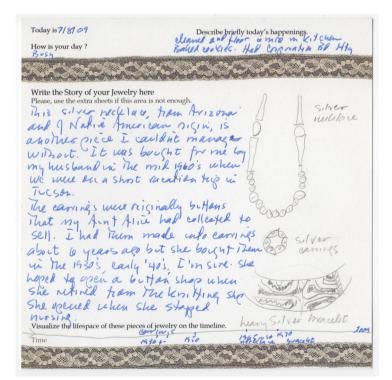


Figure 1.
A sample card from a self-documentation kit. Here Isabella is telling about her ordinary busy day's jewellery.

Œ

jewellery boxes and memory chambers, to discuss jewellery, and to explain their probe returns. As we were not interested in jewellery as a cultural category, but in its meanings to the women we studied, we did not pursue any definition of jewellery (though main author is a goldsmith by profession); instead, we asked people to define jewellery, which they did by showing their own collections to us. This method was consistent with our interactionist background theory.

The participants for the main data were from metropolitan Chicago and Southern Finland. In all, we interviewed 28 women. The purpose was to study women from two different countries was to see connections in the stories. Each story from women, no matter whether it was from interviews or the pilot study, was treated individually. Also, the content of the story was always treated as a unique source of information. The stories about wearing and possessing jewellery were rather similar, despite differences in demographics, socioeconomics, age, and nationality. Not only were the initial assumptions strengthened, but also some new nuances and insights were discovered.

The analysis of both data sets built on analytic induction (see also for example Seale, 1999; Koskinen et al, 2005) that proceeded in three phases. In the first phase, we worked with the Kalevala pilot data. When analysing any research question, we searched stories from this data set and classified them into categories. Whenever a new story could not fit into the existing categories, it opened a new category. When the resulting category system was complete, we cleaned it by removing inconsistencies from categories, and continued to do so until all the variances could be described clearly. In the second phase, this category system became a base for the main study. Once data collecting for the main study was finished, we analysed it against the category system of the pilot study, and continued until our revised category system was complete. In the third phase, we conducted three discourse validation workshops with jewellery makers (Vaajakallio et al, 2009). We chose 36 stories to cover the category system and asked the participants to cluster the stories. The result was an affinity wall that was then compared with the initial category system. The result of this procedure was a robust category system that became the basis for our interpretation, which is reported elsewhere (Ahde-Deal, 2013).

For this paper, we revisited the category system and sought cases that helped us to understand how some pieces of jewellery become parts of the core self, as defined by Belk (1988). The focus was on the processes of transition from ordinary objects into pieces that form an irrevocable part of a person's sense of self. Three processes were crucial in this transition.

Memories

One thing that repeatedly came to the fore in our discussions was the role memories played in building up the connection between

The Design Journal

an object and the self. Pieces of jewellery were like containers for memories from the past. They helped women to maintain, organize and work through memories and to pass them on to their daughters, just as their mothers and grandmothers had passed them on. The underlying key point in this process was connection to the family and the feelings that created bonds between family members.

Of course, memories also exist without jewellery. However, the physical pieces were indispensable in the processes of storytelling, and had many kinds of roles in stories. Most importantly, they do trigger memories and also bring memories to mind. Alisa here is talking about her bracelet, which she got when she lost her twin daughters in premature labour. She would never forget the instance, but she still wants to have the bracelet on to have a tangible sign of the memory.

I was pregnant before I had my daughter ... and I was pregnant with twins and ... when I was five months pregnant I went into labour and they didn't survive. So we had two girls and we had to bury them and all that. ... I also got this from my husband. It's a bracelet with a heart with their names on it. So that was right after that happened. ... I wanted to have something to ... not to remember, because I would always remember but, I wanted to have something close to me.... So, when we baptized them we gave them these names and so, I put their names on the heart on the bracelet and I would wear it every day. Just to kind of have them with me. (Alisa, 33 years)

Alisa was not the only one who was using a piece of jewellery to handle grief. Wearing and possessing jewellery from lost loved ones helped women to handle the grieving after the loss. These pieces were sometimes inherited, but more commonly, they were gifts from the loved one. In some ways, they were like prayer beads that could be touched for consolation (Walker, 2006). Although they may have looked like accessories from afar, these pieces were carriers of rich inner worlds.

