

### **From the “ecological re-design” of products to the suggestion of “new environmental scenarios”**

My contribution is organised in two parts. The first discusses in general terms what design can do to contribute to the solution of environmental problems. The second transfers such potentials into the present post-industrial situation.

The starting point – taken for granted in this context – is the established notion that the strategic solution to the environmental problem should be as “upstream” an intervention as possible in the production and consumption system and in its re-design of new values.

The aim to ecologically re-design the products, systems and services surrounding us is therefore the most mature and advanced field within present environmental culture and practice.

On the other hand, the more “upstream” the problem is set, the less can it be dealt with as a merely technical issue and the more it becomes a socio-cultural issue.

This is true in general terms and in particular when we consider consumer goods –, as it will be in my report. Consumer goods themselves constitute the material support for the lifestyles created by the industrial society. They are the most evident meeting point for production potentials and social imaginary.

Proposed solutions in this field, showing a high degree of environmental sustainability cannot be separated from how deep and in what way they are socially and culturally perceived. And on this ground the field of activity of “ecodesign” starts.

### **The possibilities of ecodesign**

The term “ecodesign” indicates a design activity aimed at connecting what is “technically possible” to what is “ecologically necessary” in order to formulate new socially and culturally acceptable proposals.

In principle, this design activity may take place at different levels:

1. Ecological re-design of the present products (which, in the light of their whole life cycle, may improve their global efficiency in terms of material and energy consumption, and simplify their disposal or recycling).
2. Design of new single products or services to replace the present ones (which, in view of the demand for performance, may uncover ideas for ecologically more favourable products or services than the ones presently offered).
3. New environmental scenarios corresponding to new lifestyles (contributing to the creation of new quality principles and to the subsequent modification of the structure of the demand for performance).

Clearly, each of these fields of intervention has a different system of limits and possibilities. Each reflects a different role in the relationship between technical and socio-cultural aspects.

The ecological re-design of the present products, implies only technical interventions, requiring no change in lifestyles and consumption. In this case, the only reference to the social component is within marketing that capitalises on the demand for “ecological” product choices. Its limit is in its need to force ecological solutions into systems originally conceived and developed outside any and all environmental concern.

The design of new single products or services substituting the present ones requires partial modifications in consumption and lifestyles, and must therefore be socially accepted. In this case technical and production innovation may be more freely directed towards environmental quality. Its limit is in the difficulty to introduce ecologically valuable products and services into a cultural and behavioural situation still dominated by different values.

The suggestion for new environmental scenarios corresponding to new lifestyles requires the highest level of social acceptance. Moreover it can only emerge from complex socio-cultural innovation dynamics within which designers may play an outstanding but limited role (collection, interpretation, reformulation and stimulation of socially produced ideas). In this case it is not so much a question of putting new specific technological or production possibilities into practice, but the production of new principles of quality that the environment may sustain, whilst being socially acceptable and culturally attractive at the same time.

### **Ecodesign and post-industrial society**

The emergence of environmental concerns and the need for an “ecological reconstruction” of the production system bring the problem of the quality principles on which the present consumption system is based to the agenda.

This necessary deep social and production reorganisation, however, is linked to another major transformation that has been underway for a long time, and still is - the shift from the “classical industrial” society to the “mature industrial” society (or “post-industrial” society).

The combination of both phenomena is remarkable since the former (the ecological reconstruction of society) will be more or less successful and sudden according to our capacity to place it within the new scenarios the latter (the transition towards the post-industrial society) tends to produce.

More precisely, the post-industrial society is characterised by the integration of cultural dimensions into each production and consumption activity.

A few major trends may be outlined on the grounds of this general statement:

1. Products are increasingly supporting the communication of cultural values. Their success is linked to the success of such values.
2. Industrial activities are increasingly related to communication strategies. A company's success is widely dependent on its capacity to communicate and construct its own precise cultural identity.
3. Individual consumption choices are increasingly turning into choices among cultural alternatives linked to different “consumption imaginaries” within the more general social imaginary. Consumers, offered increasing variety, tend to “design consumption” and to develop their own “consumption culture”.

