Critical Theory and Participatory Design

Simon Bowen
Sheffield Hallam University
Furnival Building, 153 Arundel Street,
Sheffield, S1 2NU, UK
s.bowen@shu.ac.uk

Abstract
Critical Theory (via critical design) could enable designers and users to devise products and systems with radically different roles and functions. A challenge for participatory design is how designers' and users' understanding of the 'space of possibilities' may limit what is designed. In suggesting provocative alternatives, the conceptual designs produced by critical design may allow designers and users to explore a broader 'space of possibilities' and develop innovative products and systems. In my research [3], I have developed a methodology based on these principles. This use of (critical) artefacts to both express and transform understanding has parallels with the use of critiques in Critical Theory. However criticisms of Critical Theory, notably elitism, are also applicable to critical design and are counter to the democratic values of participatory design. I will discuss these issues below with reference to my use of 'critical artefacts' in participatory design activities to foster human-centred innovation.

CHI 2010, April 10–15, 2010, Atlanta, Georgia, USA.
ACM 978-1-60558-930-5/10/04.

Keywords
Critical design, participatory design, innovation.

ACM Classification Keywords
H5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous.

Participatory Innovation
Participatory design (PD) [13, 18] ensures that the users of technological artefacts are involved in their design as informants or co-designers. This stems from an ethos that such people have a democratic right to be included in the design of what affects them and will benefit as a result, and that including them in design activities results in better (more efficient, usable, profitable etc.) products and systems. Ehn [10] refers to this as the political and technical features of participatory design. So, PD gives value to both human and operational improvement; it aims to produce 'happier' (empowered, enabled, valued, fulfilled) users and better products/productivity.

In PD, designers and users work together to explore a 'space of possibilities' for products and systems based on their combined knowledge and experiences. Such approaches can produce solutions relevant to users' *existing* wants and needs, but could be less effective at producing innovative ideas that answer users' *future* or *latent* needs (i.e. needs that users are unaware of, but recognise as being relevant to them once satisfied, c.f. [17]). A quote, often attributed to pioneering car manufacturer Henry Ford, characterises the challenge:

"If I'd asked people what they wanted, they would have asked for a better horse."

Ford's customers didn't know the potential of motorised road transport, so couldn't say what they wanted from it. The motorcar was outside their space of possibilities. To develop innovative ideas using PD, designers and users need to be able to identify relevant solutions in a broadened space of possibilities.

I reached a similar impasse with users when attempting to develop novel product ideas for the display, storage and organisation of digital photographs [4]. My tactic for achieving this broadening was to discuss with users a set of critical artefacts I had produced which expressed provocative alternative possibilities. This was inspired by a project where conceptual design proposals were used to stimulate ideation between collaborating designers [11], which in turn was informed by critical design [8, 9].

The products of critical design (critical artefacts) are intended to provoke reflection in their audiences. They express alternative social practices, values and technological possibilities that critique the assumed roles and functions for electronic products (such as Dunne's devices that draw attention to the physical phenomena of electro-magnetic waves [8]). However, whereas critical artefacts mark the end of the designer's involvement in critical design, I have used them (and the reflection they afford) more instrumentally to influence further designing.

In a project exploring the design of 'digital mementos', I produced several critical artefacts that were presented to users along with images describing their function. For example, *Aroma-mouse* (figure 1) gives off a pleasant fragrance; you could put it in a drawer with your socks to keep them smelling fresh. It also stores 100 pixel square images of the web links you visit on your home computer via a wireless connection. If discovered forgotten at the back of a drawer, clicking on *Aroma-mouse*'s buttons cycles through the stored 'mouse-eye views' on its small screen.

Aroma-mouse embodied ideas about the serendipitous discovery of mementos, and saving web activity as mementos. It was provocative in that it suggested alien applications of technology (a 'Wi-Fi drawer freshener'), unusual social practices (a device to be 'deliberately' lost), and alternative forms of memento ('mouse eye views'). The aim was not to suggest a practical product, rather to open up a discussion about product roles and functions. Through their ensuing discussion of *Aroma-mouse*, users recognised a need to capture elements of their 'digital lives' for future remembering and suggested that digital devices could create unexpected and delightful 'personal memory moments'. Discussing the critical artefacts enabled the users to appreciate novel possibilities, and me (as designer) to appreciate users' needs within them and possible opportunities for

future products and systems that then informed further design work.