Often, possessing and wearing similar pieces of jewellery created a connection between mothers and daughters. Johanna and Eva both have rings that are similar but in different colours. These rings do not only connect them to each other but also to Eva's late husband, Johanna's father, whom they commemorate with their rings, whether in solitude or communion. Johanna told how she got an American Indian ring from her mother. It was decorated with corals, but she kept losing them, and had to replace them occasionally. She loves the piece because she can see her mother wearing it. Eva, for her part, tells how the piece Johanna mentioned was her all-time favourite. She had almost lost it once when swimming in Lake Michigan, but managed to find it. To her, this piece is particularly important because it is a memory of family trips to the South-west. Most importantly, as she tells it, she thinks that the ring is irreplaceable.

I am not attached to diamonds and pearls [laughing] I mean you can replace them, you know. You can replace them, even like my mother-in-law's diamond and my engagement ring, it has a monetary value but, they are hardly one of a kind. I mean they are, but they are not, they could be, if you gave them to a jeweller he could copy it tomorrow. (Eva, 69 years)

Thus, we heard repeatedly how jewellery is used as a tool to maintain and manage memories. Someone can wear a certain necklace to bring back memories, whereas someone will keep it in a jewellery box and just open the box to touch and look at it. How a piece of jewellery works to maintain memories is individual for each woman, but the basic behaviours of touching, wearing, and browsing are essential in keeping the memories alive. These behaviours support the meaning, which lies in memories made tangible by the physical pieces.

From Great Grandmothers to Great Grandchildren

Memories get attached to many kinds of objects, but only a few get singular. When we got deeper into our stories, we came to see the role jewellery plays in family history as another necessary feature of the process of becoming a part of the core self. Every woman interviewed in the study had contrived elaborate ways of keeping the pieces in the family. They had also elaborated ways in which the pieces could be transmitted to children and grandchildren. Furthermore, these ways of transmission were explained to them too, with the aim of keeping the stories that carry memories alive. The different ways of transmission guaranteed that the pieces became time capsules that created connections between family members across several generations and connected them sometimes over centuries. Some of the pieces had market value, but more typically, they did not: their value resided above all in emotions and social connections.

For good reasons, then, women were extremely concerned about the future of their most beloved jewellery. They want to preserve them and the memories, and they went at great lengths at making sure that the future owners could share these memories. For instance, one woman tells the story of a pendant that had been in her family for five generations.

The jewellery was first given by my grandmother's grandmother to her daughter. She was Austrian, and that is why the text is in German. The pendant has always passed from mother to daughter, and that is why I got it from my mother. When I got the piece of jewellery, my mother had made a card to go with it, having the names, pictures and birth years of all the people who have worn it. Mother also wrote the story of the pendant on the card. The pendant is important to me because it will always remind me of my mother and also grandmother, whom

I have never met. My grandmother had already died when mother was young. I hope that I will have a daughter one day and can give the pendant to her. This is my most loved piece of jewellery ever. (Narratives, pilot data)

Some women had planned the future of their jewellery in detail, and created methods for transmitting the actual pieces, but also the stories to future generations. These plans are executed when the time comes. Sometimes these protocols take the form of clear and strict formulas. In the narratives, for example, one writer describes how her grandmother's mother's engagement rings with two rubies is always given to the oldest daughter of the family on her engagement day, and in some families it is always the oldest daughter who inherits certain jewellery.

More typically, as long as the pieces were handed down to the next generation properly, there was room for improvisation. An example comes from a family which had a brooch that the bride should use on their wedding day. The brooch is kept in the family by one of its female members, but the actual details of the use were to be improvised.

