

Design's Role in Sustainable Consumption

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User consumption has been a long-standing concern for sustainability, stemming from the notion that there are “limits” to global resource capacity and we are consuming beyond those limits. Yet as the field of sustainable consumption has matured, it has moved from largely *technical* concerns about efficient resource consumption and minimizing waste in our existing industrial systems to a more recent focus on the very *social* issue of lifestyle change. The emphasis on lifestyle and behavior change is supported by research that suggests consumerism is costly not only in environmental terms, but also possibly in other ways.

Although design is beginning to struggle with the challenges posed by this move toward lifestyle change, the topic of design is mostly absent from the serious discourse on sustainable consumption. In this article, I will examine the research that underpins recent shifts in the sustainable consumption field and investigate how that broader research resonates with design research and practice.¹

After a brief timeline, I will look particularly at three main research areas—environmental policy, psychology, and sociology. I will conclude by examining a question implied by mainstream research—can design move from being a cog in the wheel of consumerism to having a substantial role in supporting sustainable consumption?

Timeline

Consumption itself is a huge field and here I provide only a brief timeline. Interest in consumption as a field of study is long standing and Tim Jackson suggests that the emerging debates about sustainable consumption must be understood in a broad historical context.² He captures this sweep of work on consumer behavior and society neatly when he notes that these older debates:

Have an extraordinary pedigree reaching back to classical philosophy and encompassing the critical social theory of the nineteenth and early twentieth century, the consumer psychology and “motivation research” of the early post-war years, the “ecological humanism” of the 1960s and 1970s, the anthropology and social philosophy of the 1970s and 1980s, and the sociology of modernity, popularized in the 1990s.

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- 1 Throughout this article I write mostly of “consumer goods” in terms of products, but there is a case to be made that architecture is becoming a consumer good on some levels and that many of the points made here apply to at least partially to architecture.
 - 2 Tim Jackson, “Readings in Sustainable Consumption” in *The Earthscan Reader in Sustainable Consumption*, ed. Tim Jackson (London: Earthscan, 2006). Jackson’s *Reader* is a good entry point into the literature on sustainable consumption (and one that I draw upon heavily), because Jackson has assembled a collection largely from pre-existing writings that include many respected consumption scholars from across a range of disciplines and time periods. Another good entry point, particularly for critique of the environmental movement, is the edited volume, *Confronting Consumption*, ed. Thomas Princen, Michael Maniate, and Ken Conca (Cambridge, MA: The MIT Press, 2002).

- 3 Rachel Carson, *Silent Spring* (New York: Houghton Mifflin, 1962), Donella H. Meadows and Club of Rome, *The Limits to Growth: A Report for the Club of Rome's Project on the Predicament of Mankind* (London: Earth Island, 1972).
- 4 R. Buckminster Fuller, *Operating Manual for Spaceship Earth* (Carbondale: Southern Illinois University Press, 1969); Victor J. Papanek, *Design for the Real World: Human Ecology and Social Change* (New York: Pantheon Books, 1972); Chris Zelov and Phil Cousineau, *Design Outlaws on the Ecological Frontier* (Philadelphia: Knossos, 1997).
- 5 Jakki Dehn, "Re-Materialize Exhibition: Materials Made from Waste" (Kingston University, 1996); Susan Subtle Dintenfass, "Hello Again: A New Wave of Recycled Art and Design" (Oakland: Oakland Museum of California, 1997–98).
- 6 Nigel Whiteley, *Design for Society* (London: Reaktion Books, 1993).
- 7 Sim Van der Ryn and Stuart Cowan, *Ecological Design*. (Washington D.C.: Island Press, 1996); H. Brezet and C. van Hemel, "Ecodesign: A Promising Approach to Sustainable Production and Consumption" (Paris: United Nations Environment Programme, 1997); J. H. Gertsakis, H. Lewis, and C. Ryan, *A Guide to EcoRedesign* (Melbourne: Centre for Design, Royal Melbourne Institute of Technology, 1997).
- 8 Tim Jackson, "Readings in Sustainable Consumption."
- 9 Kate Fletcher, "Use Matters" Chapter 3 in *Sustainable Fashion & Textiles: Design Journeys* (London: Earthscan, 2008).
- 10 See for example Karrie Jacobs, "Revenge of the Small," *Metropolis*, December 2006, and Ingrid Spencer "The Acceleration of Single Speed Design," *Architectural Record*, September 2006.
- 11 William J. Mitchell, "Going the Extra Mile to Make Mass Transit More Personal" *Architectural Record*, August 2007.
- 12 See, for example, Thomas de Monchaux "A is for Adaptable" *I.D.*, May 2007, William Weathersby, "Derek Porter Studio elevates the image of FLEX self storage center," *Architectural Record*, November 2006, and Alec Applebaum "Parking Garages Driven to Good Design" *Architectural Record*, August 2007.

