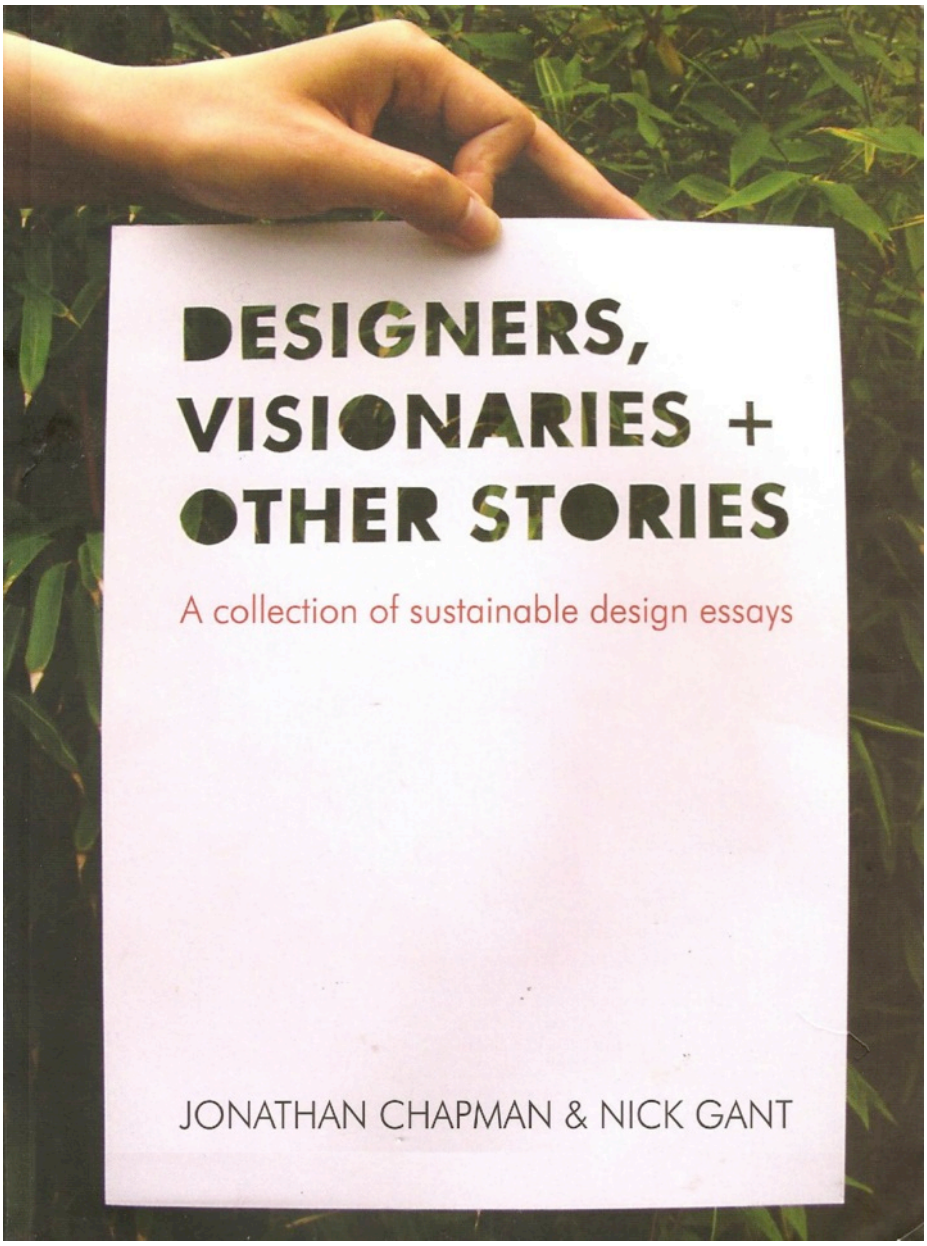
DESIGNERS,
VISIONARIES +
OTHER STORIES
A collection of sustainable design essays
JONATHAN CHAPMAN & NICK GANT

innovation bearing in mind that worldwide most water bottles made of polyethylene terepthalate (PET) never enter the recycling stream and end up in landfills or clogging surface water courses or sewage systems. Yet this story neglects the big picture. It doesn't reveal the real energy and environmental costs of the bottle of water in the production and consumption system.