My mother Edda's... engagement jewellery is the adornment of the family's brides' wedding dresses... She [author's sister and current possessor] has brought it to the wedding occasions to adorn the wedding dresses. It has been at least on Riitta's, Elina's, Peppi's, Jaana's, and Mirja's wedding dresses. Some of them have worn it in the front in the middle and some of them at the side depending on the bride. Now she is going to give the brooch to her son's daughter Sofia (...) who lives in Turku. Sofia will get confirmed next summer, I cannot remember if she is going to give the brooch already then, or is she going to wait for Sofia's wedding. (Narratives, pilot data; Turku is the medieval former capital of Finland)

This example shows another important feature of the family heir-looms, the difference between owning and keeping. A piece of jew-ellery does not have to be possessed by the wearer as long as it stays in the family and maintains the family connection. As long as the pieces stay in the family, who owns these pieces is a secondary concern. Although someone in the family was to keep the pieces and legally own them, they were seen to be keepers of family tradition rather than of private property. Their duty was to keep the heirlooms and to one day pass them to a new keeper. The duty was also to preserve the stories related to it.

The Power of Jewellery

Perhaps the most striking quality of the pieces we studied was that they had something akin to supernatural powers. They rose above those particulars that characterize ordinary existence. What was involved was something analogous to what Emile Durkheim (1964) described more than 100 years ago in his study of totemism in Australia. In explaining the importance of some totemic animals and their representations to some Aboriginal tribes, he looked at their role in community rituals during mostly religious gatherings in the desert. As he noted, clans represented by totemic animals gathered regularly together for festivities to renew their bonds. It was in rituals performed during these gatherings that the power of the clan was felt and observable for clan members. Agitated, they saw in person how they were parts of the larger group, and in the absence of sociological theories, attributed this feeling to the presence of totemic animals represented in paintings and other decor. (Durkheim, 1964: 205–239)

We repeatedly saw something similar in our study. Women talked openly about the 'powers' in jewellery (for short, we talk about 'power jewellery'), and detailed how jewellery gave them strength in life. It was this power they had inherited, and it was this power they wanted to hand down to younger members of the maternal line. It was ultimately this power that made some pieces of jewellery invaluable. The powers had helped their ancestors in life; they had helped them in life; they would help young women of the family when strength and help was needed. Much like totemic animals and their representations among the Aboriginals, jewellery was the device that made these powers tangible and observable, and the stories that carried the powers tell-able. Jewellery was indispensable, but only insofar as it carried these powers.

Of course, belief is the foundation of these powers. If the powers are not believed in, they do not work: they do not heal or cure, nor would they pass love or good luck. Over time, these powers get validated: when a piece heals, it is taken as a sign of the power at work; when they fail to heal, something went wrong in the ritual of using the piece. In this way, the beliefs are self-fulfilling prophecies that also keep changing the behaviours of the possessors. We can hear this logic at work in one story in which the possessor of the pendant wished to have a baby. Bird's legs were a common old symbol of fertility in Finland. The possessor believed in it and since she became pregnant when having the pendant, she feels that it had something to do with it. After this experience, the pendant became her most cherished piece of jewellery.

One interesting thing the stories revealed was that the pieces of jewellery had to be worn to validate the powers. Believing in the powers became stronger each time a piece was worn. The more the jewellery is worn, the fresher the power stays. Because of this, power jewellery has to be worn always when there is a need to evoke the powers.

