The Culture of Sustainability

by Victor Margolin

This essay was originally published in Sustainable Alternatives in Design: Its High Time We Start Losing Time, *edited by Barbara Predan and Cvetka Pozar. Ljubljana: The Architecture Museum of Ljubljana and The Peckinpah Association, 2009*

In 1995 I gave a lecture in London where I argued that two models of social and economic development were in conflict: the expansion model and the sustainability model.[1] According to the expansion model, "the world consists of markets in which products function first and foremost as tokens of economic exchange. They attract capital, which is either recycled back into more production or becomes part of the accumulation of private or corporate wealth."[2] I juxtaposed the expansion model with the sustainability model whose premise is that "the world is a system of ecological checks and balances which consists of finite resources. If the elements of this system are damaged or thrown out of balance or if essential resources are depleted, the system will suffer severe damage and will possibly collapse."[3]

At the time of the London lecture, which was part of a one-day conference on current design issues, neither I nor any of the other conference participants, who also included my colleague and predecessor in this lecture series, Ezio Manzini, could envision the crisis of climate change and resource depletion that we face today. In 1974, the Club of Rome published *The Limits to Growth*, which was one of the first studies to argue that we as a world society faced a possible exhaustion of resources. This was not welcome news to the people of the North who were then consuming most of them and who had invented a life style of middle class comfort and gratification. Based on a seemingly endless supply of oil, despite the oil crisis of 1973, as well as unlimited water and raw materials, it seemed as if the good life would go on forever.

The concerns of the Club of Rome were reiterated in a somewhat different form in 1987 when the World Commission on Environment and Development, a United

Nations initiative headed by former Norwegian Prime Minister Gro Harlem Brundtland, produced *Our Common Future*, a report that defined sustainability in both economic and environmental terms. As Brundtland wrote in her foreword:

> Scientists bring to our attention urgent but complex problems bearing on our very survival: a warming globe, threats to the Earth's ozone layer, deserts consuming agricultural land. We respond by demanding more details, and by assigning the problems to institutions ill equipped to cope with them.[4]

She went on to make the cogent argument that the work of the commission should not be limited to environmental issues but rather that the alleviation of poverty and the improvement of the quality of life for everyone should also be part of its investigation and recommendations. "The environment does not exist as a sphere separate from human actions, ambitions, and needs," she wrote. "But the 'environment' is where we all live; and 'development' what we all do in attempting to improve our lot within that abode. The two are inseparable."[5]

Brundtland's words could just as easily have been written today. Despite her commission's systemic analyses of world problems ranging from population and food security to industry and urban design, it did not go as far is it could have to provoke the sea change that we as a global community need in order to create a decent quality of life for everyone on the planet; nor did the many conferences and reports that followed it, including *Agenda 21*, the official document from the Earth Summit held in Rio de Janeiro in 1992. Though many excellent ideas for change were put forward at the Rio summit, their adoption has not yet been wide enough to insure the victory of a culture of sustainability in its struggle for survival against the expansion model of development that has led us to the disastrous situation we are in today.

However, there has been progress in our understanding of the problems even as they have increased since Rio. It is now clear, as the Intergovernmental Panel on Climate Change has shown through its research and Al Gore has publicized in his popular film, *An Inconvenient Truth,* that we have entered a critical period of

environmental transformation. The severity of this situation was not widely understood in the 1970s and the 1980s nor was it then obvious that China and India, the two sleeping giants of Asia, would awaken and demonstrate as strong an appetite for energy consumption as their fellow citizens in developed countries elsewhere. And not only would they crave energy but they would also mimic the crudest and most destructive forms of generating it, particularly through burning coal and adopting other techniques that have already been publicly discredited though not completely eradicated. Sadly, the most developed countries have not yet set a good example for their own reduction of carbon emissions; thus they have not had the moral authority to reign in the more recent high energy consumers in other part of the world.

We are now at a moment when the need for a culture of sustainability is more evident than it has ever been and its value is persuasive to many, who just a few years ago would have scoffed at it. In fact, one could argue that such a culture is emerging slowly in many disparate places, perhaps mirroring the process of evolution itself, whereby life has evolved to higher and higher levels, not by a single big breakthrough but by many small breakthroughs that over time coalesce into larger ones. I believe this is happening today and that it is something quite new, even within the last five years. It is most significant in the realm of the environment but many people are attempting to address problems of health and poverty as well. The question is whether these breakthroughs are happening fast enough to counter the increasingly destructive forces of climate change that have generated the many hurricanes and tornados that continue to wreak havoc on communities in all parts of the world. I think not and believe that the need for radical changes in our collective social behavior is far greater than our politicians dare to admit.