Despite calls for reductions of resource use by 'Factor 4', a concept where natural resources can be used more efficiently by doubling output/wealth and halving resource use (von Weizsäcker et al, 1995), the challenge to business or society to achieve any reduction in per capita material flows is colossal. Thirty tonnes of waste are produced for each tonne of goods reaching the consumer, and 98 per cent of those goods end up being thrown away within six months (Datschefski, 2001). The current *rate* of consumption of global resources in the developed world is equivalent to the 'environmental space' of three planets (MacLaren et al, 1998). With a rapidly expanding consumer middle class in China, India and the 'tiger economies' of SE Asia, and no real slowdown of consumption in the developed world, global per capita consumption appears set to increase not decrease. The complexity of the sustainable consumption agenda, with its heady mix of policy developments, accounting procedures, cognitive psychology ruminations and cultural myths about consumption, seems to suggest this is a societal-wide challenge rather than one where the business of production simply adopts eco-efficiency measures (Jackson, 2006).

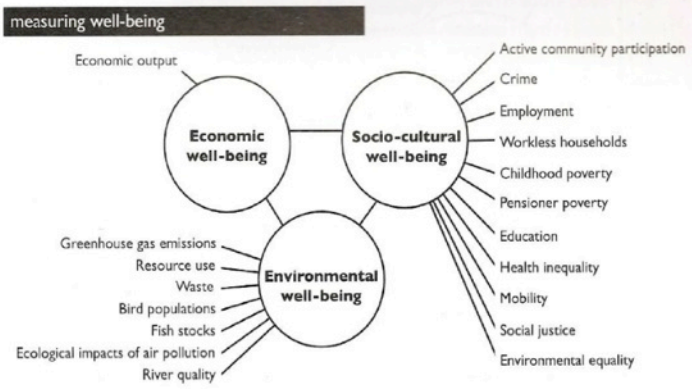


**Figure 2.1** The UK government's headline indicators for sustainable development

If the contributions of WBCSD members, Philips or Belu, to sustainable development were measured using the UK government's own headline indicators (Figure 2.1) it is unlikely they would be able really to quantify whether their businesses were making a positive difference other than under the indicator for GDP. Statistics from the UK indicate that decoupling economic growth from resource use and environmental negatives is not happening (Department for Environment, Food and Rural Affairs (Defra), 2004). If businesses were challenged to measure how much well-being they generated through the products they produced using the model developed by Fuad-Luke (2005) (Figure 2.2), it would no doubt generate further head scratching. Herein lies the real challenge to business: can business generate economic well-being while ensuring social fairness and reducing environmental impacts (implying significant resource use reductions)? How can it uncouple business growth from the environmental and social evils? What new models of enterprise

a model for design and 'well-being'

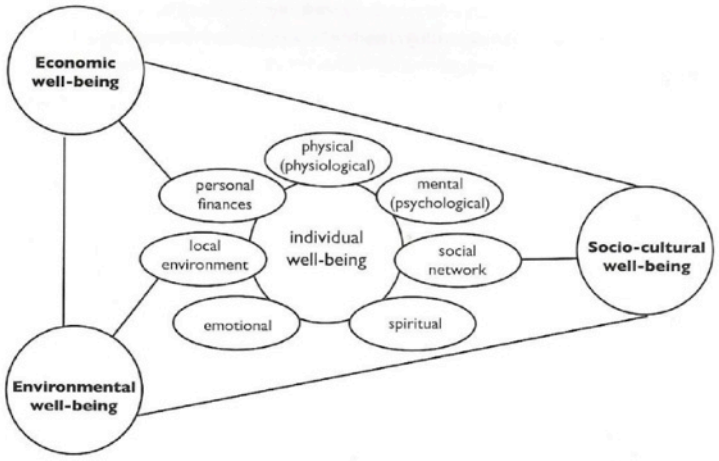


**Figure 2.2** A model for design and 'well-being'

**Source:** adapted from Fuad-Luke, A. (2005) 'A new model of well-being to design 'products' that sustain people, environments and profits', Towards Sustainable Product Design 10, Centre for Sustainable Design, Farnham Castle, Farnham, UK, 24–25 October 2005

demands questions of the designer as to which approach to apply, and where and how the design will generate well-being. It provides a lens, an approach, through which to view a particular design context. It is not prescriptive but merely sets a potential platform for enquiry. It posits design as the giver of well-being, the change agent from the existing situation to a preferred one (echoing Herbert Simon below). It takes design beyond the prescriptive world of commerce.

