

# **Context-based wellbeing and the concept of *regenerative solution***

## A conceptual framework for scenario building and sustainable solutions development

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In the last decade, at least as far as mature industrial societies were concerned, the traditionally dominant, and *clearly un-sustainable*, idea of wellbeing, the *product based wellbeing*, started to change. This change, that has to be related to the on-going shift towards an economy based on services and knowledge, can be summarised in the slogan “from possession to access”.

In coherence with this emerging vision, which we may define as the *access-based wellbeing*, quality of life tends to be related to the quantity and quality of services and experiences which it is possible to have access to (and, consequently, a new idea of freedom intended as *freedom of access*).

In principle, this new vision appears to be a good one: a vision on which it would be possible to build forms of sustainable lifestyle. Unfortunately this positive potentiality is not becoming real and, today, we are obliged to observe that the access-based wellbeing may become even more unsustainable than the product-based one.

In the following paper I will discuss this contradictory phenomenon, that has been defined as the *rebound effect*, observing it in the framework of the transition from a product-based wellbeing to an access-based one. Moving from here, I will introduce the concepts of *context-based wellbeing* and of *regenerative solutions*.

### **The product-based wellbeing**

At the beginning of the industrial era the combined development of science and technology brought to human beings possibilities never seen before: the possibility of *materialising* complex services in the form of products (a laundry service which materialises in washing machines, the service of playing music which becomes a radio or a record player) and the possibility of *democratising access to them*, producing them in increasing quantities at decreasing prices.

This unprecedented possibility brought with it an extraordinary spread of a particular form of wellbeing. A well-being that was recognised precisely in the possibility of individually possessing, showing off and consuming the products. And, moving towards more recent times, and more affluent societies, the possibility of choosing between different options and devising, in this way, a personalised set of products.

In the framework of this vision, which we can define as the vision of *product-based wellbeing*, the emerging idea is that life choices tend to be considered as choices among marketable goods and that, as a consequence, freedom of choosing is coincident with the freedom of buying (metaphorically, the contexts that best express this vision are the big *shopping malls*: places where there is the widest choice and, if we have the money to do so, the greatest opportunity to buy whatever we prefer).

The problem of this vision of wellbeing is that (as in the last two or three decades we have been forced to discover) it is intrinsically environmentally and socially unsustainable. And this for several interrelated reasons that in these years have been widely discussed.

## Rebound effect

Facing this discovery of the environmental problems related to the diffusion of the product-based well being, the environment has come onto the agenda of both politics and the economy, many products have been transformed and the environmental efficiency of each has, in general, been greatly enhanced.

In other words, considering, one by one, the various artefacts introduced in the overall socio-technical system, it might seem that the technical production system has evolved and is evolving in the right direction, that it is progressively becoming more environmentally friendly. Unfortunately this is not the case.

If we move from a consideration of the environmental quality of each single product to a consideration of the system as a whole, we realise that the situation has in no way improved, rather the overall consumption of environmental resources continues to increase. In fact, in the framework of the product-based ideas of wellbeing, and of the product-based economy behind it, these interconnected phenomena tend to happen:

- Downsized, leaner products tend to become throwaway goods and, for this reason, to proliferate.
- Friendly interfaces make simpler to do previously difficult or tedious activities, and so these activities too tend to proliferate (for instance, it has never been so easy to print documents as it has been since computers came into existence, and consequently for every document produced we print innumerable versions)
- Good communication systems permit to connect people without moving them, but it has never been so necessary to move as it is now (telematic connection is fine but every so often it is necessary to meet each other face to face!).

The great, and in many ways tragic, discovery of this period is just this: the boomerang or *rebound effect* - by which actions expected to have environmentally positive effects, in fact bring insignificant, if not actually negative results. And technological improvements, meant to improve the products and services eco-efficiency, for reasons that are rooted in the complexity of the overall socio-technical system, seems "naturally" to become new opportunities for consumption, i.e. increases in the system unsustainability.

The same kind of phenomena, unfortunately, is happening today with the emerging access-based wellbeing.

## The access-based wellbeing

Considering the dominant ideas of wellbeing, in the last decade, something started to change, at least as far as mature industrial societies were concerned. This change, that has to be related to the on-going shift towards an economy based on services and knowledge, can be summarised in the slogans "from the material product to the intangible" (IPTS, 1999a), "from consumption to experience" (Pine, Gilmore 1999) and "from possession to access" (Rifkin, 2000). All this seems good: in principle, access to services and experiences which satisfy intangible needs appears to be a promising concept, an idea on which to build some form of sustainable lifestyle. Unfortunately, as we will see, reality shows a completely different picture. In the framework of this new economy the central position of the material product in the definition of wellbeing becomes obsolete: well-being no longer appears linked to the acquisition of a "basket" of material products, but rather to the availability of access to a series of services, experiences and intangible products. More specifically: in a society saturated with material goods, to focus on the immaterial seems more interesting. And, at the same time, when life-styles are characterised by speed and flexibility, the ownership of material products appears too heavy and rigid a solution, something that increases the inertia of the system (which, on the contrary, is intended to be as light and flexible as possible) (Rifkin, 2000)

