# Sustainable consumption : a general framework for transition management

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*"A theory of consumption must account for periods of relative stasis in needs (and technology), as well as the times when consumption expanded impelled by new needs. The prevailing model is one of stasis (primitive precapitalist consumption) followed by rapid and infinite expansion under specific causes during the modern period. I argue instead for a model that recognizes 1) that consumption has diverse causes rather than being the product of a single historical event and 2) that consuming behaviour is always the result of balances between factors that promote, and those which inhibit or restrain perceived needs and wants (push and pull)." (Wilk, 1999).*

## 1 Introduction: consumption and sustainable development

The emergence and success of the idea of sustainable development cannot be explained except by a growing awareness of the fact that humankind as a whole is nowadays confronting the same problem the average household is facing most of the time: maintaining the right balance between its resources and the needs of its members. And, just like a household has a balanced budget if it ensures its needs correspond to its resources, a society is in equilibrium if its resource basis keeps up with the needs of its population. If for one reason or another, resources become scarcer whilst needs stay unchanged, or needs go on increasing (by population growth and/or changes in wants and desires) while resources stay unchanged, the equilibrium is broken and some needs are left unfulfilled, therefore creating frustration in the society at large and usually increasing inequalities, some groups being more able than others to sustain their own living standard in a context of general impoverishment. In such a case, the society has three and only three ways to come back to equilibrium and lessen the state of frustration and the widening of inequalities. They consist either in finding new additionals resources by extensification of the production basis, in intensifying the productivity of the resources (intensification) or in lowering the aspirations level of its population. Of course, in reality these strategies can be more or less mixed.

a) "Extensification" means the natural resource basis is enlarged by gaining control over more resources than before. This can be done by exploiting new territories (by war, imperialism) or by exploiting hitherto inaccessible resources. Throughout history, extensification has been the most usual way for societies meeting the limits of their resource base to solve their problem of imbalance between needs and resources.

b) Intensification: Intensification means that the natural resource base is more intensively exploited either by working more and harder or by using it more efficiently thanks to technological or

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organisational innovations, both kinds of innovations going frequently hand in hand. It is more or less the “ecological modernisation” solution.

The Neolithic revolution is the first and most impressive example of intensification ever seen insofar as it corresponds to a dramatic increase of production on unchanged portion of territory. The industrial revolution is a process of both extensification and intensification because it would not have been possible without the exploitation of the energy resources of the subsoil and was also from start expansionist (colonial conquests, imperialism) even if it is characterised by a dramatic development of technology and machinery[2].

The problem with the strategy of increasing resources is that it is inherently endless. Indeed, as long as new resources can be brought in to satisfy otherwise unleashed desires, needs keep on growing ever and ever until the system end up reaching some unavoidable and inescapable limits, throwing the system in a deep and pervasive crisis that can be put to end only by resorting to the alternative strategy, discussed now.

c) Lowering or displacing aspirations, i.e. dematerialising well-being. This alternative strategy consists in adapting needs to available resources, which amounts to dematerialising somewhat the prevailing conceptions of well-being and happiness. This means fostering immaterial values and emphasising spiritual and intellectual needs in spite of material ones.

It can be hypothesised that each solution is linked to the social pre-eminence of a different social class. Extensification is probably generally correlative of the domination of the military class, or in modern times to some kind of militaro-industrial complex. Intensification is likely  to give social supremacy to a technocracy of engineers and scientists together with a bureaucracy of managers (be it a state bureaucracy like in the so-called oriental despotism and modern times communism, or a private business bureaucracy like in contemporary capitalism). Lowering and substituting needs and aspirations needs some kind of “spiritual power” (Comte 1969) which is generally held by priests or in modern societies, their non-religious counterpart (intellectuals, psychoanalysts, pundits, etc.)…

Anyway, the on-going growth of population and the reaching of the limits of the earth as source of resources and environmental functions are such that the extensification solution to the imbalance between needs and resources is nowadays behind us. Remains only the intensification and needs control solutions. This is all what sustainable consumption is about.

