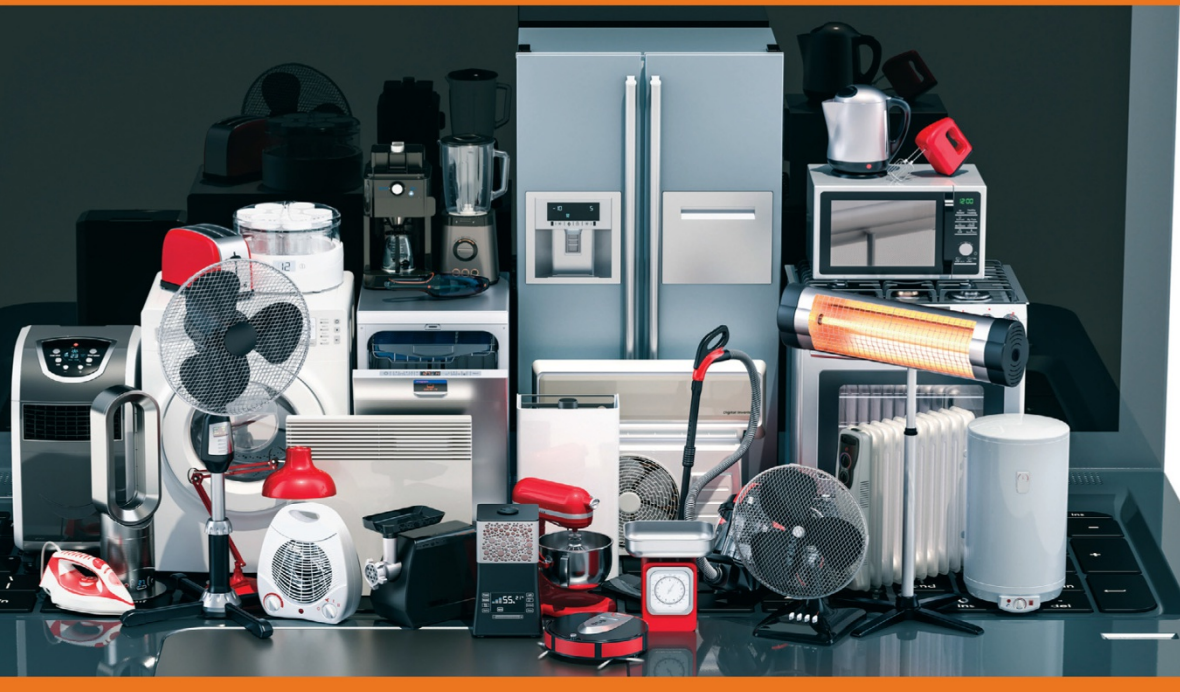
INNOVATION, ENTREPRENEURSHIP AND MANAGEMENT SERIES

Embarrassment of Product Choices 2

Towards a Society of Well-being

Michel Millot



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Preface

This book is not just about criticizing current information and the powers of disinformation (see Volume 1). Information on products (objects) should be designed, developed and organized. What is needed is to put in place a genuine system of information about products, allowing consumers to choose based on criteria such as qualities of use and effects on the environment. This is a job that requires a lot of effort and support. This book provides a certain methodology to follow, but, of course, it cannot provide any concrete and instant answers for the expectations of consumers. However, it does provide some templates for information sheets and recommendations made on the basis of analyses and usage tests, which are necessary and mandatory, with some of the "models" already having been carried out by the author and his team.

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Michel MILLOT
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Introduction

The So-called Consumer Society

"*The more I consume, the better I feel*": this is the main idea – often criticized – behind consumerism, portraying increases in consumption as an economic benefit for companies.

It means achieving happiness through the uncontrolled purchasing of products, without any awareness of the consequences, this may have on natural resources and the balance of the environment.

