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## Flawed or redundant: products with long lifespans against the odds

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**Keywords:** Consumer dissatisfaction; Faulty products; Inactive products; Lingering value; Divestment.

**Abstract:** Many strategies are proposed that should enable the consumers to keep using the products for longer, but there is less research on which and how consumer practices contribute to longer lifespans. In this paper we focus on two specific, distinct ways of reaching long lifespans: 1) retaining redundant products even though they are not needed or used, and 2) keeping on using flawed products despite they no longer functioning, fitting, or delivering the expected service level. In the former, the products are passive while in the latter they remain in active use and thus reach longer service life. The discussion is based on six focus groups conducted in connection with the project LASTING. The overarching theme was product longevity of three product groups: electronics, textiles, and furniture. Our analysis points to five categories of explanations for products that are either kept despite the lack of any intention of using them again or retained in active use despite flaws: Economical, Ethical, Social, Emotional, and Intentions. It remains important to focus on active service life and various ways to promote it to reduce the environmental and climate impacts of consumption. The role of each of the five categories will be discussed, as well as implications for sustainability and policy options.

### Introduction

The timing of product disposal is an important aspect of circular economy, where the value of products should be kept at highest level for longest possible time, thus using and reusing products as they are, before recycling the materials.

To throw away something that still is considered useable is often associated with guilty conscience and moral qualms (Klepp, 2001). Klepp's study was on clothing and describes how disposing of clothing is a painstaking process, where the clothing in question is moved around the house before the decision on disposal is reached. Cruz-Cárdenas & Arévalo-Chávez (2018) call these "transition areas," such as cellars, where objects are, deliberately or not, waiting for their exit from the household. The time between last use and when divestment decision is reached, can be labelled 'at mercy' (Klepp, 2001). A term that can shed light on this period, is products' 'lingering value' and the accompanying erosion of value or gradual downgrading prior to final disposition, to prevent the guilt or anxiety of the disposition (Türe, 2014). Such downgrading would appear through inappropriate transfer of a product to the next potential user, or through two

strategies the author call 'brutal use' or 'gradual garbaging' to use the object till the end.

For our theoretical basis, we use taxonomy developed by Jacoby et al. (1977) for describing consumer disposition behaviour. It includes the situational, personal and product related factors that influence the disposition choice, as well as the potential outcomes of the disposal decision on whether to retain the item or dispose of it, either permanently or temporarily (e.g., loan or rent it).

Several researchers have developed the taxonomy further to accommodate for the fact that divestment is a process of several stages, as described above. According to Dommer & Winterich (2021), the first step is to stop using an object, followed by decision on whether to retain the item or dispose of it, and finally choosing where to dispose of it. Hanson's (1980) paradigm for consumer product disposition processes describes disposal as a process of four stages, starting from problem recognition, search evaluation, disposition decision and post-disposition outcomes. Poppelars et al. (2020) distinguish between divestment, disposition and detachment, where divestment is seen as the overarching term referring to the final phase of the consumption

cycle, and that disposition and detachment happen simultaneously during divestment. Disposition is then the physical separation of the product, while detachment represents the mental and emotional separation of the product.

In this paper, we focus on products where the timing of the disposal seems to be “off”, by studying why consumers keep products that either don’t function properly or are just kept in storage.

## Methodology

For this study, six focus groups were carried out, with 36 participants in total. The number of participants in the workshops varied between three and eight. The composition of focus groups included focus groups that were gender specific (men/women), or with special interest in environmental issues. The participants were asked to send two pictures in advance of products they had that either surprised them positively or negatively with regards to lifespan. Over the focus groups, each participant was asked to share the reasons for the photo they had submitted, and the other participants joined in with their reflections, thoughts, and own experiences.

The focus groups were recorded and transcribed. The transcripts were coded with a combination of both deductive and inductive approaches, where deductively prepared codes were prepared based on the interview guide topics and the project application. This was augmented with themes appearing from the material with an inductive approach. Through a collaborate effort between the three researchers involved in the analysis using NVivo software, 9 main coding categories were identified. Each of these has a number of subcategories, Table 1.

For this paper the responses from the ‘Not satisfied’ subcategory is used in the Results and analysis section. The rational for this is that both product groups are representations of products that have failed to satisfy the expectations respondents had to them.

| Main analytical category | Subcategories                                      |
|--------------------------|--|
| Acquisition              | Second-hand purchase; Forms of ownership; Planning |
| Use                      | Satisfied; Not satisfied                           |
| Maintenance              | Protection: Cleaning; Repair; Adjustments          |
| Disposal                 |  |
| Quality                  | Brand; Design; Complaints; Returns                 |
| Lifespan                 | Years  |
| Life event               |  |
| Labelling                |  |
| Resources                | Knowledge; Materials; Price; Time; Transport       |

**Table 1. Analytical categories and sub-categories.**

## Results and analysis

One of the inductively found aspects is a number of products, that the owners were dissatisfied with, but still chose to keep. We noticed two particular features: 1) Products that were still fully functional, that were taken out of active use and stored without any apparent intention of using them again; and 2) Products that were flawed but still were retained in active use. The timing of disposal of both product groups seems to be delayed. We start by giving examples of products from both categories and continue with analyzing the suggested reasons behind delayed divestment.