Figure 1. Aroma-mouse

The aspects of Critical Theory apparent in critical design (and related practices) offers a description of how this operates.

Critical Design Practices and Critical Theory

Dunne & Raby [8, 9] propose critical design as an alternative to mainstream "affirmative design". The products of critical design are not explicitly intended for manufacture and sale (they are frequently encountered in galleries, e.g. [20], [2]), rather they open up debate on the role of design and its outputs. In Dunne & Raby's words [21]:

"Critical Design uses speculative design proposals to challenge narrow assumptions, preconceptions and givens about the role products play in everyday life."

Such 'design for debate' is not new, Italian new wave designers such as Archizoom and Superstudio were critiquing contemporary architecture and design from the late 1960s [5]. However the increasing prevalence of digital devices in everyday life has seen an increasing number of challenges to their uncritical design, e.g. the social roles of mobile phones [15]. Whilst some of these designers explicitly link their work to Dunne's critical design, others produce artefacts for similar ends such as the "fictional products" of Human Beans [14] and Naylor & Ball's [16] "design poetics" of mature products like office chairs. Each of these 'critical design practices' (as I have termed them) shares an intention to prompt their audience's reflection on their assumptions. This reflection (by users, designers and/or researchers) is also central to my critical artefact methodology and approaches such as Reflective Design [19] and Critical Technical Practice [1].

Sengers et al. and Agre make explicit links between their approaches and Critical Theory, and Dunne [8] describes critical design as being related to critical theories, quoting (but not elaborating on) Geuss:

"Critical theories aim at emancipation and enlightenment, at making agents aware of hidden coercion, thereby freeing them from that coercion and putting them in a position to determine where their true interests lie." ([12], p55)

There then seems to be some merit in comparing the aspects that critical design practices and Critical Theory share (accepting that the latter is a multi-faceted and complex field, c.f. [6, 7, 12]). In short, they suggest that:

- There are contextual factors that affect and situate understanding – i.e. designers' and users' understanding of how design operates and the role of designed artefacts;
- The unthinking acceptance of these factors propagates 'oppression' – e.g. maintaining a society of passive consumers; and
- Critiques offer a way of challenging understanding, and therefore afford change.

In Critical Theory, critiques are alternative views (theories) of society that aim to change society. In critical design practices, artefacts-as-critiques (critical artefacts) embody alternative possibilities (social practices, applications of technology etc.) that aim to change the role of design and its products. In both cases critiques operate via their readers' intellectual engagement with the ideas presented within them. This relates to Critical Theory's notion of theory as both explaining and constituting the social world – to change the world, think about it differently.

So, to summarise my critical artefact methodology: presenting users with artefacts that challenge their assumptions of what is possible will enable them to reflect on their unwitting limitation of possibilities and consequently enable users and designers to explore a broader space for design ideas relevant to users' existing, future and latent needs.

Critical Theory has been criticised for promoting elitist views of a 'better world' that society should aspire towards. Critical design likewise has such aspirations that could be seen to resist the democratic aims of participatory design – a 'better world' according to who?

Tensions between Critical Design and PD

Critical Theory's claim that society's enlightenment and emancipation are necessary seems legitimate if people are aware of their oppression – the benefits are obvious to those people. Relating to this, Geuss [12] suggests four "initial states" of society upon which Critical Theory can act. In the third and fourth states, the benefits of Critical Theory to the people addressed ("agents") are *not* obvious to them:

"(3) agents are apparently content, but analysis of their behaviour shows them to be suffering from hidden frustration of which they are not aware; (4) agents are actually content, but only because they have been prevented from developing certain desires which in the 'normal' course of things they would have developed, and which cannot be satisfied within the framework of the present social order." (p83)

Geuss' answer to this problem is that it is possible to extract from a society's cultural tradition ideas of 'the

good life' that can illustrate how their existing lives differ. There is also a distinction between 'high' and 'low' culture or between 'high art' and 'mass culture' made by the Frankfurt School critical theorists, related to the ideals of the avant-garde, to suggest what cultural forms illustrate 'the good life'. An introduction to Clement Greenberg's frequently-cited 1939 essay *Avant-Garde and Kitsch*[1] gives a flavour of why this avant-garde view of high/low culture is elitist – it infers that the avant-gardists' aim was to "raise the tastes of the masses". Geuss also refers to Habermas's description of Critical Theory initiating a "process of self-enlightenment of socialized individuals about what they would want if they knew what they could want" ([12], footnote 57 p83).