The term "consumer society" can be phrased more specifically as the *"industrial and commercial society of coerced consumption"*. It is a society that endlessly creates "needs", mostly artificially, to consume. Purchases are both the reasons to consume and ends in themselves. By being taken in by the temptations and lures generated by marketing, biting on the hook, exposed to the excitement generated by ad campaigns, consumer/users are rather fragile and vulnerable, lacking any real way to defend themselves.

It is not surprising that the use of gadgetry, mismanagement, waste, all the unnecessary products, luxury products, fashion and the vast swaths of "similar but different" products remain the engines of the so-called consumer society.

Consumption, with money as its king, makes it possible to distinguish oneself. In this system, economic agents believe themselves to be reasonable and to respond to a Cartesian logic. They assume that they have all the relevant information to make their choices. Modernization and new products must be organized quickly in order to expand production and spur more consumption.

For its part, the State also does its best to encourage consumers to purchase more! They are even required to throw out or put into storage any products that become obsolete and go shopping for the latest "fashions". The industrial-scale production of differences clearly defines this system of consumption.

The consumer society is an ideological lure, a trap set for chumps. Still, the criticisms of the system have a few holes in them. The considerable hubbub stirred up by advertising is generally accepted by the public. The objective of this society is to ensure corporate profits, but it ultimately pushes consumers away from their true personality.

Everything is done for this consumer society. Every wall is covered with posters and billboards. Messages appear and reappear on our screens, and then re-reappear again. Ads are slapped onto every last webpage. People can allegedly find their dreams in them. A good number of consumers are steered towards a "little bit of luxury", a certain level or comfort, with objects that will soon become connected to the Internet, or even autonomous cars with artificial intelligence!

The commercial world has given way to a system of overconsumption to make sure the "goose that lays the golden eggs" stays healthy. We are encouraged to always be consuming, from the time we are children. The economic system and the pursuit of profit now favors messages that center on the green economy, organic products, sustainability, responsibility, etc. But often, these are manipulations and illusions. The ingredients for social identities are obtained through consumption. A cell phone or watch model, the "style of our clothes" and interior decorations are all social indicators. The toys given to children for Christmas already partially begin conditioning certain parts of their personality. We are configured more by the consumer society than by our own selves. Consumers are not "free". Their ideas are replaced by preconceived opinions – and often quite stupid ones at that. They can even become unhappy because they are fighting for the things they cannot buy.

The economic crises have not slowed the pulse of the consumer society, which still holds an outsized economic influence. Its best days may still be ahead. But consumers, by becoming increasingly strapped for cash, will perhaps become more demanding and clever.

I.1. A few overused terms

When choosing or buying products, a lot of misunderstanding, inaccuracy, confusion and befuddlement arises primarily from problems related to vocabulary. The entire system of production–consumption speaks its own incomprehensible technical jargon, without specially adapted vocabulary, and which is moreover untranslatable in terms of actual requirements. It involves both the names of products or devices and their technical characteristics.

It is essential to accurately define the basic vocabulary of products in order to create a dictionary. The communication of product information, via marketing and technology, must be facilitated. The vocabulary of products and the gibberish used by the powers of misinformation suffer from a lack of consensus regarding the identification and definition of the very basic notions that they use. The verbiage that is produced forms an obstacle to more relevant information on the products.

I.2. Suitability for use

The idea of "suitability for use" must not be confused with "suitability standards", which refer to technical performance, on the one hand and performance of usage, on the other hand. The concept of suitability for use has a certain ambiguity, if we accept that the product may not be the best, or even satisfactory, for everyone. This is the case, to give a particular example, for different models of motorcycle helmets, for which the actual performance in terms of safety, comfort and convenience of use vary greatly for different individuals.

The ability of a product to be used is relative to certain conditions of use, the specific requirements and cases of the usage made by each type of user. Suitability for use is not an absolute quality, contrary to what may be suggested by certification or quality labels. In fact, this notion of suitability for use only provides the minimum level admissible for the expected service and safety of the product.