When environmental concerns emerged in the 1960s and 1970s, with works such as Rachel Carson's *Silent Spring* (1962) or the Club of Rome's *Limits to Growth* (1972) and events such as the 1973 OPEC oil embargo, scholars of both consumption and design incorporated these concerns into studies and practice.³ On the design side, for example, many of us are familiar with the work of Buckminster Fuller (*Operating Manual for Spaceship Earth*, 1969), Victor Papanek (*Design for the Real World*, 1972), architect Sim Van der Ryn, and "design outlaws" such as Jay Baldwin, among others.⁴

Jackson notes that by the late 1980s, consumption (as part of "sustainable production and consumption") had become a key component of sustainable development. He dates the term "sustainable consumption" to Agenda 21, the main policy document to emerge from the first Earth Summit in Rio in 1992. From that point, sustainable consumption became a more familiar program theme at international policy levels.

On the design side, the 1990s saw a more intense focus on recycled materials, with exhibitions such as "Re-Materialize" (1996) and "Hello Again" (1997–98).⁵ Critiques of consumerist design also appeared, notably Nigel Whiteley's *Design for Society* (1993).⁶ By the late 1990s, "eco-design" emerged as a recognizable field, exemplified by eco-design principles in *Ecological Design* (1996), and by product lifecycle approaches detailed in works such as *A Guide to EcoRedesign* (1997) and *Ecodesign: A Promising Approach to Sustainable Production and Consumption* (1997).⁷

Throughout the 1990s, for the most part neither policy makers nor designers were typically asking for substantial change in lifestyle, rather they were seeking less resource intensive production and consumption methods to facilitate existing lifestyles, as I detail below. It wasn't until 2003 that the UK government, despite the difficult political and social implications, was among the first to adopt a strategy recognizing that substantial behavior and lifestyle change are essential components for achieving sustainability.⁸

The early 2000s have also seen design work that explores lifestyle change explicitly in terms of sustainable consumption. For example, instead of consuming efficiently (buy two shirts instead of six) one design proposal recognizes laundering as one of clothing's biggest eco-impacts and suggests a "no wash" shirt. (It has ventilation and wipe-able surfaces and otherwise wears dirt or stains like a badge.⁹) We also see other interesting proposals such as:

- not simply "greening" our houses, but also substantially reducing the size of houses, or sharing a bigger house among several families,¹⁰
- relinquishing private car ownership in favor of "city cars,"¹¹ or reworking existing use patterns, such as putting schools in with other community facilities, art exhibitions in with self-storage, and cultural facilities in with parking garages.¹²

All of these proposals suggest substantial changes to existing lifestyles, not just in terms of technical efficiency but also in socio-cultural terms. The field of sustainable consumption is starting to call for just such a portfolio of diverse lifestyle changes to meet the challenges of sustainability.

In the next section I move into examining broader research in sustainable consumption and the design resonances with that research, beginning with environmental policy.

Environmental Policy

Environmental policy has typically asked, “can we make environmentally better products and convince people to buy them?” Research in environmental policy and management traditionally starts with conventional economic notions. For example, researchers assume that consumer desires are basically insatiable and that consumers exercise sovereignty over purchases. Here “sovereignty” is the idea that consumers actually control supply by virtue of allocating their “dollar votes” in a free market—demand controls supply. Most importantly, many researchers have until recently accepted the idea that economic growth is a proxy for growth in well-being, that continuous increases in consumption are equal to continuous increases in well-being.

Given these assumptions, the challenge for environmental policy then becomes meeting consumer demand in a more environmentally friendly way. This task has two sides:

Supply: producing less environmentally damaging goods, and

Demand: educating consumers about these improved goods. The approach, sometimes called “informed choice,” hinges on persuading consumers to choose smart/clean/fair/green goods that reduce environmental impacts so that insatiable demand can continue.¹³ Since consumers are rational decision makers, the reasoning goes, when they have better information they’ll make better choices.

In recent years, “informed choice” has been increasingly criticized. Critics claim the economic view of consumers as “insatiable” is inaccurate as many people choose to live within their means.¹⁴ At the same time, consumers are increasingly distanced from the impacts of consumption (they don’t witness firsthand dramatic resource destruction or worker exploitation), so despite being “informed” in an abstract sense, they have relatively little visceral feedback on which to base consumption decisions.¹⁵ Other critiques point out that increases in overall consumption are slated to cancel out any gains made in production efficiency.¹⁶ This reality is made more sobering as increasing numbers of the world’s population move from poverty to “middle class” status, for example in India and China.¹⁷

13 Jackson, “Readings in Sustainable Consumption” and Anja Schaefer and Andrew Crane, “Addressing Sustainability and Consumption,” *Journal of Macromarketing* 25:1 (2005), 76–92.

14 Karl Dake and Michael Thompson, “Making Ends Meet—in the Household and on the Planet,” *The Earthscan Reader in Sustainable Consumption* (London: Earthscan, 2006).

15 Ken Conca, “Consumption and Environment in a Global Economy,” *Confronting Consumption*, ed. Thomas Princen, Michael Maniates, and Ken Conca (Cambridge, MA: The MIT Press, 2002).