In fact, in coherence with this vision, which we may define as the vision of *access-based wellbeing*, quality of life is related to the quantity and quality of services and experiences which it is possible to have access to. And, consequently, the idea of freedom tends to be coincident with that of *freedom of access* (metaphorically, the contexts that best illustrate this vision are *theme parks*: places where, at your pleasure, you can choose your thrills among many, and where everything has been carefully thought out to offer you an "exciting experience" – if you have the money to buy the tickets).

## **The rebound effect, in the “age of access”**

The problem with this emerging vision of well-being is that, even though it breaks the direct link between well-being and consumption of environmental resources, practically, while developing in the present cultural and economical context, it may become even more unsustainable than product-based one (IPTS 1999b, Manzini 2001). And this for several interconnected reasons:

- The new “intangible needs” tend to be added to, and not a substitute for, the old “material ones”.
- The speed and flexibility of new life-styles imply the same speed and flexibility in access to services which, for this same reason, proliferate.
- Services and experiences, per se, may be immaterial, but their delivery may be highly material intensive.

Thus, the access-based idea of wellbeing, applied in the way in which it is taking place now, brings insignificant, if not actually negative results from the perspective of sustainability.

These unforeseen effects of innovation (by which actions expected to have environmentally positive impacts, in fact brings insignificant, if not actually negative results) have been defined as the boomerang or *rebound effect*. The question that we cannot escape is: why does it happen? Why, whatever we do, the final result turns out to be a further increase in the consumption of our environment?

If the reasons for the environmental and social un-sustainability of the product-based wellbeing have been very widely discussed, far less discussion has been focused on the sustainability or unsustainability of access-based wellbeing.

In the following paragraphs some hypotheses will be formulated. These hypotheses will be the basic framework of the scenarios of sustainable wellbeing that we want to build.

## **The crisis of *common goods***

Our first working hypothesis is related to the existence of a strong relationship between rebound effect, as I presented it before, and the crisis of the common goods, and in particular, of the local common goods. The expression local *common goods*, that is the pillar on which this first hypothesis is built, stands for “goods” that belong to everybody and nobody in particular. And that – as long as they remain “common” - cannot be reduced to marketable products and cannot therefore be bought or sold.

Examples of common goods range from basic physical resources, such as air and water, to social resources like a neighbourhood community or the civic sense of its citizens, to more complex resources such as the landscape or an urban public space or a “sense of security” in a town.

It is clear that these common goods constitute a fundamental part in the construction of a human habitat, i.e. in the definition of the quality of the physical and social contexts in which human beings live, and in which products themselves take on meaning.

Nevertheless, in the models of wellbeing which have been dominant in industrial societies up to now the central position held by individually acquirable goods (whether products or, more recently, services) has caused, as a highly tangible side effect, an underestimation of the role which common goods assume in the actual definition of a state of wellbeing. The consequences have been the complementary phenomena of:

- *Desertification*: the neglect and, consequently, the degeneration of the common goods, considering them as insignificant or considering their deterioration as inevitable (assuming it as a sort of penalty to pay for progress and to the quest for wellbeing – see the deterioration of different common goods: from the quality of the air to the one of the social fabric)
- *Marketisation*: the transformation into market goods of some components of the traditional human habitat that previously had been common goods (i.e. by assuming that their privatisation would be the way to avoid their deterioration – see the present world-wide debate on water management. Or by changing the expectations and shifting, for instance, from tap water to the bottled “mineral” one. Or by outsourcing activities, as food preparation, that in the previous time, in the framework of a traditional shared knowledge on cooking, had been done inside the families).

## The disappearance of the *contemplative time*

The second working hypothesis is related to the relationship between *rebound effect* and the crisis of the contemplative time.

The expression *contemplative time*, that is the pillar on which this second hypothesis is built, stands for a time that is used “to do nothing” and, nevertheless, is not empty, nor meaningless.

Examples of contemplative time range, of course, from looking at a sunset to engaging in some spiritual exercises. But we may assume that there is some contemplative time also in doing something at a slower pace (walking, eating, talking with people,...).

Traditionally, contemplative time has been an important part of life and it had been considered as a privilege (as a matter of fact, poor people did not have many possibilities for contemplating) (Offe, Heinze, 1997). Now things are changed and the contemplative time is disappearing for both the wealthy and the poor. This disappearance is caused by two complementary phenomena concerning our use of time:

- *Saturation*: the tendency to saturate every moment with something to do, and, more and more frequently, to pack it with several things to do at the same time (e.g. eating, listening to music and reading, or: driving, listening to music and talking at the phone).
- *Acceleration*: the tendency to do everything at a faster pace to have the possibility (or the illusion) of doing more (e.g. fast-food, fast-cash banking, instant-access via the www, etc.)