Above all, it considers aspects of technical design, the product as a "machine" that must operate or perform its essential function under certain conditions deemed to be "standard" (and standardized), without causing technical accidents. It involves more of a check of compliance with

standards of fitness and safety than an assessment of all the real qualities of use of the products.

Seen from the perspective of the consumer, the qualification of the suitability for use has no direct interest in the choice. Suitability for use is typically a technical concept for considering ordinary products. The suitability for use and the tests relating to it only refer, more or less implicitly, to the primary function of the product (such as washing clothes or vacuuming dust). The same is often the case for durability, reliability and quality control.

The types of performance considered for suitability for use are those that directly relate to technical features (i.e. the suction capability of a vacuum), that is, those which are most easily adapted to the traditional constraints of the measurements taken in the laboratory. In any case, acquiring the information for making the choice involves seeking out insights into the details of the additional functions and add-ons (e.g. ease of loading the laundry, cleaning the filter, the evacuation of the dust, the handheld vacuum cleaner, etc.), as well as the primary functions, through tests, methods for the analysis of usage and appropriate assessments.

I.3. Needs

The meaning of the term “needs” depends on its context. For product designers, in functional analysis, “needs” are expressed in the form of functions of use. They apply to the performance and requirements of the product that are able to be quantified. In terms of the use, evaluation and information on these products, this term is confusing and overused, and as such, it would be best to set it aside.

For marketing, the catch-all usage of the word “need” has finally found a commercial purpose. Marketing strategies tend to create an amalgam between needs, desires, necessities and usefulness. Moreover, as needs are progressively met, “new” ones must appear. This continually lucrative practice particularly favors the concerns for purported needs.

Needs are essentially subjective, since they depend on individuals and their social and economic environments. The “needs” of Western societies are not the same as those of nomadic tribes in parts of Africa!

Do we really "need" to have trains that travel at 500 km/h, rather than allow provincial users to move around more easily between two cities?

In terms of technology, "needs" may arise from a constraint, good functionality or an essential condition, among other things. However, it is pointless to try to categorize these needs, as is the case with analyses of technical value, such as classifying needs into sub-categories.

I.4. Design

This is an area that the general public (and even some companies) has little to no knowledge of, and the prejudices and misconceptions about it are many. The fact that the international media has settled on and promoted the use of the word "design" in its qualitative form (as an adjective) is symptomatic of the spirit of the market society that seeks to ignore the activity of design. The result is that the product that is for sale is easier to assimilate than the design activity!

The field of industrial design addresses the use and appearance of different products. This field is interested in the relationships between objects, users and their environments. It is not the fact that this activity is particularly involved in "forms" that make it an artistic activity, although it does not exclude the product's aesthetic components. However, it is not just concerned with an "industrial aesthetic", much less one of "decorative arts" or "applied art".

Design broadens people's outlooks on the principles of our industrial, commercial society, which is overly dominated by the imperatives of the market (possession). It focuses on products that are more user-friendly (well-being) leading to a certain quality of life (being).

I.5. Durability

Durability is simply the characteristic of that which lasts a long time. This is both a question of safety of operation and the technical ability to fulfill a given function of use in time.

I.6. Environment, eco-friendliness

Environmentalists are interested in the protection of the environment and human beings against all forms of pollution or destruction. They seek the conservation of natural resources and the preservation of natural ecosystems. By contrast, the claim that a product is "environmentally friendly" has no more meaning and content than that of classifying a product as "quality design" or "ergonomic".

Scientists cannot claim that organic foods are "better" for our health. Consumers/users do not have any information to demonstrate that the opposite is true. And in any case, this kind of food is not more nutritious than conventional food, and its sanitary conditions are not guaranteed. Organic products do not guarantee against an excess of fats, salts and especially sugars, and do not exclude the presence of gluten.