16 Jackson, “Readings in Sustainable Consumption.”

17 Conca, “Consumption and Environment in a Global Economy.”

The consumer sovereignty assumption is also criticized. Michael Maniates suggests that corporations and governments use notions of consumer sovereignty to “individualize” the problem—make individuals responsible for voting with their wallets—and thus avoid making changes either to profitable corporate business practices or convenient patterns of government subsidy (e.g., subsidies for oil drilling).¹⁸ But consumers are not individual sovereigns in a free market, they are heavily influenced by marketing and advertising. Moreover, given tremendous concentrations of wealth, a small number of very rich people have tremendous “voting power” in the market whereas most of us have relatively little.¹⁹

The fact that we broadly accept the “individualization” of the problem indicates how much we view ourselves primarily as consumers, as opposed to citizens. Are we left with shopping-as-political-act, in which our dissent is commodified and sold back to us?²⁰ A more positive view sees ethical and green consumerism as an emerging social movement, in which individuals take first steps toward further political action, and various organizations mobilize these many first steps into social change campaigns.²¹ On the other hand, some critics suggest that many consumer “desires” might be met by means other than consumer goods, but our society is commoditized to such an extent that the “non-purchase” options are rarely explored or supported.²² For example, we don’t invest in alternatives to private automobiles because they don’t work well as commodities—they don’t make good profits.

A recent counterpoint to “informed choice” is the controversial notion of “choice editing” stemming from the field of behavioral economics. This approach sees a role for government and other organizations in steering individuals into behavior and lifestyle changes. Rather than assuming people always act rationally in their own best interests, behavioral economics incorporates findings from psychology and sociology to account for seemingly irrational behavior. A recent report, “Creatures of Habit? The Art of Behavioral Change,” highlights areas where we often knowingly act against our own best interests: not saving for retirement, not losing weight, and not reducing our climate change emissions.²³

In these areas, the thinking goes, we need outside intervention to motivate new behaviors that we already know are in our best interests for the long term. It’s controversial because public intervention (such as a ban on smoking in public places) is usually deemed necessary only when actions cause direct harm to others—where there is a social cost. But forcing people to take action for their own good, such as forced saving for retirement, strikes some as paternalistic. The authors of “Creatures of Habit?” suggest there is a threshold “when individual actions carry consequences for the individual further down the track, which they themselves recognize”

18 Michael Maniates, “Individualization: Plant a Tree, Buy a Bike, Save the World?” in *Confronting Consumption*, ed. Thomas Princen, Michael Maniates, and Ken Conca (Cambridge, MA: The MIT Press, 2002).

19 Jeff Gates, *Democracy at Risk* (Cambridge, MA: Perseus Publishing, 2000).

20 For example see Kersty Hobson, “Competing Discourses of Sustainable Consumption: Does the ‘Rationalization of Lifestyles,’ Make Sense?,” in *The Earthscan Reader in Sustainable Consumption* (London: Earthscan, 2006); Maniates, “Individualization: Plant a Tree, Buy a Bike, Save the World?”; Derrick Jensen, “Forget Shorter Showers: Why Personal Change Does Not Equal Political Change” *Orion* July/August (2009).

21 Nick Clarke et al., “Globalising the Consumer: Doing Politics in an Ethical Register,” *Political Geography* 26:3 (2007).

22 Jack Manno, “Consumption and Environment in a Global Economy,” in *Confronting Consumption*, ed. Thomas Princen, Michael Maniates, and Ken Conca (Cambridge, MA: The MIT Press, 2002).

23 Jessica Prendergrast, Beth Foley, Verena Menne, and Alex Karalis Isaac, “Creatures of Habit? The Art of Behavioural Change” (London: The Social Market Foundation, 2008).

24 *Ibid.*, 8.

(emphasis added).²⁴ In other words, the authors view these as cases where most of us acknowledge we need help.

When it comes to consumption of material goods, choice editing comes up against consumer sovereignty. Rather than consumer “sovereigns” who dictate supply, choice editing sees governments and businesses editing out choices that are less sustainable, while ensuring that sustainable options are the norm—re-setting our “default options.” Examples of successful choice editing include the elimination of ozone-depleting chemicals from aerosols and the uptake of efficient fridges and freezers in Europe, where governments banned the low efficiency models and then retailers agreed to remove “middling” rated appliances.²⁵ Choice editing recognizes that mainstream consumers want to make environmentally “good” choices but are mired in habits, norms, and other factors that limit their ability to do so.

Environmental Policy—Design Resonances

In an interesting contrast to debates on informed choice that rarely mention design, researchers exploring environmental policy from a design perspective tend to see design as the heart of the problem. This view is often supported by the statistic that as much as 90% of a product’s environmental impact is fixed during the design stage.²⁶

The predominant design response to the consumption problem has closely followed the informed choice approach. That is, green and eco-designers focus on redesigning products to be more environmentally friendly hoping that better informed consumers will buy them. There has been a great deal of useful work done in this area, resulting in a bundle of principles, toolboxes, and indicators available for designers to use. Examples include:

- “lifecycle” strategies that assess a product’s impact from conception through production, use, and end-of-life
- business case studies for sustainability based on savings from efficiency, etc.
- product and building environmental rating systems such as the US Green Building Council’s “LEED” or McDonough and Brangaurt’s “Cradle-to-Cradle.”

Eco-design is useful, but seems susceptible to many of the criticisms of informed choice. Eco-design generally accepts the individual, voting-with-your-wallet approach, overlooking public policies and corporate finance systems that significantly weaken an individual’s “vote.” Although eco-design may sometimes link consumers to *downstream* consequences of products (e.g., by using recognizable recycled material), few eco-design approaches link consumers to *upstream* social and environmental consequences of making products, perhaps because many designers are as distant as consumers from these upstream effects.