## Proliferation of *remedial goods*

If we consider the past century, we can empirically observe how the spread of goods and services for private use and consumption has run parallel to the common goods deterioration and to the disappearance of the contemplative time.

Facing this observation, our third working hypothesis may be articulated in this way:

- There is a *relationship* between the diffusion of market goods (if ever more sophisticated and efficient) and the crisis in common goods and contemplative time, and in all that these common goods bring as their specific, cost free, contribution to the definition of “a state of wellbeing” (as, for instance: the diffusion of cars brings to an increase in pollution and in traffic jams. But also: the diffusion of individual home entertainment products and services brings to the crisis of social entertaining events and, at the end, to the deterioration of the social fabric).
- There is a second *relationship* between the crisis in common goods and contemplative time, and the proliferation of new *remedial goods*, i.e. products and services that try to make acceptable a context of life that, per se, is heavily deteriorated (as, for instance: increasing

- consumption of medical care products as an attempt to cure to the bad environmental quality. Need of new electronic safety systems to face the perceived un-safety of the present neighbourhood).
- The growth in consumption of remedial goods, in turn, brings more consumption, and a further crisis of both common goods and contemplative time. And so on in a negative auto-reinforcing cycle.

The concept of *remedial goods* is obviously the central issue in this hypothesis. The common character of remedial goods is that their use or consumption is not improving the quality of life or opening new possibilities for the user (as it could be the case for a new washing machine for a person that, until then, had washed by hand). What they do is simply to (try to) restore a degree of acceptability to a context of life that has been degraded.

The meaning of this definition immediately appears if we consider the crisis of some basic common goods: we buy “bottled distilled water” because natural, local water is polluted, we move to faraway “tourist paradises”, because the beauty nearby has been destroyed, we buy electronic and telematic domestic security systems, because neighbours no longer discretely, and at no cost, keep an eye on the house, and so on.

Even if it may be less evident, the same concept of remedial goods may be used in dealing with the disappearance of the contemplative time: we buy and we consume a growing number of products and services “to pack our time”, to kill the sense of void left by our incapability to enjoy contemplative time or, simply, to do something at a slower pace. In this case, i.e. considering the relation between goods and the disappearance of contemplative time, it is not easy to establish with a sharp precision, which goods are the remedial ones and which are not. But we could easily say that a lot of them, from TV, to mobile phones, to junk food, contain a strong remedial component.

## Context-based wellbeing and regenerative solutions

In conclusion of this part, we can assume that un-sustainability, at the local scale, is a process of deterioration of the contexts of life, caused by the crisis of the common goods and the disappearance of contemplative time.

The consequence of this assumption is that every idea of wellbeing, to be sustainable (or at least, to have some probability to be sustainable) has to include a consideration of the overall qualities of the *contexts of life*, i.e. of the access to a variety of products and services, but also, or even more, on the quality and quantity of the available *common goods* and *contemplative time*.

In this conceptual framework, we can start outlining our scenarios of sustainable wellbeing indicating their motivations, i.e. their goals and their criteria.

*Goal:* we have to conceive scenarios of wellbeing in which the overall quality of the context of life has to be considered, in which the physical and social common goods are regenerated and where contemplative time has its place.

*Criteria:* we have to conceive scenarios, and the proposals that give them a concrete form, that have to be consistent with two major criteria:

- *Low material-energy intensity.* this is the most traditional criterion for sustainability, and it remains the fundamental one (Shmidt-Bleek, 1993, Brezet, Hemel, 1997): whatever solution could be proposed, it has to be highly eco-efficient (keeping count of the overall life-cycle of the related artefacts).
- *High regenerative potential:* it is the criterion for sustainability that comes from our previous considerations and hypotheses and integrating the different but converging proposals of some

innovative thinkers on the concept of regenerative economy (Pauli, 1997, Sthael, 1999, Braungart, Englefried, 1992; Braungart, McDonough, 1998): whatever solution could be proposed, it has to act as positive agent in the regeneration of the contexts qualities.

## **A design research programme**

On the bases of these criteria, we can start to imagine the most general outline of the scenarios of sustainable wellbeing that we would like to build: a sustainable wellbeing that has to be related to the qualities of the contexts of life and has to be based on solutions that have to be *at the same time* lean *and* regenerative (i.e. with low material-energy intensity *and* with high regenerative potential)

In this very general framework, the most challenging issue, in my view, is to conceive systems of products and services which have to be endowed with *high regenerative potential*, i.e. that have to act as positive agents in a process of regeneration of the different qualities of the contexts.