I have a lot of beliefs, but she will say 'mom you are crazy'. You know beliefs for crystals, crystals you are supposed to have at home. Crystals heal yourself and like the amethyst make you

calm. And make your nerve system better and make your spirit better. ... This is like artificial crystal. When someone go and we wear it like this [the viewer gets light in his eyes from the jewellery]. When you have blue eyes [Amy has blue eyes], you are very weak person because you don't have power. That's why I sometimes wear this necklace, because it makes the [viewer's] eyes go to the crystals not to me you know. ... You know, mostly when I go outside I wear the crystals, you know, because I meet a lot of people. When I am staying at home I don't wear that because I don't need it. I need protect when I go out. That's most important I think. (Amy 52 years)

Most of the women interviewed had at least a few pieces of jewellery that carried powers and all women knew others that had power jewellery. However, most of the jewellery had no power when it was new. It appeared over time as experiences mounted. The powers should also be proven: the strongest powers were in pieces that had a long history and a lot of evidence for the powers. Sometimes, these histories and evidence extended over decades, generations, or even centuries, creating connections between women who, ultimately, could not think about themselves without them.

We cannot tell whether the source of these powers is self-confidence that stems from a belief in them, some therapeutic process (for instance, knowing how grandmother lived through hardships may help the granddaughter to live through a similar hardship), or just a placebo effect. The mere existence of power jewellery, however, means that stories from the past give women companionship in life even when they are alone. This companionship can be an important source of inner strength, and should not be looked down upon.

The process of a piece of jewellery transforming into power jewellery is easier to locate. According to our interpretation, there is a formula that illustrates how these powers are construed. First, there has to be an occasion where power is faced for the first time. It may be a common symbol of power, like the evil eye, so that the piece of jewellery has the power when it is purchased, but more typically, it is a personal experience in which the piece is involved. Then the experience is built into a story that has to be validated over the years in several retellings. If this happens, and the story is shared within a family, the piece is slowly turned into power jewellery with transcendental qualities. Subsequently, memorizing, repeating and sharing the stories of the power jewellery keeps strengthening the power and spreads it to other family members. Eventually, these beliefs may become so strong that it is impossible to break them.

Discussion

This paper has explored the ways in which some pieces of jewellery become so significant to people that they become parts of their core self. As a part of a larger social turn in design research (see Chapman, 2014; Keyte, 2013; Parmar, 2008; Summatavet, 2005), this paper has situated jewellery into everyday life, and explored some of those social processes that turn some objects into heirlooms. Looking at jewellery from a social angle rather than seeing as an object of consumption has given us some fresh insights into jewellery ownership.

The research objects were those pieces of jewellery that have been kept in a family for generations. First we studied memories and stories that maintain memories that are identities that connect women to their maternal line. Even though life throws people into many kinds of situations and roles, these pieces and stories help women to keep in mind who they are, where they come from, and also to communicate this irrevocable part of their core self. We learned that ultimately, they become bigger than their carriers, empowering them, but also setting them duties and rules that instruct how the pieces have to be kept in the family and handed to subsequent generations. In rituals in which these pieces are given to girls of younger generations, these girls get new identities significant to the family. These observations, in turn, led us to explore how the pieces grant women power to work through the life's hardships. When faced with pain and sorrow, women get strength from their jewellery by recounting how these pieces have helped their ancestors through their grief, for instance. When a piece achieves this status, it becomes singular and irreplaceable.

Can we go beyond description and explain how jewellery becomes a part of the core self? Given the nature of our qualitative study, the answer to this question is a partial yes. Our interpretation shows how pieces in our data become singular, but it cannot say whether these are the only possible processes, nor does it say whether the processes we describe always lead to jewellery becoming a part of the core self. That is, we can describe necessary, but not sufficient, conditions of the process (see Seale, 1999).

Is our interpretation relevant to objects other than jewellery? There is some evidence that suggests that our argument is of interest to many kinds of designers. There are objects that are kept in families for generations as memories. For instance, Battarbee (2003) reports a case of a rocking chair that has been in family for more than 100 years. Houses are built with children and grandchildren in mind, and there is a market for vintage design and vintage designer clothing. There are people who buy Macintosh chairs, samurai swords, china and so forth, for future generations rather than for a collection which will be sold one day. As things like collecting may explain many of these practices, we remain cautious about whether these practices are related to the processes we have described and whether these objects form a part of the core self.