25 Sustainable Consumption Roundtable, “I Will If You Will: Towards Sustainable Consumption” (London: National Consumer Council and Sustainable Development Commission, 2006).

26 Paul Hawken, Amory Lovins, and L. Hunter Lovins, *Natural Capitalism* (New York: Little, Brown and Company, 1999); Helen Lewis and John Gertsakis, *Design + Environment: A Global Guide to Designing Greener Goods* (Sheffield: Greenleaf, 2001).

“Design for behavior change,” an approach that resonates with choice editing policies, has gained ground recently. T. A. Bhamra, D. Lilley, and T. Tang describe a spectrum of design for behavior change.²⁷ On one end, it is the same as informed choice, where a product displays environmental information—such as the miles per gallon readout on the Prius hybrid automobile—thus better enabling a consumer to act upon it. On the other end of the spectrum, a design solution may actually use technical controls or spatial organization to steer consumer behavior—for example to reduce refrigerator door opening, or prevent consumers from over-filling the tea kettle, and so forth.²⁸ Bhamra et al. hint at the controversial nature of this approach, pointing out the ethical implications of allocating the power of decision-making between the consumer and the product.

Criticisms of the informed choice model, as well as the evidence supporting the choice editing model, stem from other disciplines. I turn next to psychologists, who have been looking at the connection between the pursuit of material wealth and mental well-being.

Psychology

At a basic level, psychological research on consumption asks, “can things make us happy?” Clearly there is a significant role for material goods in modern life, but recent research indicates that increasing levels of material wealth do not lead to corresponding increases in happiness, and eventually can become detrimental to psychological and even physical health. Tim Kasser has found that people with highly materialistic values report lower levels of mental and physical well-being; his discovery is bolstered by a number of other researchers who found similar results across age groups (young and old), cultures (Eastern and Western), and income groups (rich and poor).²⁹ The finding suggests that continuous increases in consumption are not a good proxy for increases in well-being.

Underlying these findings is the theory that human beings, in addition to having some universal physical needs (such as for sustenance and shelter) also have universal psychological needs. Needs theory, as it is sometimes known, includes contributions from various scholars on how human needs might be framed. In general, psychological needs tend to fall into the categories of social and personal. Social needs include participation, belonging, and affection, and personal needs include understanding, creativity, authenticity, and freedom.³⁰

In social terms, consumer goods have a darker, anxiety-producing side, in which they help us avoid shame. Novel or expensive consumer goods gain us a certain position in society, a position lost without relentless striving. This is what’s known as “positional” consumption. It’s one way that consumerism advances

27 T. A. Bhamra, D. Lilley, and T. Tang, “Sustainable Use: Changing Consumer Behavior through Product Design” in *Changing the Change Conference Proceedings* (Turin, Italy: Allemandi Conference Press, 2008).

28 Some history and a range of examples are reviewed in Dan Lockton, Professor David Harrison and Professor Neville Stanton, “Making the User More Efficient: Design for Sustainable Behaviour” *International Journal of Sustainable Engineering*, preprint (2008). available from <http://hdl.handle.net/2438/2137> (accessed 9/23/2008).

29 Tim Kasser, *The High Price of Materialism* (Cambridge, MA: The MIT Press, 2002).

30 Tim Jackson, “Consuming Paradise? Towards a Social and Cultural Psychology of Sustainable Consumption,” in *The Earthscan Reader in Sustainable Consumption*, ed. Tim Jackson (London: Earthscan, 2006); Kasser, *The High Price of Materialism*.

31 Tim Jackson, “Prosperity Without Growth: The Transition to a Sustainable Economy” (London: Sustainable Development Commission, 2009), 39, 63–65.

individualism, and suggests that simplistic appeals to “consume less” won’t work.³¹

Kasser notes that individuals who rely primarily on materialism and physical appearances—having the “in” cell phone or the latest hair style—are typically less successful in meeting their psychological needs than people who use a broader range of techniques to develop relationships or pursue inner growth. Perhaps this broadening of techniques gives people alternate ways of gaining or understanding social position.

Studies on how consumption meets psychological needs examine both the act of making a purchase and the state of “happiness.” Daniel Miller argues that the act of making a purchase can articulate caring and authenticity in relationships. To the extent that developing meaningful relationships makes us happy, consumption should improve happiness in this regard. He gives examples of a mother’s search for children’s clothing that balances the child’s aesthetic with the family’s, as well as the case of a man who can, by himself, purchase a suitable garment or pair of shoes for his woman. These examples demonstrate the love of one for the other and its expression through the process of consumption.³²

Miller suggests that critics of consumption are making moral judgments on consumers, and he argues that when we appropriate it, consumption is a way to enhance humanism. Miller celebrates consumption and points out that the elimination of poverty worldwide must rely upon more consumption, not less, and upon mass production. Although not commenting on design directly, he dismisses “craft,” from which the reader infers “local scale production,” as suitable for no more than a hobby.