To those of us in the design field, whether designers, students, manufacturers, or intellectuals like myself, it should be self-evident that design has a major role to play in creating a new culture of sustainability and conversely it is complicit in contributing to a destructive culture of expansion. Whether sustainable or expansive, culture consists of

social practices and rituals, institutions and networks, and resources. It is also embodied in the multifarious artifacts of every day life for that designers create.[6]

For many years, no one took account of the economic and energy infrastructure that was required to support these objects, whether appliances, transport vehicles, or buildings. The theory of conspicuous consumption that the Norwegian, Thorstein Veblen first presented in his seminal book of 1899, *The Theory of the Leisure Class,* made the connection between consumption and status, thus endowing consumption with a symbolic value that had little to do with the satisfaction of real needs and more to do with achieving an ephemeral position of social standing. Today the premises of conspicuous consumption are continued in the most sophisticated branding strategies that seek to connect people's sense of inner identity to the possession of particular products and promote their affiliation with specific brands.

As the theory of conspicuous consumption developed in the first part of the 20th century, it took different forms such as the myth that changes in styling, as one saw in the 1930s with domestic appliances or in the 1950s with automobiles, signified an improvement in products. Today we know that not to be the case. A byproduct of conspicuous consumption was the extravagant generation of waste due to the short-term interest in continually changing a particular product model such as a Sears Roebuck refrigerator designed by Raymond Loewy or a General Motors car styled by the Art and Color Section of General Motors. Just as the sources of materials for new products seemed unlimited so did the space for dumping old ones. Manufacturers became good at creating what I call "cul-de-sac products." What I mean by that term is a product that reaches a dead end and is thrown away just as a cul-de-sac at the end of a street offers no exit. I juxtapose "cul-de-sac products' to what I call "flow through products" that continue to circulate, either as single objects or as parts that are extracted and reused elsewhere.

To extend the metaphor of the cul de sac, imagine the map of a city that consists entirely of cul de sacs. Each time you go down a street in a cul de sac city, you arrive at a dead end and then have to turn around and return to your starting point. In a city of cul de sacs you only arrive at dead end destinations that have no connection to the rest

of the city. The circulation is based on the idea of back up as people have to retreat to a prior starting point in order to resume their travels. It is impossible to circulate in a direct line through the entire city.

Now consider that image in relation to what we do with the things we consume – not only the things themselves but also their packaging and all the materials that are created to advertise and promote them. Without effecting recycling strategies, we end up with a similar backup of products that reach a dead end and must then be sent to a landfill or some dumping site. Not only do we take up much needed space for living things by filling it with dead goods, but we also fund an economy that is focused on throwing waste in landfills. Considerable financial resources are spent on acquiring land for dumping sites, transporting waste to them, and then covering it up. When some developed countries run out of space, they pay developing countries to take the waste, using them as dumping grounds for their excessive consumption, and consuming yet more energy by shipping the waste in barges or freighters from one country to another. The problem of waste is not only one of bulk. It is also a problem of toxicity. We bury thousands of toxic products in landfills, thus contaminating the earth just as we dump toxic substances in our waterways, thereby polluting our water. And even when social agencies in industrialized countries send used computers to developing countries they increase the chances that eventually those computers and the toxic materials they contain will end up in a landfill as well.

Let's compare the map of a cul de sac city with a flow through city where everything is reused, including human waste. We already understand many ways to use waste from composting and enriching the soil to taking products apart and using their parts again. If this were to truly work in human society, the map of a flow through city would provide a picture of efficient circulation where people, things, and waste moved along routes that transformed them into something new and useful.

There are of course new theories of sustainability that call for reduced consumption and many people, at least in the mature industrial cultures, are practicing this. I read articles in the newspapers regularly about people who go for a year without Made in China products or petroleum products or who reduce their carbon footprint by a radical degree. While these are exemplary efforts and serve as an inspiration to

others, they do not by themselves solve the problem since the forces that are required to create change on a larger scale are still not in place.

A new vision

I want to move now to a vision of how I believe the world has to change in order to address our current problems most effectively. I don't believe that this vision is easy to achieve, given how the world is today, but I do think it is important to consider what could be done and what ought to be done and then to strive for the most meaningful goals rather than settle for lesser ones. As I have stated elsewhere, most of us have a difficult time envisioning the future as we are beset with many different scenarios and methods of constructing it.[7] One has only to consider the on-line simulated world *Second Life* to see what a mundane and consumer-driven vision of life more than one million people have created in a virtual community.

