

House of Lords Science and Technology Committee

Enquiry into Waste Reduction

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1. The UK disposes of considerable, and increasing, volumes of domestic electronic products (DEPs) each year – the majority of which still perform their tasks perfectly, in a utilitarian sense. In an emotive sense, however, these unwanted products bear an immaterial form of defect manifest within the relational space occupied by both subject and object (user and product). In this way, it is clear that the *design for durability* paradigm has important implications beyond its conventional interpretation, in which product longevity is considered solely in terms of an object's physical endurance – whether cherished or discarded. In this sense, it can be seen that durability is just as much about desire, love and attachment, as it is fractured polymers, worn gaskets or blown circuitry. It therefore appears clear that there is little point designing physical durability into consumer goods, if consumers lack the desire to keep them.

2. It may be argued that the unsustainable consumption and waste of natural resources is a legacy of modern times, born largely from the inappropriate marriage of excessive material durability with fleeting product life spans. Landfill sites and waste management facilities throughout the UK are overloaded with fully functioning DEPs – toasters that still toast and freezers that still freeze. In many cases, waste of this nature can be seen as nothing more than a symptom of a failed relationship between the user and the product. This is because consumer desire is unstable; it continually evolves and adapts, whilst the DEPs deployed to both mediate and satisfy those desires remain relatively frozen in time. It is this incapacity for evolution and growth that renders most DEPs incapable of both establishing and sustaining relationships with users. The waste this inconsistency generates is substantial, coming at increasing cost to manufacturers facing the policy-driven demands of the European Union (EU) Waste Electrical and Electronic Equipment (WEEE) Directive and, perhaps more importantly, the natural world. We must therefore begin to consider the emergent paradigm of *emotionally durable design* alongside more established notions of physical durability and material endurance.

3. Despite growth as a territory of enquiry, thus far, the creative methodologies addressing design for durability have attended almost exclusively to the cosmetic, bodily survival of manufactured objects. Indeed, at present, products designed for take-back are generally geared toward economical disassembly, recycling and reuse, rather than prolonged lifespans. Though these end-of-pipe methodologies are essential, it may also be stated that, through focussing solely on waste management strategies (such as the design and production of recyclable waste, biodegradable waste and disassemble-able waste, for example), deeper strategic possibilities are overlooked. In this way, it may be argued that sustainable design methodologies are symptom-focussed; addressing the after-effects – rather than the causes – of the inefficient model of design, production and consumption we face today.

4. In the case of most DEPs, longer lifespans are environmentally beneficial, as the majority of energy consumed occurs pre-use, during the resource extraction and manufacturing phases. This is particularly true of digital products – such as mobile phones, PDA's, digital cameras and MP3 players – that require low levels of energy to operate (largely due to their frictionless action, achieved through a lack of moving parts), but actually require relatively high levels of energy to produce. However, there are exceptions to this rule. DEPs that consume substantial amounts of energy during the use phase, when more energy efficient alternatives are commercially available, may well become counterproductive over extended periods of time (exceeding 8–10 years); products that typify this classification include washing machines and fridge freezers.

5. Though the need for longer lasting DEPs is widely recognised and supported, practical working methods, design frameworks and tools that enable the commercial implementation of such artefacts, are scarce. This may be described as a consequence of the apparently intangible, ethereal nature of considerations pertaining to psychological function, which cause confusion for the practicing designer tasked with the design and development of greater emotional longevity in DEPs. As a result, the positive impact(s) of academic studies in this area has thus far failed to penetrate the working practices and

methodologies of design – arguably, the one place where new models of sustainable design knowledge and understanding are most urgently needed. It is essential therefore that practical methodological information is generated, that enables product designers to engage more effectively with complex issues of emotional durability through design; presenting a more expansive, holistic approach to design for durability, and more broadly, the lived-experience of sustainability.

6. From my research, in which an empirical study (2006) examined the attachment behaviours of 2154 respondents with their DEPs, the following *6-point experiential framework* has been distilled; providing product designers with distinct conceptual pathways through which to initiate engagement with salient issues of emotional durability and design; the 6-point experiential framework (and supporting annotations) is as follows:

- a. Narrative: users share a unique personal history with the object; this often relates to when, how and from whom the object was acquired
- b. Detachment: feel no emotional connection to the object, have low expectations and thus perceive it in a favorable way due to a lack of emotional demand or expectation (this also suggests that attachment may actually be counterproductive, as it elevates the level of expectation within the user to a point that is often unattainable)
- c. Surface: the object is physically ageing well, and developing a tangible character through time, use and sometimes misuse
- d. Attachment: feel a strong emotional connection to the object, due to the service it provides, the information it contains and the meaning it conveys
- e. Fiction: are delighted or even enchanted by the object as it is not yet fully understood or known by the user; these are often recently purchased objects that are still being explored and discovered by the user
- f. Consciousness: the object is perceived as autonomous and in possession of its own free will; it is quirky, often temperamental and interaction is an acquired skill that can be fully acquired only with practice

7. By designing DEPs that consumers wish to keep for longer, these products are transformed into conversation pieces – linking consumers to producers, through an ongoing and sustained dialogue of service, upgrade and repair. If appropriately managed, it is proposed that fostering and maintaining such relationships with customers, presents a significant part of the solution to issues of sustainability and design; enabling business to continue generating revenue whilst reducing the frequency of need for further costly manufacturing, resource extraction, energy consumption, atmospheric pollution and waste.

8. Form has a vital role to play in achieving the function of sustainability. Function has a more ethereal quality than is commonly recognised – it could be said that function exists on a linear scale, in which at one end you have *task-oriented* function where objects perform and fulfil their tasks well (which is a sustainable characteristic), and at the other end of the scale, you have a more *sociological/existential* function where objects are effective in mediating the particular values and beliefs of the individual user. Both modes of functionality are largely dependent on the designer, and are central to the success or failure of an object in social, economic and environmental terms, as when objects succeed within both modes of functionality through design, replacement motives are quelled, and things generally, are valued, cherished and kept.

9. Amidst the industry-wide movement to achieve compliance with environmental legislation such as the EU WEEE Directive, the root causes of the ecological crisis we face are overlooked; meanwhile the inefficient consumer machine surges wastefully forth, but now it does so with recycled materials instead of virgin ones. By neglecting to better understand the motivational drivers underpinning the consumption and waste of DEPs, design resigns itself to an end-of-pipe problem-solving agency, rather than the central pioneer of positive social, economic and environmental change that it potentially could be.

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