

The nature of Packaging

While dealing with the theme of packaging, it should be taken into account that in most cases these are manufactures that carry out a high number of performances, and are made by means of advanced and complicated technological systems. In other words, the obvious and plain character we perceive in them does not correspond to the actual sophisticated level of their "technical nature". These manufactures dwell in the background of our daily life, and cover a strategic position in the consumption system, determining it and being determined by it. In other words, to act on packaging means to act at a very deep (and therefore very stable) level of our present metropolitan "material culture".

Packaging itself, indeed represents one of the most significant material supports to lifestyles produced by the industrial society. It (i.e. the "container" rather than the "content") best expresses the way our society's material life is organised:

- through its "protective" character, packaging appears as the "materialization" of production and consumption times and methods.
- through its "communication" character, it still represents most clearly the transformation increasingly leading the products of the post-industrial society towards a clear "information support" role.

The possibility to put forward new solutions (and specifically solutions showing a higher degree of endurance for the environment) in this field, depends on the extent and on the way these are socially and culturally perceived. Hence the environmental problem of packaging is:

- a complex problem admitting no simple and unique solution
- a problem requiring a "strategic" action to be taken at the same time in order to find short, medium and long-term solutions
- a problem requiring to reconsider not so much packaging as such, as the distribution system and the product itself
- a problem requiring a redefinition of the social actors' roles.

This redefinition of the social actors' roles should occur:

- at the level of product conception (between designer, product manager and marketing)
- at the level of product logistics (between manufacturers and suppliers)
- at the level of the relationships with the market (between manufacturer, suppliers and consumers)
- at the level of the more general "rules of the game" (role of public organisations).

The following notes are written under the assumption that:

- such redefinition of roles should occur anyway
- in different forms, it is already under way
- the ecological re-orientation of our production and consumption system is already under way
- however, the extent and speed of such change are not yet appropriate for the extent and growth speed of environmental problems

- an acceleration of this necessary transformation may stem from the capacity to re-define the environmental problem of packaging as much upstream as possible, i.e. starting from project definition.

The following is a picture of the opportunities (and limits) of a packaging design basically aiming at minimising its environmental impact.

Ecodesign and packaging

The expression “ecodesign” indicates a design activity whose aim is to connect what is “technically possible” with what is “ecologically necessary” in order to produce new socially and culturally acceptable suggestions.

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

1. ecological redesign of the present products (which, considering their life cycle as a whole, may improve their global efficiency in terms of material and energy consumption, and simplify their disposal or recycling).
2. design of new individual products or services replacing the present ones (which, considering the demand for performances, may detect new product and service ideas, ecologically more favourable than the currently offered ones).
3. proposition of new production and consumption scenarios corresponding to new lifestyles (contributing to the creation of new quality principles and to the modification of the nature of the demand for performances itself).

Considering each of these three action levels more closely and specifically referring to packaging, their different limit and opportunity systems are stressed. In particular, it appears that the major difference between both is in the role played by technical aspects versus socio-cultural aspects.

The ecological redesign of the present packaging actually involves merely technical actions and requires no change in lifestyles and consumption.

In this case, a reference to the social component, i.e. the market, can only make the ecological sensitivity pervading demand direct the purchase choice towards the most “ecological” product among a selection of similar products (at this level, solutions such as “environmental labels” may play a positive role in terms of information and, subsequently, in directing consumption). Its limit consists in its forcing ecological solutions into systems originally conceived and developed outside and beyond any environmental concern.

The design of new packaging solutions, replacing the present ones, requires partial modifications in consumption and lifestyles. Such modifications must therefore be socially accepted.

In this case technical and productive innovation may more freely aim at an environmental quality. Its limit consists in the difficulty of introducing ecologically valuable solutions into a cultural and behavioural picture that is still dominated by different values.

The suggestion of new production and consumption scenarios corresponding to new lifestyles requires the highest level of social acceptance. Moreover, it may only emerge from complex socio-cultural innovation dynamics, within which designers may play an outstanding but limited role (in the collection, interpretation, re-consideration and stimulation of socially produced ideas).

In this case the job is not so much to apply new specific technological or productive opportunities, as to introduce new quality criteria into the production, distribution and

consumption process. Such qualities should be environmentally sustainable, socially acceptable and culturally attractive at the same time.