By contrast, projects like *Our Common Future* provide some idea of how to create a sustainable vision of the future because the work is carried out by teams of high-level researchers under the auspices of the United Nations and other international organizations. Due to their institutional origins, however, these projects are under serious constraints not to upset the core values of any UN member states. Thus, *Our Common Future* does not go as far as it might have because it takes for granted that the world of the future will be one where national governments and multinational corporations continue to pursue their self-interests, albeit in ways that one hopes would be more enlightened than occurs today.

While these reports serve as helpful guides to thinking about the future, I am equally interested in a vision that is unconstrained by how things are and is instead based on how things could be. Some years ago I co-taught an academic course called "The Design of Utopia," in which a group of architecture and design students looked at various utopian models from the past although without speculating about the future. Since then, I have continued to be interested in how the world might be but my imagination has become more pragmatic. Rather than imagine a utopian environment as William Morris did in his novel *News from Nowhere*, which was a beautifully poetic but

completely unrealistic vision for an industrializing world, I prefer to consider technology as an important component of a better world but I believe that we need an improved understanding of how it can contribute to human wellbeing. In fact, we need a better understanding of what human wellbeing is.[8]

If we consider the Universal Declaration of Human Rights as a reasonable starting point for what the peoples of the world are entitled too, we can find the basis for developing a vision of the future. The basic rights in that declaration concern human survival – particularly health, shelter, and food. These are fundamental to a world of wellbeing. Now, when we understand that providing the resources for human survival must be done through a system of economics that encourages the production of wealth within a set of reasonable regulations and defines the way that money as a symbolic system of exchange maintains its value, we have the basis for beginning our discussion.

The production of wealth depends on labor, both suitable compensation for it and the provision of satisfying work. As the economist E.F. Schumacher notes in his seminal book of 1973, *Small is Beautiful: Economics as if People Mattered:*

> Character, at the same time, is formed primarily by a man's work. And work, properly conducted in conditions of human dignity and freedom, blesses those who do it and equally their products.[9]

We have problems matching our definitions of good work to an economic system that provides a decent financial return for it. The economic failure of the Soviet Union and its then satellites made clear that centralized command economies were ultimately ineffective. On the one hand they were good at marshaling resources for large social projects but on the other they were inefficient in satisfying human needs and wants and in providing fair rewards for work done.

By comparison, the unbridled capitalism that prevails in the world today has vastly increased the difference between the wealthy and the poor, put too much wealth in the hands of a few people, and created a disequilibrium of both wealth and power. The recent financial meltdown in the United States, which was caused basically by greed, is a case in point of how unbridled and unregulated capitalism can lead to severe

damage. In some countries, particularly in Scandinavia and a few elsewhere, this disequilibrium has been somewhat countered by the creation of a large middle class that pays adequate taxes, a situation I support so long as the governments who are the beneficiaries of these taxes have reasonable plans for spending them on the satisfaction of human needs. In the United States, before the recent economic downturn, the housing market, which was only minimally regulated in many places, was in a boom phase with large numbers of homes being built, particularly in the luxury market. The scale and extravagance of such homes is excessive and fits well within an expansion model that has no limits to individual wealth or acquisition. Now we are paying the price by witnessing large numbers of people who were living beyond their means and are losing their homes or else developers who overbuilt are ending up with excessive inventory and no means to repay the banks for their construction loans. The excess in the American housing market is paralleled by the huge number of oversized cars that flooded the market for a number of years, although this market too is crashing because of rising gasoline prices. As a result, the Big Three automobile companies in the United States are now stuck with an inventory of gas guzzling SUVs and trucks that no one wants, while at they same time they have been slow to design smaller fuel efficient cars that consume considerably less gasoline. We also see an increase in the number of private jet planes, which are beginning to overcrowd airport runways and contribute to flight delays as more and more planes wait longer and longer to take off. But as fuel prices continue to climb, this sector may crash as well. It seems that some people must experience a severe financial crisis before coming to recognize the sound economic policies and design practices that should have been followed in the first place.