What we know is that our study opens up several research questions for the future. For example, why some gifts come to be cherished while others become objects of discomfort and even hate, or why some wedding rings become secret sources of power after divorce while others are thrown away, melted or sold for cash? Also, our study has provided a deviant case to the literature on product attachment, which usually builds on cross-sectional survey data and focuses on the point of purchase and its perceptual context (see for instance Mugge *et al.*, 2005; Schifferstein and Zwartkruis-Pelgrim, 2008). Its other methodic limitation is that statistical methods by definition cannot help to understand singularity.

Some lessons of our study are methodic, then. If we want to understand how some objects pass from consumption to the core self, we need methods to listen to the core self, which is often well hidden and fragile. For us, the probe-enhanced method proved to be the key, as it created an empathic connection to women. Empathy and trust are basic requirements for studies like ours, and it was the stories the probes elicited that created trust between the women and us in our study.

Our final reflection concerns the implications of the social turn in design we referred to above. When we look at other studies in empathic design, the research program that formed the larger context of our study (see Mattelmäki et al, 2014), we see that as a rule, design is less important than consumer studies suggest. In the consumer studies mentioned above, objects are usually studied in isolation from the larger context, and often design becomes a matter of visual perception and cognitive processes based on perception. When we expand from the perception nexus, we see that processes are much more important to people than perception: we see the joys of parenthood and marriage, but also the pains of divorces and death, for example (see Ahde-Deal, 2013; Paavilainen, 2013; Paavilainen et al, 2016).

Like most social perspectives on design, empathic design tells us to pay attention to how meaning is created in social action. It also teaches us to be wary of assuming that design somehow automatically shapes human action. However, it is also worth noting that our paper had added a new line of interpretation to this message. It has shown that there indeed are ways in which some objects grow larger than life and achieve something akin to transcendence from it in the sense that their meaning dwells on definitions that take decades to shape and that change only very slow. These objects become constitutive of social processes and may ultimately be integrated to our core selves that define our sense of who we are, and how we are to behave almost regardless of the situation. For those designers who take the social turn seriously, our message is ultimately positive: some objects persist for decades and even centuries, and may in fact do so because they carry powers that turn the hardships into strengths.

Disclosure Statement

No potential conflict of interest was reported by the authors.

References

- Ahde-Deal, P. (2013). Women and Jewellery. A Social Approach to Wearing and Possessing Jewellery. Helsinki: Aalto University.
- Battarbee, K. (2003). 'Stories as shortcuts to meaning'. In Koskinen, I., Battarbee, K. and Mattelmäki, T. (eds), *Empathic Design, User Experience in Product Design*. Helsinki: IT Press, pp. 59–65.
- Belk, R. W. (1988). 'Possessions and the extended self'. *Journal of Consumer Research*, 15(2), 139–168.
- Chapman, J. (2014). 'Meaningful stuff: Towards longer lasting products'. In Karana, E., Pedgley, O. and Rognoli, V. (eds), *Materials Experience: Fundamentals of materials and design*. Oxford: Butterworth-Heinemann, pp. 135–143.
- Csikszentmihalyi, M. and Rochberg-Halton, E. (1981). *The Meaning of Things*. Cambridge, UK: Cambridge University Press.
- Cunningham, J. (2007). 'Contemporary European Narrative Jewellery.' Practice Based doctoral dissertation, Glasgow School of Art, Department of Silversmithing and Jewellery.
- Durkheim, É. (1964). *Elementary Forms of Religious Life*. London: George Allen & Unwin.
- Forlizzi, J. and Battarbee, K. (2004). 'Understanding user experience in interactive systems'. In *Proceedings of Designing Interactive Systems DIS 2004*. New York: ACM Press, pp. 261–268.
- Holm, C. 2004. 'Sentimental cuts: Eighteenth-century mourning jewellery with hair'. *Eighteenth-Century Studies*, 38(1), Hair (Fall, 2004), 139–143.
- James, W. (1890). *The Principals of Psychology vol.1*. New York: Henry Holt and Company.
- Jordan, P. W. (1997). 'Human factors for pleasure in product use'. *Applied Ergonomics*, 29(1), 25–33.
- Jordan, P. W. (2000). *Designing Pleasurable Products*. London: Taylor & Francis.
- Keyte, J. (2013). 'Objects in purgatory: How we live with uncherished gifts'. *Interiors: Design, Architecture and Culture*, 4(3), 315–337.
- Kopytoff, I. (1986). 'The cultural biography of things. Commoditization as process'. In Appadurai, A. (ed), *The Social Life of Things*. Cambridge: Cambridge University Press, pp. 64–92.
- Koskinen, I., Alasuutari, P. and Peltonen, T. (2005). *Laadulliset menetelmät kauppatieteissä*. Tampere: Vastapaino.
- Mattelmäki, T. (2006). Design Probes. Helsinki: UIAH.
- Mattelmäki, T., Vaajakallio, K. and Koskinen, I. (2014). 'What happened to empathic design'. *Design Issues*, 30(1), 67–77.
- Mugge, R., Schoormans, J. P. L. and Schifferstein, H. N. J. (2005). 'Design strategies to postpone consumers' product replacement: The value of a strong person-product relationship'. *The Design Journal*, 8(2), 38–48.
- Nippert-Eng, C. (2010). *Islands of Privacy*. Chicago, IL: University of Chicago Press.
- Paavilainen, H. (2013). Dwelling with Design. Helsinki: Aalto.