### *Inactive redundant products*

This group of products had representation from all three product categories discussed in the focus groups: Clothing, furniture and electronics. An example of the latter is the hot dog heater (Figure 1). The owner explained that it was both impractical to use and not really needed, as other household equipment already can deliver identical functions. Another example is a robot vacuum. The owner describes it as a mistaken purchase, as the robot vacuum is too high to get under the sofa. The owner had checked the height of the robot vacuum without noticing that this measure was given without the wheels needed for it to move around.



Figure 1. Dennis' (M-63) Hot dog toaster.

The following is part of an exchange on a pair of cross-country pants owned by a man in his 70s. He considered them too lined and subsequently too warm, and the tightening mechanism around the waist had broken. However, he had managed to fix it with a shoestring:

*Man: (...) And so it never worked, it probably hung there for God knows, I don't know how many years.*

*Moderator: Ok, but you have not disposed of it?*

*Man: No, No I have not disposed of it, no no, disposing of it, that is not that easy, and it's not possible to sell it either, so it'll be left there hanging for, I don't know how long.*

*(...)*

*Female: God, they [the trousers] must be annoying, they have been annoying you for ten years!*

*Man: Well yes, I keep moving those things around...*

Examples from furniture is an old folding table that was considered as rather unpractical as it was hard to fit chairs under it. This was ready for going through a next step in 'a cascade': To be moved from the living room to the cabin. A probable final step: disposal, was still unarticulated.

The common denominator here was that all these products had full functionality, but that the users either did not have a need for these functionalities any longer, or that such needs were covered by other products or solutions.

With reference to the terms suggested by Poppelars et al., (2020) one could speculate if these products have progressed more on a mental and emotional separation of the product (detachment), but less so on physical separation (disposition). Or is it rather the other way around, as the products often appear to be out of sight, and as such is physically separated, but are still kept as the emotional separation is harder?

### *Faulty products in active use*

Examples of flawed products with long lifespans against the odds within electronics include a dishwasher and a SodaStream that both need to be started in a special way to function, requiring extra skills from their users, a tumble drier where the drum needs to be pushed manually to start rotation, a washing machine where spin-drying can't be used because it destroys clothes, and hair dryer that does not have the heat function (Figure 2). The owner in her 30s explains:

*That hairdryer, it was also a bit cheap from Clas Ohlson, I remember when I bought it and then the hot air stopped working very quickly. So.. and then I just haven't bothered to do anything with it because I don't use a hairdryer that much. (...) I've probably had it like seven years, (laughs). (...) I use it. It works, it just takes a lot longer than with a hot hair dryer, so that's probably why I haven't bothered to do anything with it. (laughter).*



Figure 2. Charlotte's (F-37) hair dryer.



For clothing and furniture, many of the problems were related to poor aesthetic properties, where the materials have not tolerated use and have become so unsightly that the user for example chooses to wear the clothes only under other garments or at home, or for furniture, cover it with a tablecloth.

Further, some of the furniture was found very impractical, like a sofa that cannot really be sat on, as the upholstery material does not tolerate some common clothing materials such as denim jeans, and the seat pillows slip off when you sit on it. Within clothing, the owner in her 70s explained how the zipper in her jacket was so poorly sewn that it was very hard to close. She had to step into her jacket while the zipper is closed to be able to wear it. As with electronics, some of the furniture was partly broken but retained some function, such as a dresser that could be used as a TV cabinet even when the drawers could not be opened.

A common nominator for all these examples is that the products have some of the function left. They have not reached the first step of the disposition process where the owners stop using them (Dommer & Winterich, 2021). This could be interpreted as some of the core functions of the product still is intact, whereas the additional functions or services the products originally could provide were 'nice to have'.

## Discussion

So, what keeps the owners of products with one of these features from disposing them? Other consumers would probably reason otherwise and replace these products without guilt or moral qualms. In line with Jacoby et al, (1977), we find that there are situational, personal and product-related factors that influence the divestment choice. Based on the material, we suggest that the users still feel that these products have some (lingering) value attached to them, either economic, emotional, social, or practical use value. Also, their own ethical considerations on non-wastefulness have an impact, as well as the situational aspects such as available storage space, transport possibilities and accessible divestment options.

### *Economical*

One reason appears to be some kind of mental depreciation. Some of these products were associated with high prices, and the owners felt

that it was too early to throw them away. As the owner of a leather coat phrased it when he was asked why he still held on to it: "*I cannot afford to throw it away!*" For some of the faulty products still in use, the cost of replacement would be high, such as for the washing machine and the dryer. In these cases, the user is saving money when keeping on using the machines.