Marketing, keeping pace with the tastes of the day, now touts the benefits of organic farming, which is less industrial and therefore less polluting. For some products (items and furniture), it is also an issue of the respect for nature. It is, as always, yet another issue of financial profit! Consumers buy into these illusions, and request "organic" and supposedly natural products. Marketing tactics have repainted all products "green".

I.7. Ergonomics

Ergonomics focuses on "scientific knowledge used for the design of products and equipment, in order to improve the simplicity and comfort of their use" (Burandt 1978; Mc Cormick 1976; Paneiro 1979). Anthropometric data (data involving human dimensions and measurements) are the most accessible.

The manipulations, operations, commands and controls must be in a relationship with the capacity for understanding, the operating and sensory capacities of the users, as well as with cultural expectations.

The relevant factors are, for example, the directions of maneuvering, the directing and the sequences of commands, the auditory and/or visual controls, the evidence of the on-off positions or control functions, the visibility of the indications or the legibility of the markings, etc. Thinking about the "ergonomic criteria" in the selection of a product is used as a first

step, but one that still remains rare because it is difficult for customers to consider, both in the store as well as with tests done on the fly. This does not fit with the reality of the actual cases of use. This assessment is very often positive, whereas it should be critical.

Ergonomics is a term that is imprecise, and something of a buzzword, which only partially addresses the complexity of the factors to specifically be taken into account. These factors fall within the domain of industrial design, and therefore, that of the qualities of use.

I.8. Reliability

Reliability is the ability or the probability of a product to function, or to perform a technical function required of it, under a given period of time and conditions.

Reliability is associated with the failure rates of the products. It is probabilistic in nature, given that it requires the knowledge of the failure rates of each component. However, these failure rates are obtained on a low number of samples. Reliability is governed by the laws of statistics. It should not be confused with wear, since any finished product is bound to experience a failure as it ages.

It is an essential component of the safety of operation since it contributes to the availability of a product. Reliability is also related to the servicing and maintenance of a product. The use of the term “reliability” to describe the choice of the product appears to be done without discernment, without any proof and without the possibility for analysis, ultimately making it a bit deceptive.

I.9. Function

The concept of a function is overly general and merits a more rigorous approach while making a choice. By function, we mean “a characteristic action, among a set of actions performed to achieve a goal or meet a requirement” (Grenier 1978). Referring back to the information on the product, the functions may be distinguished by functional criteria which include:

– financial aspects (purchase price, costs of installation, maintenance, repair, usage costs, overall costs, etc.);

– ergonomic aspects (operations, manipulations, usage needs, etc.);

– nuisances (noise, smell, vibrations, gases, waste, etc.);

– services (quantitative and qualitative services, auxiliary services, education, etc.).

The functional complexity of an object is not limited to its instrumental role.

An object for everyday use is a means of action, because it is able to provide certain services to users in their living environments. For example, while the contents of a refrigerator do not form part of the device itself as a technical object, in practice, they are inseparable from the role the refrigerator plays as an everyday object.

The *essential function of use* of a product is a response to the question: what does the use of this object allow us to do? What do we get from it? What does it provide and what benefit does it give? This should not be confused with its technical and instrumental functionality (i.e. the instrument and the tools physically created under certain conditions of use). A function of use is *essential* if, and only if, its existence determines the existence of the type of commonplace object or system.

The functionality of usage is part of a system of values within which the objectively describable facts can be assessed.

In the case of the refrigerator, its everyday functions are to preserve certain perishable items, such as foods and pharmaceutical products, and to cool some of the substances or objects for specific uses, such as fresh or frozen drinks or desserts, dishes to be served, “refills” for coolers, ice cubes, etc.

From a functional point of view, the instrumental role that the objects are considered fit to play is the result of the convergence of their technical functions, on the one hand, and of the way they are used, on the other hand. The ultimate technical function of a refrigerator, for example, is to

refrigerate the air inside a storage area. This function is “objective” in the sense that it only depends on the object.