Ecological re-design

Considering the present packaging system (set by a demand, a supply and a system of relationship of both), the problem is:

1. to eliminate highly toxic or harmful products (CFCs, inks with heavy metals, bleach, etc.)
2. to minimise the exploitation of matter and energy (wall thickness reduction, reduction in the weight of packs, increase in density of the products transported and stored – through a re-design of containers, etc.)
3. to use recycled materials (paper, cardboard, plastics, glass, and metals).

(In this field it is essential to develop research and application of recycling systems, and it is particularly important for products to be conceived in view of recycling at the onset – see following point)

4. to increase the potential recycling capacity through:
 - at the product's level, a chemical homogeneity of the materials used (manufacture of one-material products, e.g. in a bottle, check the chemical compatibility between the bottle itself, the cap and the label)
 - at the level of product classes, homogeneity of the materials used to manufacture all products belonging to the same class (e.g. manufacture all containers of liquids in the same material)

(In this field it is essential to develop research and application of chemically homogenous and multifunctional materials, e.g. the sandwich packaging for food products could be made of a single material).

Ecological design of new solutions

Modifying the present packaging system in response to current demand through different solutions (i.e., by modifying the supply-demand relationship system). The point is to reconsider the range of performances carried out by packaging today, and to express it differently.

This should occur at the following levels:

- product
- its logistics
- its communication and information capacity
- its easy use.

In particular:

1. at the product level: re-design it into a form requiring less packaging (ranging from the elimination of the need for protection, to the creation of “edible packaging”)
2. at a logistic level, introduction of secondary “returnable” containers
3. at a communication level, delegate to the shelf display the job of attracting the customer and supplying information about the product (thus the product's packaging may be more neutral)

4. at the level of easy use, supply “usage tools” designed for the product and allowing re-use.

By acting at these levels, the change required substantially effects the distribution system, which must play a more complex role.

New production and consumption scenarios

Modifying the present packaging system in the light of a wide re-definition of products and of the demand-supply relationship.

At this level the specific design action is only a part of a deeper change in the consumer’s culture (and in the subsequent behaviours).

In practice the problem is to set up a counter-trend opposite to the currently dominating one, which may be synthesised as follows:

- Passing from the trend towards a “product of increasingly simplified use” to a trend in which the product requires the consumer’s more aware and active participation.

Such transformation is difficult but by all means possible: a few signals and experiences are going this way, by asking the consumer to “take care of products” and do “a few more deeds”.

For example, in some cases products sold ready and packed have passed the floor to:

- products to be diluted and bottled at home
- products “spilled” from automatic dispensers in the quantity desired.

(The same field of experience obviously also includes the traditional issue of “returnable containers” vs. “disposable containers”).

Such measure may be pursued in a much wider sense.

Instructions for the project

Theme: Packaging, quality, environment

The project should provide solutions to the problem of food packaging considered as an environmental as well as a cultural problem:

- as an environmental problem in connection with energy and matter consumption and with waste production, if any.
- As a cultural problem in connection with the quality of the cultural acts and references involved in the domestic use of such products (in food preparation and table setting).

Intervention level

To develop project ideas at the third of the intervention levels indicated in the previous sections (New production and consumption scenarios).

This means that the focus of interest is not so much a particular packaging, as a system allowing to minimise packaging and maximise the quality of its use. (This also means that an optimal solution in terms of ecological packaging design may be the one involving its total elimination).

Starting point and design process

To start from a food product and its production, distribution, domestic preparation, consumption process, up to the disposal of the waste it creates.

To consider the present situation and stress its critical aspects (in environmental terms as well as in terms of cultural quality).

To figure out new solutions leading to reconsider the product itself and its production, distribution, domestic preparation and consumption system.

To emphasise the quality criteria it refers to.

To emphasise the environmental benefits it could allow.

Hints

Towards an alternative to “single-use containers”

Towards “concentrated” products to be “diluted” at the moment of use

Towards products to be “spilled” at the point of sale in the desired quantity

Towards a new generation of “returnable containers”

Towards the generation of “edible containers”

Towards a more active domesticity

Towards a packaging showing cultural and sensorial qualities.