For me, the answer to this excess is a much more moderate form of capitalism, which encourages entrepreneurship but needs to be mixed with a greater assumption of social responsibility by governments, one that is independent of political whims and corrupt practices. I also believe that governments can and do offer incentives to wealthy people to use a portion of their wealth in socially constructive ways and here I would note the Bill and Melinda Gates Foundation, which has allocated millions of dollars to solving health problems in developing countries. Well, you can ask how we might control some of the excess. I know that there is a prejudice against regulation but I

would propose such regulations as they can be reasonably worked out in terms of resource use. While this is unwelcome by many, the alternative is the continuation of ruthless over-consumption and ensuing economic disaster.

When production takes place far from where goods are consumed, even though labor is cheaper, there are great energy costs in transporting these goods to their sites of consumption. This leads us to one of the major problems in bringing about change. Consumers like cheap products. They will pay more for a sustainable or eco product only up to a limit. Certainly liberal people prefer not to buy products that are made in Third World sweatshops and the more this is exposed, the more of an effect it has on labor conditions in these low-cost factories. Naomi Klein did a great job in pointing out some of these labor issues in her book *No Logo*.[10] To this end, we need to consider better industrial and innovation strategies in which policy makers find a balance between creating jobs through the introduction of innovative technologies, applying those technologies to new products, and considering how those new products will impact the existing social order and existing social relations. It is this last point that is usually neglected as governments and venture capitalists who invest in new technologies simply because they see an opportunity to make money with them.

In the ideal world that I am envisioning, governments would play creative roles in developing projects and programs and would provide incentives for private citizens to participate in them. As part of its responsibility to address the issue of "good work," governments should play a larger role in supporting innovation and creating and funding needed jobs that will help the world move forward. From a design point of view, we have to invent new forms of governance that can function more creatively. If wealth is more evenly distributed through decent minimum wage laws, tax incentives for socially productive enterprises, and positive visions for local, regional, national, and international agendas, a basis will be established for providing the necessities for survival.

I will refrain here from addressing some of the largest global problems such as terrorism, crime, drug trafficking, child soldiers, sex slavery, and all the other evils that we live with. These in my mind are aberrations, a kind of human pollution that cannot be easily eradicated. We can't let these problems defeat us, however, even as they drain

productive energy in the form of surveillance, deterrence, security and other measures to protect people against harm. But what these aberrations do highlight is basic to my argument for a good society. No economic system will work well unless it is supported by people of good character. Hence the Greek philosophers were correct in their emphasis on character as they reflected on the qualities of a citizen in the good polis. How we achieve this character is of course another difficult topic but I believe that those who already have it can strengthen its effect on world conditions by joining together for common objectives.

Health is one of the most serious issues we face and its many ramifications have much to do with design. First on the agenda of unhealthy influences is the environment. As several thousand environmental scientists recently acknowledged, human beings have largely created our environmental problems and here I would add through design. I don't blame designers because design is simply one form of techné or technique within industrial and postindustrial capitalism. Nonetheless, designers in the past – whether engineers, architects, product designers, or planners –created all the products that have contributed to the current state of global air pollution: coal burning factories, gas guzzling cars, inefficient furnaces and air conditioners and so forth. But they have rarely been the ones who conceived those projects or who mandated that they be designed inefficiently. In the past, the problem for designers has been power. They have not had much of it.

Today there are hopeful signs of change. Some designers are beginning to push back against projects that are inefficient or unproductive. They have been more active discursively, speaking up more often to advocate better solutions. I recall a meeting with an industrial design professor at the Ontario College of Art and Design in Toronto who told me that she had been able to persuade a manufacturer client not to use certain factories in China because of their poor labor conditions. Instead she convinced the client to use others with better conditions, even though they were more expensive.

Designers can also do more to take control of the product development process by forming their own enterprises for the introduction of valuable new products. This happens a lot in the software field but not enough in the realm of material goods. Today, designers who are so inclined can produce and distribute finished products - whether

these are books, bicycles, or furniture - far more easily than previously. This new situation is due to several factors: the dematerialization and reduced cost of the equipment needed to make products; the dematerialization of many products themselves, i.e. software and websites, but also hard goods that are made with more compact but stronger materials; the possibility to create virtual product prototypes that can be used to solicit financial support and stimulate public discussion; and the opportunity to market products inexpensively through electronic means. The development of faster and less expensive chips has allowed manufacturers to pack more intelligence into compact and cheap computers. These machines enable small businesses to run bookkeeping, accounting, and inventory control programs at fairly low costs. Advances in computing mean in the long run that many factories will function with cheaper equipment, making it possible to produce material objects with far less capital outlay.