Further to the spreading of cultural dimensions into production and consumption, product definition may hardly be reduced to technical and economic issues. It is increasingly needs to creatively integrate what is “technically possible” with what is “socially acceptable”.

Since this creative integration between technical and cultural aspects corresponds to what is roughly meant by the term “design”, the post-industrial society is expressing a growing “demand for design”.

On the other hand, the demand for design in the present situation considerably widens the design application field - from classical product design (industrial), to the design of product ranges, production strategies, services integrated into products (thus becoming service-products), up to something that may be defined as “consumption design” (a sort of assistance to consumers in the guidance of choices).

In order to be successful in each “ecological re-design” strategy applied to the production system, therefore, these complex cultural dynamics should be considered. And, in this situation, design – in its previously mentioned meaning – becomes a fundamental operative instrument.

This potential importance of design may be detected both in general and specific terms.

In general terms design is an instrument for the connection of what is technically possible in the field of clean technologies with what is culturally desirable in the field of the growing environmental awareness. With its capacity to perceive and interpret technical potentials and social expectations and to project them into new solutions, design may therefore positively accelerate the change in production and consumption processes.

Within the framework of the post-industrial society, in fact, the success of ecologically valuable solutions is also measured on the ground of their capacity to take on a favourable position within the cultural dynamics under way and, more precisely, of the “consumption imaginaries” society is able to produce.

In specific terms, i.e., with reference to its relationship with a single company and with single product concepts, design may foster the “social acknowledgement” of the environmental choices supporting a product or an entire corporate strategy, and thus contribute to their success in economic terms too.

The need for an integration between technical and production facts and cultural facts, typical of the post-industrial society, is also felt (and maybe we could even say, is particularly felt) by the companies adopting an ecological strategy: what is “technically possible” and what is “ecologically necessary” should be expressed as what is “socially and culturally appreciated”.

The winning ecological solution is therefore not only a technical solution. It is a technical solution as well as a socially appreciated quality and a communication strategy (of the product and of the manufacturing company) making it socially acknowledgeable.

### **Attracting scenarios**

To enhance the cultural and communicative dimensions of the environmental issue does not mean to underestimate its “material hardness” and the need for a technical solution. On the contrary, it means to enhance a field of intervention that appears as the strategic one.

Indeed, all major social transformations in the past were catalysed by equally big dynamics of ideas and by the outlining of powerful living scenarios acting as “attracting poles”.

We may therefore correctly think that the same is true for the present society (moreover, the role of such “attracting scenarios” should be even more important today, in the light of our previous considerations about the features of post-industrial societies and about the role played by cultural and communication issues within them).

On the other hand, the present status of the imaginary against the possible qualities of an “ecological life” appears extremely poor, and linked to a few general ideas about the approach to nature, often debatable and confused if turned into facts.

We may therefore easily infer that the present lack of positive images of a greater balance between the artificial world and natural environment is one of the main causes for the slow ecological transformation in society: apart from catastrophic events, the transformation “spurred” by the emerging of problems is slower than it would be if it were also “attracted” by a new perspective.

On this very ground ecodesign seems to play a fundamental role: to exploit one's experience, sensitivity and inventiveness for the creation of new, possible, attractive environmental scenarios.

### **Consumption culture, industrial culture and design culture**

The potential for ecodesign to actually play the significant role it is assigned (that is the ecological re-design of the present production and consumption processes) will depend on the evolution of culture and on the practice of the different social actors involved: designers, manufacturers and consumers.

This is not the right place to make a detailed analysis of the socio-cultural dynamics under way, but a few observations can be made.