**Table 2.3** Design activism for a better society

| Design activism | Definition | Sources |
|---|---|---|
| Open-source design | Open design is the investigation and potential of open source and the collaborative nature of the internet to create physical objects. People apply their skills and time to projects for the common good, perhaps where funding or commercial interest is lacking. | Wikipedia, Nov 2006 |
| User-centred design | UCD is a design philosophy and a process in which the needs, wants and limitations of the end user of an interface or document are given extensive attention at each stage of the design process.<br><br>UCD describes design, based on the needs of the user.<br><br>Fundamental to user-centred design is that the best-designed products and services result from understanding the needs of the people who will use them. | Wikipedia, Nov 2006<br><br>Norman, D. A. (1986) *The Psychology of Everyday Things*<br><br>Black, A., The Design Council, Nov 2006 |
| Service design | Service design can be both tangible and intangible. It can involve artefacts as well as communication, environment and behaviours. Service design is the specification and construction of technologically networked social practices that deliver valuable capacities for action to a particular customer. | Wikipedia and The Design Council, Nov 2006 |

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|---|---|---|
| Metadesign | Metadesign is an emerging conceptual framework aimed at defining and creating social and technical infrastructures in which new forms of collaborative design can take place. Metadesign extends the traditional notion of design beyond the original development of a system to include *co-adaptive processes* between users and systems, which enable the users to act *as designers and be creative*. | Giaccardi, E. and Fischer, G. (2005) 'Creativity and evolution: A metadesign perspective', in 6th International Conference of the EAD (AD06) on Design>System>Evolution, Bremen, University of the Arts, 29–31 March 2005 |
| Experience design | Experience design is the practice of designing products, processes, services, events and environments – each of which is a human experience – based on the consideration of an individual's or group's needs or desires, beliefs, knowledge, skills, experiences and perceptions.<br><br>Experience design strives to create experiences beyond products and services. Its boundaries go beyond traditional design.<br><br>Experience design is driven by consideration of the 'moments' of engagement between people and brands, and the memories these create. | Wikipedia, Nov 2006<br><br>AIGA Experience Design, Nov 2006<br><br>Ardil, R., The Design Council, Nov 2006 |
| Empathetic design | 'Empathetic design practice is about combining these subjective approaches …[empathy, intuition, inspiration and subjective visions are ambiguous] with user data and other sources of objective information.' | Black, A. (1998) 'Empathetic design: User focused strategies for innovation', in proc. of New Product Devt., IBC Conferences, quoted by Mattelmaki, T. (2003) 'Probes: Studying experiences for design empathy', in Koskinen et al, *Empathetic Design – User Experiences in Product Design*, IT Press, Helsinki, pp119–130 |

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|---|---|---|
| Inclusive/ universal design | Inclusive design is about ensuring that environments, products, services and interfaces work for people of all ages and abilities. | Helen Hamlyn Research Institute, Nov 2006 |
| | Inclusive design is a process whereby designers, manufacturers and service providers ensure that their products and services address the needs of the widest possible audience. | DTI (2000) Foresight programme, Dept of Trade & Industry, London |
| | Universal design is an approach to the design of products, services and environments to be usable by as many people as possible regardless of age, ability or situation. | Wikipedia, Nov 2006 |
| Co-design, co-creation, participatory design, collaborative design, cooperative design, transformation design | Participatory design (PD) is a design framework and related methods which advocate user involvement in design, and a political stance advocating worker rights. | Axup, Jeff – Mobile Community Design blog, Nov 2006 |
| | Participatory design … a term that refers to a large collection of attitudes and techniques predicated on the concept that the people who ultimately will use a designed artefact are entitled to have a voice in determining how the artefact is designed. | Carroll, John M. 'Dimensions of participation in Simon's design', *Design Issues*, vol 22, no 2, pp3–18, Spring 2006, MIT |
| Slow design | Slow design is 'design to slow metabolisms (economic, resource flows, human) and to celebrate slowness as a counterbalance to the 'fastness' or speed of the current design paradigm'. | Fuad-Luke (2002) and www.slowdesign.org, Nov 2006 |
| | The ethos of slow design is to encourage human flourishing (*eudaimonia*, Greek) within a meta-paradigm of a socially equable world, a regenerative environment, and renewed visions of living and enterprise. | Fuad-Luke (in press) and www.slowlab.net, Jan 2006 |