Mihaly Csikszentmihalyi’s studies examine both happiness and the process of making purchases. His research suggests that we are happiest when our consciousness is “tuned,” a state he calls “flow” that occurs from active engagement in something such as writing or playing music, but not from passive activities such as watching TV. He found activities that have higher physical resource requirements (in this case BTUs—units of energy) typically correlated to lower happiness levels.³³ He hypothesized that lower BTU activities are “happier” because they require greater *psychic* energy and thus better tune our consciousness. In this view, “psychically” active engagement is key to achieving well-being. He suggests that there is a relatively low threshold beyond which increased material wealth does not add to flow, but more importantly there is an additional threshold beyond which material wealth may start to rob us of flow.

In terms of making purchases, he notes that in contemporary life, shopping is one of the main areas where many people experience a tuned consciousness, in the absence of other opportunities or skills. By contrast, in previous eras people would have experienced a tuned consciousness through activities such as

32 Daniel Miller, “The Poverty of Morality,” *The Earthscan Reader in Sustainable Consumption*, ed. Tim Jackson (London: Earthscan, 2006).

33 Mihaly Csikszentmihalyi, “The Costs and Benefits of Consuming,” *The Earthscan Reader in Sustainable Consumption*, ed. Tim Jackson (London: Earthscan, 2006).

34 Maniates, “Individualization: Plant a Tree, Buy a Bike, Save the World?”

making their own entertainment, making their own goods (e.g., sewing or woodworking), or participating in religion, among other things. Other research indicates that personal consumption rates are correlated to the quality of an individual's work. If your job makes you feel powerless, you may compensate by shopping, which appears to put you back in control.³⁴

It bears repeating that consumption and material goods can and do play a positive role in psychological and physical health. I interpret the psychological research not in terms of whether consumption is good or bad, but rather, in terms of searching for the right intensity of consumerism in our lives.

Psychology—Design Resonances

Recent design research and practice reflects the theme of psychological needs, particularly in terms of tuning our consciousness and relationships. Kate Fletcher, Emma Dewberry, and Philip Goggin examine the issue within the context of washing clothes.³⁵ They suggest that social and cultural ideas about cleanliness go far beyond the basic concern of hygiene, to reflect happiness, success, and even affection. Consider the meaning of a clean white shirt to a successful businessman, schoolchild, or a fashionable young woman. The researchers suggest that in designing both clothes and washing machines, these psychological needs must be considered alongside the “material” needs of production, if we are to reduce the intensity of our reliance on material goods.

“Slow design” also addresses psychological needs, based on the notion that the fast pace of contemporary life tends to reduce our time both for internal reflection and connection with others.³⁶ Carolyn F. Strauss and Alastair Fuad-Luke suggest that designed objects and architecture can work to slow us down and help us regain temporal stability, partly by enabling us to shift value from material objects to experiences that perhaps help us tune our consciousness.³⁷ They posit six principles of slow design, ranging from collaborative engagement with end users (as in place-based architecture) to revelation of previously unseen elements of life. Another principle is evolution, a subject also taken up by other designers.

The now defunct Eternally Yours Foundation promoted designing products that would evolve, seeking to strengthen and thus lengthen relationships between people and products.³⁸ In related work, Stuart Walker suggests that rather than flashy, perfect-looking products, which put too much emphasis on themselves and their constant updating, we need “good enough” looking products that will free us to focus on inner, spiritual development.³⁹ He attempts to slow the pace of stylistic change by devising “good enough” products built with local, often recycled, materials supplemented by limited globalized components. Walker uses the notion of enduring products to address sustainable consumption through both informed

35 Kate Fletcher, Emma Dewberry, and Phillip Goggin, “Sustainable Consumption by Design,” *Exploring Sustainable Consumption: Environmental Policy and the Social Sciences*, ed. Maurie J. Cohen and Joseph Murphy (London: Pergamon, 2001).

36 Ann Thorpe. *The Designer's Atlas of Sustainability*, (Washington DC: Island Press, 2007).

37 Carolyn F. Strauss and Alastair Fuad-Luke, “The Slow Design Principles: A New Interrogative and Reflexive Tool for Design Research and Practice,” *Changing the Change Conference Proceedings* (Turin, Italy: Allemandi Conference Press, 2008).

38 Ed Van Hinte and Liesbeth Bonekamp, *Eternally Yours* (Rotterdam: 010 Publishers, 1997).

39 Stewart Walker, *Sustainable by Design* (London: Earthscan, 2006).

40 Jonathan Chapman, *Emotionally Durable Design: Objects, Experiences & Empathy* (London: Earthscan, 2005).

choice (better products to choose) and inner growth (de-emphasis of appearance).

Jonathan Chapman's work also examines lengthening our relationships with our products.⁴⁰ He suggests that current relationships with products fail because although we grow and evolve, our products don't. He offers a toolbox of approaches for involving users in empathetic relationships with products, such as making products endearingly unpredictable or giving them "free will." Although Chapman posits these approaches only for a niche market, he appears to encourage using material goods to meet psychological needs. He notes, "Somewhere during the last 100 years we learned to find refuge outside the species, in the silent embrace of manufactured objects."⁴¹ Rather than question this embrace, Chapman seems to be saying that things can make us happy, as long as designers can create the right kind of empathetic products.