Consumption can be defined as any activity involving the selection, purchase, use and disposition of goods and services by individuals and groups to meet one or several needs or aspirations[3]. At the most general level, all what fulfils needs and aspirations can be subsumed under the abstract, general category of *satisfiers* which are the “individual or collective forms of Being, Having, Doing and

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[2] As Veblen observed: “The efficient enlargement of industrial capacity has, of course, been due to a continued advance in technology, to a continued increase of the available natural resources, and to a continued increase in population”. For a discussion of the Neolithic and the industrial revolutions as the two main break lines in human economic history, see P. Bairoch (1997).*Victoires et déboires. Histoire économique et sociale du monde du XVIème siècle à nos jours.* Tome I, Gallimard.

[3] The definition is a synthesis of Common and Stagl’s (2005: 90) definition of consumption as “the use by human individuals of goods and services to satisfy some of their needs and wants. ‘Goods and services’ are often referred to as ‘commodities…’” and Campbell’s (1995:104) one as “any activity involving the selection, purchase, use, maintenance, repair and disposition of any product or service”. Note that we have discarded “maintenance” and “repair” activities from Campbell’s definition because they pertain much more to production than to consumption, even if for many goods the costs of maintenance and repair are supported by the consumer and not by the producer or the retailer.

Interacting" (Max-Neef 1992:30) whereby an individual or a group actualizes and satisfies its needs. Satisfiers refer to the whole class of material and cultural artefacts and institutional arrangements by which needs are satisfied, of which goods and services are only part. It follows that consumption is the satisfaction of needs or wants by means of goods and services. What is unclear is if the concept of consumption should be restricted to market-based, commercialized goods ("Commodities") and services or if it encompasses also non-commodities such as home-made goods and non-commercial services. In the latter case, consumption would refer only to non-public goods and services, i.e. those whose consumption by one agent reduce consumption by others (rivalry) and of the consumption of which it is possible to be excluded (excludability).

Consumption is crucial for sustainable development simply because it is crucial for people's well-being and flourishing. Indeed, the final objective of sustainable development is to secure opportunities of well-being for all humans whatever their precise time and space location. Well-being, in turn, can be defined as the adequate[4] satisfaction of human needs and aspirations, notably by way of consuming. Therefore, the ultimate concern of sustainability is to ensure adequate consumption for future generations. But, as Agenda 21 put it: "the major cause of the continued deterioration of the global environment is the unsustainable pattern of consumption and production, particularly in industrialised countries". Yet, it gives no definition of the notion of "pattern of consumption" nor of sustainable consumption. The latter came two years later in 1994 at the Oslo symposium where sustainable consumption was defined as: "the use of goods and services that respond to basic needs and bring a better quality of life, while minimising the use of natural resources, toxic materials and emissions of waste and pollutants over the life cycle, so as not to jeopardise the needs of future generations." The link with the ordinary concept of consumption as economic activity came four years later, in 1998 at a workshop on "Consumption in a sustainable world" organised also in Norway by the International Institute for Environment and Development and where it was claimed that "the focus of sustainable consumption is on the economic activity of choosing, using and disposing of goods and services and how this can be changed to bring social and environmental benefit". (Jackson 2006: 5).

## 2 Towards consumption efficiency: a decomposition analysis

To be sustainable, development must be as efficient as possible in its use of scarce, costly and/or non-reproducible resources. Sustainability could thus be measured by an indicator of productivity of valuable resources (or of material efficiency) in the well-being production process. Nørgärd (2006) has recently provided a useful formulation of this in the consumption domain. Nørgärd decomposes what he calls "overall-efficiency" as the interplay of 4 "local" efficiencies: satisfaction efficiency, service efficiency, maintenance efficiency and throughput efficiency. The overall efficiency ratio between the final output (satisfaction) and the primary input ("eco-sacrifice") is thus disaggregated in a succession of interrelated intermediary ratios, as follows:

**Overall-Efficiency = Satisfaction/ Eco-sacrifice**

**= Satisfaction/Service * Service/Stock * Stock/Throughput * Throughput/Eco-sacrifice**

The formula is best understood by starting from the last ratio, the **Throughput/Eco-sacrifice** ratio or "throughput efficiency" which expresses the productivity of the production process with respect to environmental resources. Then comes what Nørgärd calls the "maintenance efficiency" which refers to the durability, reparability, etc. of the stock of goods. The **Stock/Throughput** ratio is the converse of the goods replacement rate, i.e. the number of new goods entering the stock with respect to the size of the existing stock. The "service efficiency" refers to the number of services provided by a given stock