Another related aspect is that Norwegians in general live in rather spacious dwellings, where products may be stored away in attics or storage rooms and be kept out of sight. As such, they can be kept without a constant reminder that they are there.

### *Ethical*

Some of the respondents expressed sustainable or ethical motivations related to non-wastefulness and did not want to dispose of the products before they were used up, despite the poor functionality, they still have 'lingering value' (Türe, 2014). For the cross-country pants that were kept despite any intention of using them, it seems to be more of an indication of moral qualms (Klepp, 2001).

### *Social*

Some of the products were received as gifts. This might make it harder to dispose of them, even though you have little use for it, or find it ugly (Cruz-Cárdenas & Arévalo-Chávez, 2018). One example was a daughter who received a microwave from her father as a present. If she disposed of it, she felt that she would say to her father that she really would not appreciate his present, and she obviously would not like to tell him off like that.

### *Emotional*

According to reviewed literature, many products are retained due to emotional attachment. This was seldom the case in our study, because the examples we focused on, where products people were dissatisfied with. However, some of the inherited items fitted with this description, as well as some products with aesthetic properties that the owners appreciated, even though the product otherwise would not function as expected. Some inherited products were kept without any intention of using them further. With inheritance comes some legacy and that it is a product that you are expected to take care of before it is passed on to the next generation. So, not just waiting for an occasion

in your own life when the gadget, garment or furniture suddenly would fit, but even when occasions arise in other people's lives. For instance, when your children are moving out, maybe they then would need that thing in your storage?) Such products often have an emotional value. The folding table could be an example of this, although the owner stated this somewhat indirectly ("an old table").

### *Intentions*

We also saw that some products were retained with the intention of potential future use where needs may arise or circumstance change. For example, the owner of the robot vacuum cleaner was moving and would now test if it could be used in the new dwelling.

In some cases, the intention was delayed, as the owner claimed it was too late to forward a complaint to the store or manufacturer. Under such circumstances the product could have been saved through repair or replacement.

### *Sustainability*

An overarching question is to what extent any of these product features can be said to be environmentally sustainable. Intuitively one would be tempted to say that faulty products that are kept in active use are sustainable in this sense. They postpone the purchase of new product that would cover the same need, so the lifespan of the product is increased at some cost (lower functionality). However, there could be hazards resulting from the use of such products: electrical faults, an electrical shock, or other health hazards like cuts or bruises, or even fire. They are also a frequent source of dissatisfaction for their owners.

The sustainability of products that are kept but that have gone out of use may intuitively appear less likely. They may, however, function as backup, in case currently used products for a specific task should fail. If these products could find their way to a new user, or even a new area of use, the active lifespan even of these products could increase. On the other hand, quite a few products are susceptible to obsolescence (through changes in technology or fashion). They typically take up physical storage space, which can potentially slow down the acquisition of new products (Cruz-Cárdenas & Arévalo-Chávez, 2018).

## **Conclusions**

This paper has identified two product types that for a variety of reasons are kept, despite failure to meet owners' expectations (satisfaction). This is one property that unites these products, however even some reasons behind holding on to them appears to apply for both product types. However, there are also differences: The flawed products that are kept in use, seem to fit to the 'lingering value'-concept, whereas this may not explain the inactive product type. For the latter reasons are more tacit, however they suggest a negotiation between the detachment and disposition-concepts, where physical and emotional separations sometimes appear to be in accord with each other, other times they conflict.

There are several options for avoiding or reducing these two product types. To avoid inactive items, a lot can be done during acquisition, as mistaken purchases and gifts constituted a large share of these. Further, facilitating options for reuse can contribute to re-activate these items. Many of the faulty products could be repaired or refurbished, and many disfunctions could have been avoided by guidance in stores on proper maintenance of products.

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## **References**

- Cruz-Cárdenas, J., & Arévalo-Chávez, P. (2018). Consumer Behavior in the Disposal of Products: Forty Years of Research. *Journal of Promotion Management*, 24(5), 617-636.
- Dommer, S. L., & Winterich, K. P. (2021). Disposing of the self: the role of attachment in the disposition process. *Current Opinion in Psychology*, 39, 43-47. doi:10.1016/j.copsyc.2020.07.016
- Jacoby, J., Berning, C. K., & Dietvorst, T. F. (1977). What about Disposition? *Journal of Marketing*, 41(2), 22-28.
- Klepp, I. G. (2001). Hvorfor går klær ut av bruk?. SIFO.report 3-2001.
- Poppelaars, F., Bakker, C., & van Engelen, J. (2020). Design for Divestment in a Circular Economy: Stimulating Voluntary Return of Smartphones through Design. *Sustainability*, 12(4), 1488.
- Türe, M. (2014). Value-in-disposition: Exploring how consumers derive value from disposition of possessions. *Marketing Theory*, 14(1), 53-72.