Starting from the consumer's perspective, in the last few years a "demand for environmental quality" has clearly increased. Such demand, however, is varied. Sometimes it only appears as the generic demand for a better environment (a demand emerging from the dissatisfaction about the degradation of life conditions and about the fear of possible catastrophic events). Sometimes it appears in the form of temporary fashions (leading to often-debatable behaviours). It also appears in the form of "eco-consumerism" (that is as a trend in consumption leading to a preference for products that more or less legitimately appear as ecological).

In spite of this fragmentation, this phenomenon constitutes the most positive aspect in the overall picture. Even in its most superficial and contradictory aspects, this new demand is the fundamental social factor making ecodesign an actually sustainable proposal rather than a mere statement of what should be done. As a matter of fact, the existence of ecodesign is due to this emerging social demand, and ecodesign must especially refer to it by acting as a catalysing factor for a new "consumption culture".

Considering the business aspects, i.e. the way industry is reacting to the evidence of the environmental issue, we face, once again, a contradictory reality in motion.

Along with the appearance of fragments of a new ethics and of a new responsibility for manufacturers, cases increase in which the "ecological choice" derives from the spotting of new business areas or from the will not to surrender to criticism and challenges or, even more, at the lowest level, from the attempt to give a "green aspect" to current activities. The overall picture is therefore fragmented and contradictory for industrial practice and culture, with the presence of a few good examples and of cases quite close to fraud.

In order to foster the former and to limit the latter, various factors can come into play: from the self-regulation of manufacturers themselves (i.e. from the development of a new industrial culture integrating its reference values with the environmental issue), the introduction of "eco-labels" (i.e. certification instruments ensuring the environmental quality of a product), regulatory interventions (contributing to the increased average level of environmental sustainability in production), to the co-operation with designers aware of the environmental issue.

We now come to consider the third aspect, related to the designer's culture and practice. At first glance the picture does not appear particularly positive: present design is still quite far from ecodesign.

On one hand, in fact, an intense design activity is flattened on the most superficial requirements by marketing as designers respond to the "demand for design" that, as we said, the post-industrial society is increasingly expressing, with a professional skill entirely lacking independence and valuable references, and in particular, thoroughly insensitive towards environmental problems.

On the other hand there is the activity of designers claiming their own cultural independence, but often ending up with an excessive focus on formal aspects. As a result the glossy pages of magazines are filled with highly expressive projects, though very little contributing to the proposal for a new culture of inhabiting.

However, turning this first glance into a more careful analysis, other more comforting issues appear. Two lines of research are particularly promising.

Starting from the evolution and critical thinking of the new Italian design, research in the “qualitative” aspects of the environmental issue, based on the “inhabiting” concept, considers the way products are manufactured within the context of the present artificial environment.

Stemming from the Anglo-Saxon and Scandinavian culture, research about the “quantitative” aspects of the environmental issue is well under way, proposing products made with harmless materials, longer-lasting products, and recyclable products.

Both trends currently show a few limits: the first relates to the cultural dynamics of the present society, but hardly has an influence on practice; the second, on the contrary, suggests practical solutions but does not influence the major consumption models, and does not produce new environmental imaginaries.

Ecodesign should start from here, from these partial lines of research, by integrating them with each other and by producing a more mature and effective culture of design, capable of operating in the post-industrial society and of turning the discovery of environmental limits into a set of new opportunities.

## **Conclusion**

It is necessary, but also possible, to propose an “ecodesign”. This activity, necessarily involving designers and manufacturers, implies the design of products, systems and services provided with a higher degree of environmental sustainability. Such activity takes place within the present post-industrial society, in which production and consumption processes are dominated by communication and cultural factors.

This means that to be successful, ecodesign should make socially and culturally recognisable and appreciable proposals.

Ecodesign may therefore act on different levels: from the most technical, immediate and punctual level (re-design of existing products) to the level in which totally new solutions are imagined.

But its strategic task is different, and of a more general kind. It consists of a co-operation in the production of new environmental scenarios, based on new quality principles compatible with the environment, socially acceptable and culturally attractive at the same time.