It should be noted that the common name of a product refers both to the role of the *instrument* as well as to the nature of the functional services that can be expected during its use. For example, a household vacuum cleaner is obviously of greater interest for removing dust than for sucking in air (whether or not that air contains dust). The functionality of the usage of a housecleaning robot is completely identical to that of mechanical or manual tools that provide the same types of service.

All of the usual features that respond to the question “what services does it provide?” arise from modes of use that are fundamentally linked to the “needs” and requirements of the users.

I.9.1. *Use functions*

I.9.1.1. *Essential functions and services (e.g. toilet seats in bathrooms)*

A toilet seat is not a commonplace object for which the instrumental features and useful features can be considered in isolation. It is a sub-system that is technically detachable, but is inseparable from the common usage of the toilet bowl where it is installed.

The functional services of use that can be analyzed are those of the overall system “seat + toilet bowl” and, obviously, the qualities of these services are very largely conditioned by the method of use of the toilet and the behavior patters of its users. A toilet seat is used mainly for sitting down and adopting the appropriate body postures for defecation, urination or other forms of waste discharge of a physiological nature (according to the acquired cultural habits or depending on the circumstances). But a person’s use of a toilet can also be the occasion for this person, in keeping with “natural tendencies” or the opportunities of the moment, to read, do crossword puzzles, do their nails, listen to the radio or music, reflect or simply sit and wait.

It is also important to note that some users prefer to perch directly on the rim of the seat, keeping a perfect state of cleanliness, without sitting and remaining suspended above the bowl, generally lifting themselves above the

seat for fear of coming into contact with contagious elements. In some cases when a device is attached to reduce the size of the opening of the seat, for use by very young children, the toilet seat retains all of its essential functions, even though the operative aspects or the availability of the seat in the current configuration may be modified.

A *complementary service function* must have a more or less close relationship with the existence, in space or time, of the essential service or services. In general, this is a prolongation or an extension of the possibilities offered by the instrumental functionality of the system.

If a function of use is not critical, and even if it is the result of the main instrumental function of the system, it is then seen as complementary. Some examples of this include the possibility of removing large debris and/or water with a household vacuum cleaner, or drying a baby's bottom with a hairdryer.

I.9.1.2. *An example of complementary service functions for a toilet seat lid (excerpts from study)*

When it includes a cover, the latter confers on the seat the instrumental function of a screen between the environment of the toilet and the inside of the bowl that is "topped" by the opening of the seat.

This lid allows the "problem area" of a toilet bowl to be hidden, and therefore hides it from sight, causes its presence to be forgotten, hides traces of it, negates a source of bad odors, prevents nearby objects from falling in and, in the opposite sense, potentially protects the surrounding area from spattering as a result of excess water during flushing. In the open position, the lid can also act as a shield for the splashing of urine or flushed water, protecting the front of the tank, as well as the wall and the overflow of flush water.

Based on its nature and configuration, the lid can be used to sit for any useful purpose (place shoes, put them on, care for one's feet, use tweezers, rest for a moment, etc.); rest one's hand to reach further; use as a stool to climb and reach higher; and temporarily place nearby objects (for household cleaning, toiletries, during the course of routine maintenance or during the occasional need for water or for products available on the site).

Some users may place a cover on the lid, made from textiles, often citing reasons such as comfort to the touch and visual appeal (thanks to its decorative nature, matching the decor its surroundings). However, it should be noted that, strictly speaking, this addition will not add any particular functions of use to the lid.

As additional functions, and without having any direct link to the roles that must necessarily be played by the seat or the cover, the lid of the toilet may serve as an intermediary for distributing deodorant products or bactericides, or to start and stop music playing on the radio, to weigh people (while sitting down), to attach usage instructions for the toilet, to establish the unique character of the location (decoration, mood) and to remotely control the operation of the flushing (by lowering the lid).

