

**ANNE BALSAMO (2011) *DESIGNING CULTURE:
THE TECHNOLOGICAL IMAGINATION AT WORK.*
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Designing Culture is an exploration of a range of technological design processes, labelled 'technological imaginations' by Balsamo in order to incorporate the imagined, the practices, and the interactions of design work across education, art, design and technology. Underpinned by technological and material designs and exhibitions, Balsamo not only argues that technology and culture are inseparable, but also that they have always been so. Working against the many guises of technological determinism, she argues that we need to see culture as both a precondition and a horizon of creative effort. Culture is not only central to innovation, it reconfigures innovation processes as complex, fluid and negotiated.

Drawing on a range of feminist epistemology and feminist new media theory (e.g. Haraway, 1988; Harding, 1991; Hayles, 1999; Barad, 2003; Suchman, 2005), and with resonances of assemblage and actor-network theory (e.g. Law, 2002; Latour, 2005, DeLanda, 2006), Balsamo argues that her book is about the way the work of the digital age is materialized in the practices of designers, innovators, prosumers, educators and shift workers. I would suggest that her book is much more than this. It is a real intervention into a technologically determined or individualistic approach to design that relocates the meaning and power of technological design firmly into the cultural domain. This means that design processes work within, and emerge from, power and gender relations: it also means that the relations of labour, the everyday, the discursive and material relations are at the forefront of her considerations about the success and impact of technology today. The legacy of cultural studies and feminist theory can be clearly seen here, but she harnesses these theories and approaches for the digital age, and in so doing demonstrates the forgetfulness and repetition that has marked our

circuitous approaches to technology that have always been both forgetful and highly inadequate.

Balsamo offers ten lessons or claims about technoculture innovation, which are worth briefly reiterating here, not least because they form the crux of her argument. Her first point is that innovations are not things or objects, but are instead assemblages of materialities, practices and affordances. This is, to a certain extent, a familiar argument to feminist new media theorists and new media theorists. Indeed, Caroline Bassett makes a similar point when she argues that technologies are 'bearers' of the social and technological relations and conditions in which they were forged (2007: 48). Balsamo's second point is that their meaning and impact also needs to be considered in this way. Immediately then, we are asked to consider technology not as a realisation of singular design or individual creative autonomy, which is often assumed in the conception of the individual 'user' or 'creator' of technology (e.g. Castells, 2009; Prensky, 2011; Jenkins, 2006), nor as a stand-alone artefact or object impacting onto and shaping our lives. Instead, positioned against the medium-centricity of many of these arguments, and in a similar vein to the approaches of José van Dijck (2009, 2011) or Valerie Walkerdine (2007), we are asked to consider technology as one, albeit crucial, element in a complex and iterative negotiation.

Following this, innovation is the result of many people, all of whom contribute (and take) something different from the design process; all of whom generate innovation through connections and articulations. These points feed directly into her later argument that the technological imagination is inherently gendered. Indeed, if we consider technology less as an object, and more as a series of relations and imaginings, then the power dynamics of social interaction, working relations, discourse, fantasy and semiotics all come into play. This means that the cycle of technological imagination is not only gendered, it is also forgetful, even as it is constantly replayed in the overlapping or subsequent imaginings that technology helps generate. To some extent, then, Balsamo answers the question posed two decades earlier by Cynthia Cockburn, when she asked why gender relations survive 'so little changed through successive waves of technological innovation[?]' (1992: 44). Indeed, for Balsamo, the answer is clear: technology-as-object or artefact effectively masks, if not negates, these relations, prioritising the product to the detriment of the processes and

practices that shaped it (and are shaped by it). Cockburn's assertion that 'technology *itself* cannot be fully understood without reference to gender' (1992: 33), seems as pertinent here as it did twenty years ago. Indeed as Bassett argues, it is this claim that we need to both remind ourselves of, and reinstate (2012, forthcoming).

Balsamo's fourth lesson follows this claim when she states that there is a dual logic to technological innovation that positions technology as both determined and determining. She argues that this contradiction is held in tension throughout the process of technological design and development. Turning this around, she argues that the process of design articulates cultural processes so that culture is both a tool for, and outcome of, the design process. Drawing on her experiences of co-designing, creating and exhibiting what she calls 'interactives' at the San José Museum of Technological Imagination, she argues that designing is as much about creativity as it is about negotiation: it is not (just) about an individual vision, it is also about compromise and dialogue in realising, reimagining, renegotiating and revisioning. Those processes all reveal cultural and social relations, which are encapsulated in the exhibited interactives she later discusses.

The interactive exhibits/technologies are offered as illustrations of the messiness of reflexive and creative design. They also exemplify lesson 7: that designing makes matter meaningful. She argues that it is at the point, when technologies and things are appropriated, that meaning is created so that the real value of the interactives should not be measured through the success of their operation (whether they worked as they were intended), but through the various relations (material, imagined, technological, social) that were reconfigured in the production and later interaction with them.

Balsamo argues that if we privilege the object or the device-form of technology, it has repercussions not only for how we conceptualise design, meaning and mediation, but also for how we approach wider issues such as engagement and literacy. One of her later arguments in her chapter on technological literacies is that the concept of literacy always implies a technological dimension. She suggests that the object (technology, artefact, exhibit) changes as does the processes of comprehension/engagement. This means that knowledge, design, and literacy are all culturally and temporally contingent and shifting. So what literacy is, and how it is understood is already technological, quite simply, because culture is already

technological. This also means that arguments that construct barriers to engagement as an issue of access miss the point and return us to a determinism, whereby a perceived lack in users (as illiterate) can be solved by a donation of technologies. Instead, Balsamo argues that literacy is not about the impact of technology, nor is it about giving more people a computer or showing them how to use it: Literacy has changed already because it is reproduced and reimagined both culturally and technologically.

Designing Culture is a welcome and important intervention into many contemporary approaches to technology, innovation and design that construct technology as a final outcome of a singular imagining, or as a forceful determiner of socio-cultural practices. The book is powerful because of the way Balsamo makes what are crucial and profound interventions seem both obvious and logical. The breadth of topics and examples that she brings to the table to underpin her arguments also demonstrate the pertinence and real need for such a book across a whole set of disciplines, approaches and institutions. She reminds us that our consideration of the digital or technological should not end with the artefact or programme, and such approaches effectively hide the processes and relations discussed above, masking them in a celebration of the technicity of the new product. To negate the cultural and the social, she argues, is to miss the real power of technology: that occurs in the space between the technology and culture, in the slippages between intention and actualisation, and through the mediation of interface, technology and use.

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