These elements of Critical Theory imply an elitist attitude to society ('the masses'): 'you don't know what's good for you' and, reading between the lines of this statement, that critical theorists 'know better'. In a similar fashion, critical design also implies that users (consumers?) have low aspirations for products and that they are unaware of the higher ideals they should want.

In Critical Theory and critical design practices, it is the theorist or designer who enables society to recognise its 'true interests' (after Geuss). This could place the theorist/designer in a morally or intellectually superior position – the 'all knowing designer' as auteur. Using critical design within PD then seems problematic as it limits the voice of the user – to paraphrase Geuss/Habermas: users don't know what they should want.

'A better world' assumes that everyone can recognise and agree what is 'better' whereas this is relative and individual – who is qualified to say what is 'better'? People may also be aware of the values underlying their culture and be content with them – "it's ok, we realise it's about profit".

My critical artefact methodology attempts to account for these problems by using critical artefacts *within* a design process. The 'better world' they imply is a tool for opening up the design space, and the artefacts subsequently designed reflect needs users agree as relevant. Ultimately, users and designers collectively determine what is 'better'.

Critical Theory attempts to liberate society from its unwitting restrictions. Returning to Ehn's [10] political feature of participatory design, how can design practices inspired by Critical Theory develop products and systems that transform the lives of their users for the better?

[1] http://www.sharecom.ca/greenberg/kitsch.html, last accessed 5 January 2010

References

[1] Agre, P. E. *Computation and Human Experience.* Cambridge University Press, (1997).

[2] Blauvelt, A. *Strangely Familar: Design and Everyday Life.* Distributed Art Publishers, (2003).

[3] Bowen, S. J. *A Critical Artefact Methodology: Using Provocative Conceptual Designs to Foster Human-centred Innovation.* PhD Thesis, Sheffield Hallam University, Sheffield, UK, (2009).

[4] Bowen, S. J. Crazy Ideas or Creative Probes?: Presenting Critical Artefacts to Stakeholders to Develop Innovative Product Ideas. *Proc. EAD07*, (2007).

[5] Branzi, A. *The Hot House : Italian New Wave Design.* Thames and Hudson, (1984).

[6] Calhoun, C. *Critical Social Theory : culture, history and the challenge of difference.* Blackwell, (1995).

[7] Dant, T. *Critical Social Theory.* Sage Publications Ltd, (2003).

[8] Dunne, A. *Hertzian Tales - Electronic Products, Aesthetic Experience and Critical Design.* RCA CRD Research Publications, (1999).

[9] Dunne, A. and Raby, F. *Design Noir: The Secret Life of Electronic Objects.* Birkhäuser, (2001).

[10] Ehn, P. Scandinavian Design: On Participation and Skill. In Schuler, D. and Namioka, A. eds. Erlbaum Associates, New Jersey, (1993), 41-77.

[11] Gaver, B. and Martin, H. Alternatives: exploring information appliances through conceptual design proposals. *Proc. CHI '00*, (2000), 209-216.

[12] Geuss, R. The Idea of a Critical Theory : Habermas and the Frankfurt School. (1981).

[13] Greenbaum, J. and Kyng, M. eds. *Design at work : cooperative design of computer systems.* Lawrence Erlbaum Associates, (1991).

[14] Human Beans. http://www.humanbeans.net/

[15] Ideo. *Social Mobiles*. http://www.humanbeans.net/

[16] Naylor, M. and Ball, R. *Form follows idea: an introduction to design poetics.* Black Dog, (2005).

[17] Sanders, E. B. -. Virtuosos of the experience domain. *Proc. IDSA Education Conference,* (2001).

[18] Schuler, D. and Namioka, A. eds. *Participatory design : principles and practices.* Lawrence Erlbaum Associates, (1993).

[19] Sengers, P., Boehner, K., David, S. and Kaye, J. Reflective design. *Proc. CC '05,* ACM Press, (2005) 49-58.

[20] Z33. Projects: Nr.15 Designing Critical Design. http://www.z33.be/index.asp?page=detailproject%7Csub=67&lang=en

[21] Z33, Dunne, A. and Raby, F. Designing Critical Design FAQ http://www.z33.be/debat/files/dunnerabyfaq.pdf