In contrast, Ezio Manzini suggests that design must challenge "product-based" well being, particularly by attending to the quality of our contexts for living.⁴² Manzini looks at the services that products provide and for ways to offer these services with fewer physical resources. For example, few people want a drill per se, they want the hole that it creates. Manzini characterizes this as a shift "from products to results" an approach known as "product-service-systems."⁴³ In addition to potentially reducing the material intensity of life, the implication is that reduced ownership duties (shopping for, maintaining, and decommissioning objects) would free up time and attention for other methods of meeting human needs. This approach also tends to have an element of sharing or collectivism, which may provide opportunities for improved relationships.

Manzini suggests that historically, product-based well being stems from the idea of labor-saving technology, which was then extended to a general notion of bundling knowledge and skills into devices, reducing user involvement. He calls these "disabling" solutions. Others have noted this as a process of "de-skilling."⁴⁴ Seen in the light of "flow" and other elements of psychological wellbeing (e.g., creativity, participation, understanding), technical approaches that reduce skills do appear to some extent to rob the user of chances to tune their consciousness. Manzini promotes "enabling" solutions that move the user from a passive to an active role as co-designer.

The notion of co-design builds upon a trend (outside the realm of sustainable consumption) toward democratic, representative, or user-enabled design.⁴⁵ In the sustainable fashion context, Kate Fletcher (in a publication separate from that cited before) reports on projects that encourage consumers to become co-designers by cutting garments to fit, inventing with mix-n-match or unusually sized garments, or drawing with fabric pens on undergarments.⁴⁶ Work by the Design Council (UK) uses "co-creation" in the context of reinventing public services.⁴⁷ This research emphasizes the importance of social networks as an aspect of co-creation, repeatedly

41 Ibid., 61.

42 For example, see Eva Heiskanen and Mikko Jalas, "Dematerialization through Services—A Review and Evaluation of the Debate" (Helsinki: Ministry of the Environment, 2000); A. S. Bijma, Brezet, and S. Silvester, "The Design of Eco-Efficient Services: Methods, Tools and Review of the Case Study Based 'Designing Eco-Efficient Services' Project" (Delft: Design for Sustainability Program, Delft University of Technology, 2001); and Ezio Manzini, "Design, Ethics and Sustainability: Guidelines for a Transition Phase" (Milan: Politecnico di Milano, 2006).

43 Ezio Manzini, "Design for Sustainability: How to Design Sustainable Solutions" (Milan: Politecnico di Milano, 2006).

44 Albert Borgmann, "The Depth of Design," in *Discovering Design: Explorations in Design Studies*, eds. Richard Buchanan and Victor Margolin (Chicago: University of Chicago Press, 1995).

45 For example, see Gui Bonsiepe, "Design and Democracy," *Design Issues* 22:2 (Spring 2006), 56–63; Jeff Howard, "Toward Participatory Ecological Design of Technological Systems," *Design Issues* 20:3 (Summer 2004), 40–53; and Peter Blundell Jones, Doina Petrescu, and Jeremy Till, eds., *Architecture and Participation* (New York: Spon Press, 2005).

46 Kate Fletcher, "User Maker," Chapter 8 in *Sustainable Fashion & Textiles: Design Journeys*.

47 Hilary Cottam and Charles Leadbeater, "Health: Co-Creating Services," *Red Papers* (London: Design Council, 2004).

48 Kristina Niedderer, "Designing Mindful Interaction: The Category of Performative Object," *Design Issues* 23:1 (Winter 2007), 3–17.

highlighting the correlation between well-being and the quality of a person's relationships with others. Design's role here involves user research, facilitation, visualizing structures and systems, and inventing a shared language for problem solving.

Kristina Niedderer, a product designer who explores products as mediators of relationships, proposes the idea of "performative objects" which create "mindful interactions" among people.⁴⁸ She created "social cups," a group of champagne flutes that only stand up when linked three or more together. In a broader exploration of how objects influence interaction, she observes, "objects are designed to make people independent rather than to make dependency and care acceptable as an integrated part of use."⁴⁹ To the extent that her observation is true, it suggests how consumer goods facilitate individualization and potentially minimize relationships.

To summarize, we recall the basic question about how far consumerism can go in meeting our psychological needs. Can things make us happy? Or do material goods rob us of real relationships and render our consciousness out of tune? If material goods make us happy up to a point, then where is that point? We have seen that designers are exploring how to support behaviors and lifestyles that promote psychological well being, both by building relationships and by considering how objects (and their absence) might better contribute to a tuned consciousness. The ideas reviewed here include slow design, good-enough products, co-creation, empathetic products, product-service-systems, and performative objects.

These approaches raise questions about roles and methods of design. For example, what is a designer's role among a group of enabled users who co-create in what Manzini calls "designing communities"? It's also not clear that design methods exist for some of these new approaches. For example, there are elements of services, such as hospitality and customer care, that are not typically captured in a design education. Similarly, few designers are trained in facilitating "flow" for users.

Sociology

On a basic level, sociological research on consumption asks, "what does consumption mean?" This research examines the role of material objects and consumption in constructing meaning and identity—how we use goods to make sense of our world and ourselves. For sociologists and other cultural theorists, goods have symbolic meaning, and that meaning is negotiated through social interaction.⁵⁰

In a sense, goods have become our main source of "symbols," in the same way that fossil fuels have become our main source of energy. Goods are "symbolic resources" in the same way the oil is an energy resource. Over time, society has lost many of its older sources of symbols, such as rights of passage, seasonal and ceremonial customs, and personal and community rituals and practices.