Given that these regenerative solutions are very far from our present ones, to move in this direction some lines of research have to be developed.

### ***Marketable-goods vs. common goods.***

If we consider the past century, we can empirically observe how the spread of goods for private use and consumption has run parallel to deterioration in the quality of the contexts of life as a whole.

To better understand what has happened (and what is still happening) we have to look, in particular, to the role of *common goods* (as opposed to marketable goods) and to the way in which these “off market” goods constitute a fundamental part in the construction of the human habitats. Moving from this consideration, it clearly appears that the decreasing qualities of the contexts of life are linked to the crisis in local common goods. And that, facing this crisis, a growing quantity of products and services are needed not to improve the quality of life, but only to restore it to some acceptable standard.

*Design has always developed marketable goods and services: is it possible to conceive new solutions that will be able to regenerate and develop common goods?*

### ***Enabling systems vs. disabling ones***

Until now the user profile adopted is mainly one of a lazy person, a subject whose only tendency is to avoid effort and care. This passive attitude is, for sure, a strong component of every human being, but it is not the only one. Human beings can also be active and committed, and they may enjoy using their skills and capabilities.

The combination of these two human attitudes – passive and active - depends on many variables. The most important ones are those related to the kind of systems that a person has the possibility of using. Some systems may be seen as *enabling*, but the majority of them are conceived as *disabling*: systems conceived to reduce the capability and will of the user to actively participate in the solution of his or her problems. This growing passivity is individually, socially and, in the long run, also environmentally, unsustainable.

Design has always been oriented towards solutions to increase comfort. And the idea of comfort that it has promoted has been directly linked with the reduction of the user's participation: how can we break this link and develop attractive enabling systems (reducing the appeal of the disabling ones)?

### ***Taking time vs. real time***

Flexibility and speed are two words that are increasingly used to define the qualities needed today, not only to compete in the market, but also to manage our own personal *life strategies*. In turn, the integration of flexibility and speed generates socio-technical systems characterised by “instant adaptability”, i.e. capable of perceiving the signals of the context and changing accordingly in real-time.

Because of this situation, it's imperative to create opportunities characterised by a different, slower timing: situations that will allow us to “take time” for thinking more in depth than we can usually do in real-time interactions. But also taking time for better appreciating some experiences, or simply for contemplating.

In other words, exactly because everything moves so fast, and we cannot stop it, we have to create some *island of slowness*.

*Design, in all its history, but especially in its more recent years, has been an agent of acceleration: is it possible to conceive solutions combining the real-time of interactions with the possibility of taking time for thinking and contemplation?*

## Bibliography

- Braungart, M., Englefried, J. (1992) *An “Intelligent product System” to replace “Waste Management”*, Fresenius Bulletin 1:613-619, 1992
- Braungart, M., McDonough, A. (1998) *The Next Industrial Revolution*, Atlantic Monthly, October 1998
- Brezet, H.; Hemel, C. van, *Ecodesign (1997) A promising approach to sustainable production and consumption*, UNEP, Paris
- Schmidt-Bleek, F. (1993) *MIPS Re-visited*, Fresenius Environmental Bulletin, vol.2, n°8, Birkhauser Verlag, Basel, August 1993
- IPTS (1999a), *Futures Project. Demographic and Social Panel Report*, N° Series 02, IPTS, Seville.
- IPTS (1999b), *Futures Project, Information and Communication Technology and the Information Society Panel Report*, N° Series 03, IPTS, Seville
- Manzini, E. (1999) *Strategic Design for Sustainability: Towards a New Mix of Products and Services*, Ecodesign '99, Tokyo, Japan, February.
- Manzini, E. (2001) *Design Systems. Scenario building and solution providing in the network society*, paper presented to the ICSID 2001 Conference, Seoul, October 2001 (to be published)
- Offe, C., Heinze, R.G. (1997) *Economia senza mercato*, Editori Riuniti, Roma.
- Pauli, G. (1997) *Breakthroughs - What Business Can Offer Society* (trad.it. *Svolte epocali*, Baldini&Castoldi, Milano, 1997).
- Pine, J.b., Gilmore, J.B. (1999) *The Experience Economy. Work is Theatre and Every Business a Stage*, Harvard Business School Press. Boston, Massachusetts
- Rifkin, J. (2000) *The age of access*, Putnam
- Stahel, W. (1999) *From Products to Services or Selling Performance instead of Goods*, Ecodesign '99: 1st International Symposium on Environmentally Conscious Design & Inverse Manufacture, IEEE Computer Society, Japan.
- Vergragt, P., Green, K. (2001) *The SusHouse Methodology. Design Orienting Scenarios for Sustainable Solutions*, The Journal of Design Research, 2001.