Of course, the usage functions of a toilet seat lid do not cover all of the biologically necessary activities related to the toilet that, for the purposes of analysis, may be divided into various activities or operations:

– restoration of the seat into usable conditions, if applicable;

– partial withdrawal, or the appropriate opening, of the relevant clothing;

– adoption of a given posture (sitting, squatting, half-squatting, bending suspension, standing with legs apart);

– establishment of the psycho-physiological conditions for expulsion (alternating relaxation and contraction of the sphincter, possibly involving mental concentration);

– generally discontinuous expulsion of feces or gases containing odors, urine or other waste products;

– wiping, draining or cleaning, if required (toilet paper, towels or cleaning pads, washing/drying devices);

– control of the evacuation and cleaning of the toilet bowl by the flushing of the water with additional cleaning if necessary (toilet cleaning brush);

– general return of the toilet to its initial state.

During the different phases of this process, which is not strictly sequential, complications or incidents may occur for which the “resolution” may be found to be of varying levels of ease:

– undesired dropping of objects in the toilet bowl, including sanitary pads, belts, contents of pockets, jewelry;

– expelled materials or water from flushes splashing on the buttocks or overflow on the seat;

– unpredicted dropping of suspended substances from the perineal area onto the seat or on clothing during wiping;

– uncontrolled urine jets on the seat and the "surroundings";

– children's buttocks becoming stuck in the opening of the seat;

– unexpected falls of unstable lids that either "cut off" the flow of urine, or fall on the penis and the hand of boys "trying" to urinate standing up, or on the buttocks of women bent over the bowl.

The additional functions should be taken to include the service functions that are generally of occasional interest, but without immediate connection with the essential usage features of the object. In some cases, the systems used must be equipped in a permanent or temporary manner with additional means that may allow other uses to be made, with or without any further processing. The functions of use determine the requirements and performance and, therefore, the qualities of use.

I.10. Quality

Talking about the quality of a product has no meaning in a strict sense. Quality is a blanket term, used baselessly in the commercial world. This term is ambiguous, used as a *quid pro quo*, and generally is more indicative of the market value than of the usage value.

The qualities, and not the "quality", of products have a very complex value. The subjective assessment made by the consumers/users or end-users differs from the effective qualities of products when they have actually been analyzed and tested.

The "quality" of the products is not the result of a vague judgment made at a glance, without requiring any special skills. It is only after the purchase that users will be able to form their assessment, some time after the initial encounter. This degree of satisfaction will bring into consideration both the

qualities and defects, which are of course objective; but, above all, mostly subjective, aesthetic and symbolic qualities.

Some consumers/users value the visual qualities of the product at the expense of its functional qualities that they still have not fully mastered. Others shun usage performance as a means of assessment, instead favoring respect for the environment or energy consumption, or even the idea of "made in France".

Qualities of use and environmental qualities can only be analyzed and tested in the most real use cases, by competent and experienced people, but without the necessary technical skills. It is necessary to provide more depth to the blanket term of quality, without merely sticking to the illusory criteria of technical performance, durability, feasibility, reliability or suitability for use.

It is commonly accepted that a product that sells well is a "good product". This fits well with the "production/consumption" logic of the economic system. This market value is tied to the market and, therefore, to the law of supply and demand, and to buyers.

The objective qualities of use are to be distinguished from the "perceived quality", and from the opinions of consumers, clients or users. The perceived scope and importance of the qualities of a product vary from one consumer to the other. Some value qualities of service, performance and use while others value ease of use and aesthetics, and still others value environmental quality. Therefore, there are no "average qualities". Compromises must be made by each of the customers according to their own requirements.

Hence, the way manufacturers produce products is essentially "blind". In this sense, the market acts at random, a risk both for manufacturers and for consumers. Arbitrary, unpredictable or unreasonable choices, made in a way that is perhaps too "free" due to a lack of information, come after the fact.

I.11. Use value

There is no one "use value" assigned to a product. There are as many as there are cases of use, and therefore types of users. In addition, a use value unfortunately cannot be characterized by a single number (percentage, ratio