49 Ibid., 7.

50 Mary Douglas, "Relative Poverty, Relative Communication," *The Earthscan Reader in Sustainable Consumption*, ed. Tim Jackson (London: Earthscan, 2006).

51 See for example John Connolly and Andrea Prothero, "Sustainable Consumption: Consumption, Consumers and the Commodity Discourse," *Consumption, Markets and Culture* 6:4 (2003), 275–91; Mary Douglas and Baron Isherwood, *The World of Goods* (London: Routledge, 1979); Tim Jackson, Wander Jager, and Sigrid Stagl, "Beyond Insatiability: Needs Theory, Consumption and Sustainability," *ESRC Sustainable Technologies Programme Working Papers* (Guildford: Centre for Environmental Strategy, University of Surrey, 2004).

These used to help people navigate community and identity with less emphasis on material goods. In our fast changing world, we increasingly rely on consumer goods and the process of consumption to continually construct, reconstruct, and project our identities and social relationships.⁵¹

There are various models for how social relations and consumer goods allow for construction of the self. For example, Csikszentmihalyi (in a separate study from that previously cited) and Eugene Rochberg-Halton suggest a three-layered self that includes the personal self (the individual), the social self (self in relation to community), and the cosmic self (self in the “larger harmony of things”). They see material objects as templates: the possessions one selects to endow with special meaning out of the total environment of artifacts are both models of the self as well as templates for further development. They serve to give a tangible expression and thus a continued existence through signs to one’s relationships, experiences and values.⁵²

In this model, material objects might express goals or show how they are being achieved, for example professional cookware attests to the goal, and perhaps the achievement, of becoming a gourmet cook. The researchers suggest that this is productive when the psychic energy we put into objects is returned in the form of enjoyment, learning, and creativity—in essence, the form of personal growth. These authors theorize that in recent decades the personal self has dominated and cut us off from wider networks of meaning, leaving the social and especially the “cosmic” self to wither. Without these other selves, it is harder for objects and their meanings to become instruments for personal growth.

Jackson reports on another model for how we construct identity, the “social, symbolic self.”⁵³ Material and symbolic resources make up our daily lives—we operate life with material things—but the social value of the goods and symbols can only be tested and validated in a social milieu. What do you think of my new car? Do my clothes help me gain social status? We must know the social value of our symbolic resources in order to complete the “social, symbolic” self. Seen in the light of identity and meaning, consumer society and material goods are the contemporary response to the need to build a humanly meaningful world—they have become our dominant meaning structure.

Although consumerism arguably fails in environmental terms and to some extent also in psychological terms, to the extent consumerism provides our structure for meaning, the implications for changing lifestyles and behaviors are complex. In this view, the challenge of sustainable consumption lies well beyond the reach of typical informed choice models that environmentalists have tended to pursue.

Jackson concludes that to confront consumerism as the dominant structure for meaning, we must understand it and pose

52 Mihaly Csikszentmihalyi and Eugene Rochberg-Halton, *The Meaning of Things: Domestic Symbols and the Self* (Cambridge, UK: Cambridge University Press, 1981), 188.

53 Jackson, “Consuming Paradise? Towards a Social and Cultural Psychology of Sustainable Consumption.”

alternatives. He also questions, as few of the cultural theorists seem to do, who *controls* the boundless symbolic resources—the meanings to be found in consumer goods. He notes that goods and their system of symbols are not under any sort of democratic or community control, despite a certain level of “appropriation” of symbols by consumers. Rather, the control of symbols is largely in the hands of business and commercial interests seeking profits.

And here at last, we come back to design. He notes, “Marketers, advertisers, designers, and retailers not only have a vested interest in controlling symbolic resources, they also have a long and rather sophisticated experience in effecting this control to their own best advantage.”⁵⁴ Business interests typically have more money available to manipulate symbolic resources than public or social sectors that promote sustainable consumption. Perhaps more worryingly, the “vested interest” he mentions is nothing less than continuous economic growth, which implies a goal of continuous growth in consumption.

At a time when consumption and commoditization are steadily increasing, Jackson’s analysis suggests that to some degree we need to take the way we construct social meaning and disconnect it from commerce. Although not every aspect of social relations and identity are commoditized, there are an increasing number of social needs that we meet through individual purchases. How much do we rely on appearances of clothes, tools, vehicles, or houses as an essential part of our identity? Commercial services now overtake social relations in areas as diverse as food and cooking, daycare, healthcare, elder care, cleaning, dating, and entertainment. As vested commercial interests mine these profitable services, the “purchase” solutions are the ones that are researched, perfected, and patented. They then begin to appear to “work better” than under-supported alternatives such as providing for ourselves, maintaining social capital (e.g. maintenance and preventative care), or developing cooperatives (such as car sharing).⁵⁵

Sociology—Design Resonances

The sociology of consumption seems to pose the biggest challenge yet to design. While there is no doubt that consumerism can and should be made much better, through informed choice, choice editing, and other approaches, there is also little doubt that the dominance of commerce and consumerism in social life is problematic. Elsewhere, based on some of Jackson’s analysis, I have developed the idea that culturally sustainable design allows for more meaning to be generated among individuals and communities, rather than being globally or even nationally broadcast by commerce.⁵⁶ This approach suggests that in parallel with “for profit” design work, we also need design efforts in the nonprofit, social enterprise, and even public sectors.