An emerging global marketing structure is also changing the way goods are sold. A manufacturer can now build a network of interested consumers who are widely distributed in space rather than located in a specific geographic area. Through the Internet, one can reach people scattered around the globe without having to target a particular location with printed material, billboards, and the like. This enhances the opportunity for innovation. Many new products can reach the market in ways they never could before. Production can be based on small batches of goods that are distributed to individuals or selected retailers and in fact, a producer can create a special community for a particular product. New technologies enable us to redefine the traditional notion of a cottage industry. No longer associated specifically with the crafts and limited to local distribution, a contemporary cottage industry can use the most advanced technology and reach a worldwide market. We see this now with any number of products such as clothing, food, music, and software. Innovative marketing has, for example, long been a mainstay of the bicycle industry, where high-end cycles, produced in small numbers, are marketed through customized channels. Given the new networking approach to the production of goods and services, where resources, both human and material, are brought together for specific projects, small manufacturers can

lease production facilities or services for particular projects, just as a small press entrepreneur goes to a printer.

Designers today have the opportunity to produce and distribute new products with moderate outlays of capital. The plethora of things that has resulted from these new conditions of production and distribution is also evident in the arts and interested designers can learn from artists who have used advanced technologies for both the production and distribution of their work. Writers are starting their own electronic publishing companies and producing books on-line; composers are creating orchestral compositions without orchestras, and many filmmakers are presenting new films on the web. Film equipment has also dematerialized. Today, small video cameras can generate broadcast or theater quality footage and independent filmmakers can shoot their films with such cameras and edit them on computers. They are able to control the entire production process with a cash outlay that is only a fraction of what it once cost to make a film. Just as those artists who are using technology to produce and distribute their work constitute only a small percentage of the larger community of writers, painters, filmmakers and so forth, so too designers who choose to become manufacturers as well are unlikely to become more than a small minority of the design profession. Large companies still dominate the market and will continue to be the primary clients for design services. But designers who get involved with the production and distribution of products they conceive themselves have the possibility to change the market, even in small ways, and open up new product sectors that might even become beacons for larger manufacturers to follow.

I don't want to claim any particular moral or socially responsible high ground for designer/entrepreneurs but, in fact, there is a better chance for a small company to innovate in socially responsible ways than there is for a large organization that must work against many constraints – shareholder concerns, competing visions of corporate purpose, and aversions to small-scale innovations, for example.

One area where this new decentralized and dematerialized production system can make a mark is in the sector of sustainable products. Since the Industrial Revolution, large companies have had a near monopoly on the production system and because of that the necessary shift to a culture of sustainable production has been slow to

materialize. Now, those designers with ideas for sustainable products have a better chance than ever to create prototypes or finished goods and bring them to the market in a new way. With possibilities to reach a receptive consumption community that is not bounded by material geography, a sustainable product culture may begin to emerge.

A number of sustainable products have already been created by designer/entrepreneurs . Examples include new kinds of cargo-carrying bicycles. Ross Evans' Xtracycle Access Foundation makes cheap reliable bikes for developing countries, while the Xtracycle manufacturing company markets a higher tech cargo bike as an alternative to motorized transport. In addition, Evans organizes workshops to help poor communities design and build bikes themselves. Wendy Brawer has used the internet to create a Green Map System, a global network of green maps that indicate a city's cultural and sustainable resources, while Oliver Vogt and Hermann Weizenegger, worked with Berlin's Institute for the Blind to manufacturer well-designed brushes and household accessories that were sold from a catalogue. They also developed a line of furniture called Blaupause, which was offered only as 1:1 blueprints from which buyers assembled the pieces themselves. Such products do not have an affect on the world comparable to the launch of a mass-produced object, but they do begin to change the product milieu in an incremental fashion. Dean Kamen's wheelchair that can go up stairs is another example.[11]

While many large companies make contributions to a culture of sustainability, significant breakthroughs in sustainable product development are beginning to come from smaller designer/entrepreneurs such as those described above. Ross Evans and Dean Kamen have established their own foundations to fund the research, design and production of innovative products on a modest scale and to promote their adoption. This, I want to argue, is a new model for the designer, one that holds great promise for changing the global product culture. I am not presenting this model as a universal one; rather it responds to a particular set of circumstances.