- Paavilainen, H., Ahde-Deal, P. and Koskinen, I. (2016). 'Dwelling with design'. *The Design Journal*, 20(1), 1–15. doi: 10.1080/14606925.2016.1223783
- Parmar, B. (2008). 'A Grammar of Sentiment. Thinking about Sentimental Jewellery Towards Making New Art about Love and Loss.' Doctoral dissertation, University of Wolverhampton.
- Schifferstein, H. N. J. and Zwartkruis-Pelgrim, E. P. H. (2008). 'Consumer-product attachment: Measurement and design implications'. *International Journal of Design*, 2(3), 1–13.
- Seale, C. (1999). The Quality of Qualitative Data. London: Sage.
- Summatavet, K. (2005). 'Folk Tradition and Artistic Inspiration A Woman's Life in Traditional Estonian Jewellery and Crafts as Told by Anne and Roosi.' Doctoral dissertation, University of Art and Design Helsinki. Tallinna: Tallinna Raamatutrükikoda.
- Untracht, O. (1982). *Jewellery Concepts and Technology*. New York: Doubleday.
- Vaajakallio, K., Ahde, P., Hahn, Y. and Latva-Ranta, S. (2009). "Narri Utilizing the full potential of narrative data through a design game." Paper presented at 40 IADE 40 conference. October 1. Lisbon, Portugal.
- Walker, S. (2006). Sustainable by Design. Explorations in Theory and Practice. London: Earthscan.
- Wallace, J., Dearden, A. and Fisher, T. (2007). 'The significant other: The value of jewellery within the conception, design and experience of body focused digital devices'. *Al & SOCIETY*, 22(1), 53–62.
- Wolff, K. (1964). The Sociology of Georg Simmel. Toronto: The Free Press.

Biographies

Dr Petra Ahde-Deal is currently a coordinator at KEA Copenhagen School of Design and Technology. She is interested in smart jewellery and wearable technologies and has studied meanings of jewellery. She is also a goldsmith and jewellery designer.

Dr Heidi Paavilainen is currently a university teacher in the Aalto University. Her research interest is consumption and use of industrial design. Her background is in textile design.

Ilpo Koskinen is currently a professor at Hong Kong Polytechnic University. His main research interest has been research methodology but his work has also covered multimedia, the cityscape, and these days' social design.

Address for Correspondence

Dr Petra Ahde-Deal, KEA – Copenhagen School of Design & Technology, Campus Empire, Guldbergsgade 29 N, 2200 CPH N, Denmark.

Email: peth@kea.dk