Seen in this light, solutions that use non-purchase, shared,

54 Ibid., 389.

55 Manno, “Consumption and Environment in a Global Economy.”

56 Thorpe, *The Designer’s Atlas of Sustainability*.

self-provisioned, or community-provisioned options to meet peoples' needs (either for goods or meaning) are not *non-design* solutions. They are solutions that call upon an alternate economic framework within which to organize design activities. For example, instead of forming a consulting business, designers may need to join public sector efforts or form a non-profit design studio. (Designers would still earn a living as employees—we are not talking about volunteering.)

Yet designers typically view themselves, and others view them, as commercial actors. Designers are trained to respond to clients and consumers, and to add value to businesses. Governments develop policies that position design as a tool of economic growth. Professional design associations largely concern themselves with business practices and responsibilities to clients.⁵⁷ Design is a key cog in the wheel of consumerism, so it is no wonder that most designers have trouble conceiving of their work in any other form than commerce and consumerism. Many designers fall back on the idea of making consumerism “better.”

Moving Beyond a Cog

Yet designers are proposing alternatives to “purchased” solutions, though few explicitly recognize how the economic organization of design affects its role. Some of the previously mentioned ideas, such as “designing communities” or local schemes supplemented by global components, suggest a move away from mass production and toward regional production, self-provisioning, or sharing and trading—all activities that would struggle as for profit entities, but thrive as non-profit or social enterprises, perhaps kick started by public investment. Consider a few more examples:

Product service systems. Recent efforts at car sharing have typically been set up and run by nonprofit community organizations.

Design for the elderly. Victor and Sylvia Margolin give an example from the public sector of social interventions in which social workers team with architects to assess how to better meet people's social and physical needs.⁵⁸

Local graphic design. Tremendous global pressure toward a dominant western graphic design can be overcome through awareness of local cultures, via visual traditions and folklore—an awareness best fostered through schools and professional design associations which are typically public institutions or non-profits.⁵⁹

Social self build. In England during the 1970s and 80s, architects employed by the local government (public sector) helped people on housing waiting lists solve their own problems through self build. Government-donated land and simplified building techniques enabled people to design and construct their own housing.⁶⁰

57 See, for example, Peter Dormer, *Design Since 1945* (London: Thames and Hudson, 1993); John Heskett, *Toothpicks and Logos: Design in Everyday Life* (Oxford: Oxford University Press, 2002); Thorpe, *The Designer's Atlas of Sustainability*.

58 Victor Margolin and Sylvia Margolin, “A ‘Social Model’ of Design: Issues of Practice and Research,” *Design Issues* 18:4 (Autumn 2002), 24–30.

59 Sherry Blankenship, “Outside the Center: Defining Who We Are,” *Design Issues* 21:1 (Winter 2005), 24–31.

60 Jon Broome, “Technology and Participation Towards Sustainability,” *Architecture as Initiative* (London: Architecture Association, 2007).

Design strategies that help us meet needs with fewer purchased solutions could lead to more sustainable consumption. Although this approach is not guaranteed to eliminate the development of new products and services—to do away with “stuff”—it could reduce the quantity of stuff and go some way toward changing our lifestyles, potentially by making stuff easier to share, produce locally, repair, or do yourself, which also could have social and psychological benefits.

Even if designers are willing to go in these directions, some might argue that consumers are not. Given the dominance of individualism, consumerism, and private property rights, what is our willingness to share, to be enabled and re-skilled? There is a sense that having lost much of the “civic realm,” we now lack the organizational scale with which to engage people.⁶¹ But perhaps design’s “project” focus can provide the right scale; its “universal” visual language can provide the basis for conversation and new visions. This leads to additional methods questions for designers. Do designers automatically know how to motivate and build social capital? Do designers understand how to operate in nonprofit groups or public agencies?

The possibilities for enabling users and for building local community meaning are alluring in a digital society, with recent applications of open source methods to the areas of law, biology, and news.⁶² Could design be next?⁶³ Where are the opportunities? Although the questions are beyond the scope of this paper, they are relevant to further research into design that supports sustainable consumption.

Conclusion

This review has captured only a small portion of the work in the enormous fields of design and sustainable consumption. In highlighting important themes in mainstream research and their resonances in design, I have attempted to map out some of the key questions and concerns that now face design research and practice. Answers to these questions about methods and forms of organizing design practice may help move design from a cog in the wheel of consumerism to facilitator of sustainable consumption.

61 Hobson, “Competing Discourses of Sustainable Consumption: Does the ‘Rationalization of Lifestyles’ Make Sense?”

62 Geoff Mulgan, Tom Steinberg, and Omar Salem, *Wide Open: Open Source Methods and Their Future Potential* (London: Demos, 2005).

63 See, for example, Bruce Sterling, *Shaping Things* (Cambridge, MA: The MIT Press, 2005); C. Leadbeater, *We Think: Mass Innovation Not Mass Production* (London: Profile Books, 2008); and Alastair Fuad-Luke, *Design Activism: Beautiful Strangeness for a Sustainable World* (London: Earthscan, 2009).