I would now like to conclude with a discussion of strategy for bringing about change at multiple levels. The most important factor in generating a vision of the future is values. We need what I call a "calculus of values," that can enable us to assess the

worth of new experiences brought about by social and technological changes and formulate suitable responses to them. Such a calculus also lies at the basis of the future that people can imagine for themselves and others. One hopes they would envision a world in which they can see themselves functioning in a positive and satisfying way. Such visions are based on values that they believe, as the Greek philosophers said, to be good and true. Reasonable people ought to envision a world in which everyone has basic rights and in which social justice prevails. That is certainly the kind of world that I advocate and one that I hope others will embrace. Such a world is based on the principle of correlating life style with sustainability. By sustainability in this sense I mean the capacity of the envisioned world to successfully endure over time. While there is no way to know how long our planet will survive as a part of the cosmos, we do know that the Earth has lasted a long time thus far and that there is no good reason to imagine its extinction unless we destroy it ourselves. Therefore we have to plan for long-term survival, which surely turns us to a strategy of creating a healthy and stable environment that is in accord with larger ecological requirements.

Each person can maximize their capacity to turn global development in a positive direction by operating on multiple levels simultaneously. Clearly the changes that make the greatest impact will happen at the highest level. Governments, international organizations, and large corporations are the principal actors in bringing major changes about. And the problem there is that the heads of these bodies are usually reluctant to act in too extreme a manner even as they cause the greatest damage. Thus individuals must join together in groups to provide alternate visions. This means involvement in political and social organizing and we have seen that such organizing can be successful as indicated by the many new social networking sites that promote socially valuable ends.

We should also think about creating new organizations for productive action at the middle range or working through existing organizations. Every country has its own designer organizations and these are good starting points for meaningful programs. There are also many NGOs to work with. Next would be starting one's own enterprise to make a new product or serve in some other socially valuable capacity. And finally one can change his or her own habits as a citizen by paying closer attention to energy use,

reducing one's carbon footprint, recycling, using bicycles or public transportation more often, and other practices.

Here I would like to call attention to the excellent work of Ezio Manzini, François Jégou, and their colleagues on the topic of the sustainable everyday. For quite a long time they have been holding workshops around the world on the subject of what ordinary citizens can do and they have produced many excellent scenarios for individuals and communities. A number of these were presented in an exhibition at the XX Triennale in Milan and then published in 2003 in the book *Sustainable Everyday: Scenarios of Urban Life.*[12]

Changing one's own personal behavior leads to considering the next level up to increase the effectiveness of one's actions and thus we find ourselves within a cycle of working from the personal to the local to the global and then back again to the personal. While, making small changes in our own lives is important and within our control, we also have to recognize the urgency of the present situation. The longer we wait to take strong action against the current forces of climate change, for example, the more we will be faced with natural disasters that will consume increasingly more resources to address. Thus we have no choice if we want to survive as a community of people on this planet. Those interested in a culture of sustainability must join together against the opposing culture of expansion. We must either act together or face the consequences. Design can be an important part of positive change. It is up to us to use it effectively.

NOTES

[1] A revised version of the lecture was published as "Expansion or Sustainability: Two Models of Development," in my book *The Politics of the Artificial: Essays on Design and Design Studies* (Chicago and London: University of Chicago Press, 2002)
[2] Expansion or Sustainability: Two Models of Development," 82
[3] Ibid.
[4] Gro Harlem Brundtland, "Foreword," *Our Common Future: The World Commission on Environment and Development* (Oxford and New York: Oxford University Press, 1987), xi.
[5] Ibid.

[6] Unless they are also manufacturers, designers are not fully responsible for the global product milieu but they are the ones who give form to products and enable others to make them and promote their use.

[6] For a discussion of how differing views of the future compete, see my article "Design: the Future and the Human Spirit" *Design Issues* 23 no. 3 (Summer, 2007), 4–15

[8] See the manifesto "Brighton 05-06-07," which concludes that the fundamental purpose of design is the creation of wellbeing. It was published in *Design Issues* 24 no. 1 (Winter 2008): 91-93

[9] E. F. Schumacher, *Small is Beautiful: Economics as if People Mattered* (New York et. al. Harper and Row, 1973), 55

[10] Klein, Naomi. *No Logo* (New York: Picador USA, 1999)

[11] The above products were first described in an issue of I.D. magazine, "The I.D. Forty: Socially Conscious Design," (February 2001)

[12] See Ezio Manzini and Francois Jegou, *Sustainable Everyday: Scenarios of Urban Life and Album: A Catalogue of Promising Solutions* both (Milano: Edizione Ambiente, 2003)

[i]

---

[i]