organizations that catalyse 'trigger points' (radical societal shifts). It is this looser, yet more accessible definition of design that might point the way forward for a renewed purpose for design. It implies that *changing is also designing*. Change is implicit in the journey towards more sustainable ways of producing and consuming, as it is any exercise that involves cultural behavioural change. It also necessitates a shift in how we measure well-being, how we define economic progress, and how we want societies to develop. In short, sustainability demands a re-evaluation of societal values at global, regional, national and local levels. This way of designing can not be confined to the work of specialists (designers with some kind of formal training) but is, by necessity, *design with, for and by society*.

## *Design* WITH, FOR and BY society

Fundamentally, sustainability cannot be achieved if only particular individuals or sectors of society see it as an ambition. Sustainability has to be a cooperative ambition, a societal ambition. It requires that society has a universal awareness of its condition before taking the radical steps on the sustainability road. Recent mediation of the climate change debate in the UK and USA has raised that universal awareness (or for those who remember the environmental and energy crisis of the 1970s, revived that universal awareness). Certainly the recent publication of the Stern Review (Stern, 2006) and Al Gore's film *An Inconvenient Truth*, plus the attendant publicity they received, might be perceived as a watershed and a potential catalyst in shifting socio-political and economic thinking. Stern's suggestion that immediate remedies to halt or slow climate change might cost 1 per cent of world GDP today, but a laggard response could end up *decreasing* world GDP by 5–20 per cent, might engender a critical shift in attitudes and stimulate actions. The costs of climate change, coupled with the prospect of a post Peak Oil future, are capturing the attention of the politicians and the populace alike.

Are there precedents during the era of the consumer economy for a more society-oriented way of designing? Yes, 'participatory design' has its roots in the labour movements in Scandinavia in the 1950s. Furthermore, the terminology has diversified since then to embrace 'collaborative design', 'cooperative design', 'co-design' and 'social design' (Margolin and Margolin, 2002). More recently, co-design has been renamed 'transformation design' by the RED group at the UK Design Council (Burns et al, 2006).

The terms 'participatory' or 'co-design' seem particularly useful as they are self

explanatory. The essence of co-design is that it is an approach 'predicated on the concept that people who ultimately use a designed artifact are entitled to have a voice in determining how the artifact is designed' (Carroll, 2006).

There are several core principles. Co-design is not a single procedure or ingredient. It is a commitment regarding power and inclusion. Co-design involves *mutual learning* in a multi-stakeholder environment. Co-design invokes many of the characteristics of soft system methodologies, as described in Broadbent (2003):

- being a holistic, intuitive, descriptive, experiential and empirical, pragmatic and wisdom/values-based approach;
- being an iterative, non-linear, interactive process;
- being 'action-based' research;
- involving 'top-down' and 'bottom-up' approaches;
- simulating the real world;
- being useful for complex systems or problems;
- being situation driven, especially by common human situations;
- satisfying pluralistic outcomes;
- being internalized by the system.

The more commercially oriented aspects of co-design are also manifest in a variety of user-centred or user-innovation design approaches, although the main goal is the production of profitable, rather than sustainable, goods and services. For example, Philips has just entered the virtual world Second Life in order to explore the potentiality of 'crowdsourcing' in product development. Fiat recently used a web blog to engage customers in design of the new Fiat Bravo car.

The internet provides an infrastructure for social and collaborative networking that engenders co-design, especially in open-source environments. The growth of online resources from Wikipedia (information), YouTube (entertainment) to the BBC's Climate Change Experiment attests to the potential power of internet collaboration.

## Co-design in action

Co-design challenges how we use design to grow, nurture and sustain human, social,