4 Adequate, i.e. neither insufficient nor excessive.

of goods. This has mainly to do with the way the goods are appropriated and used. For instance, the **Service/Stock** ratio is higher for a taxi than for an individual car, because the former is used the whole day long by many customers, while the latter is most often used only twice a day by one customer only. Finally, the “satisfaction efficiency” refers to the satisfaction brought by the service. For instance, in the current traffic conditions in town, the mobility service brought by the individual car is less and less satisfying. As Nørgärd (2006, 18) observes:

“The reason for adding satisfaction efficiency … is that in the affluent part of the world, *marginal* satisfaction of increasing services from the market seems to be very low and declining, maybe even below zero.”

Nørgärd’s analysis of consumption efficiency shows how limited and partial are public and business policies that focus exclusively on the throughput efficiency ratio by aiming only at *decreasing the mass of materials in new products*. This is only one part, and perhaps not the most important one, of the answer to the issue of sustainability of our production and consumption patterns. However it is probably the easiest to put at work in a capitalist and technology-driven economy (and culture) because it doesn’t challenge their fundamental growth and production orientation. Actually, the more you go from the right of the formula to the left, the more you move away from what is taken-for-granted in our industrial societies and the more you bring into question their deepest and unconscious cultural underpinnings. Indeed, going one step further than the eco-efficiency or “decoupling” policy, a more demanding ecological modernization approach would act also upon the “Stock/Throughput” ratio by encouraging more durable goods and struggling against the “planned obsolescence” of many so-called “durable” goods. This means (Geiser 2001) extending the useful life of multi-uses products[5], designing products for upgrading and adaptation but also for reconditioning and remanufacture and for repair and reuse.

Service efficiency expresses the rate of services acquired from the consumer’s stock of goods (durable and non-durable). One effective way to increase service efficiency is to substitute services for goods in final consumption, like in the above mentioned example of the taxi vs. the individual car. Another strategy in this respect is to foster the sharing of products, as for instance in car sharing. More generally, where the use pattern of a product involves long periods of disuse or the acquisition costs are high, products may be shared among multiple users. Examples are numerous (Geiser 2001, 324): ladders, lawnmowers, washing and drying machines in residential areas; tool and equipment rental stores allowing customers to share the services of hardware and avoid individual purchases; video rental stores giving customers a wide choice of films by sharing the services provided by the individual DVD machines, etc.

Finally, the satisfaction/service ratio expresses the fact that the ultimate goal of consumption is well-being, happiness or needs satisfaction. Clearly, some satisfiers are more efficient than others in bringing satisfaction, or well-being.

Actually, Nørgärd’s analysis – which is itself based on an equation proposed by Daly (1991) – is close in its inspiration to Common’s (2007) suggestion of assessing sustainable development as the ratio between well-being and environmental pressure. More precisely, he proposed to use as indicator of sustainable development the following ratio:

$$\mathbf{S_{it} = WB_{it} / GHG_{it}}$$

Where:

[5] On the contrary, one-use products are those that are totally exhausted (except for wastes and pollutions) in the act of consuming, like food, fuel, drugs, etc.

- $S_{it}$ : the sustainability of country *i* at time *t*
- $WB_{it}$ = the level of well-being in country *i* at time *t;*
- $GHG_{it}$ = Green House gas emissions of country *i* at time *t*.

As indicator of well-being, Common uses the product of life expectancy at birth with the reported level of subjective well-being of the population. We will not discuss here this interesting (but debatable) idea and leave open for the moment the problem of measuring and evaluating well-being. On the other hand, we prefer to use the general idea of "Ecological Footprint" (without necessarily endorsing the way it is currently measured and used) as indicator of environmental pressure rather than the more limited GHG. We propose therefore to start with the following formula, where EF for "Ecological Footprint" replaces "GHG" and the subscripts have been dropped:

$$\mathbf{S = WB/EF \quad (1)}$$

Following Nørgärd's approach (and long before him, Kaya's decomposition in the climate change context), formula 1 unfolds as:

$$\mathbf{S = (WB/C) * (C/EF) \qquad (2)}$$

Where **C** = Commodities. **(WB/C)** refers to the productivity of commodities in terms of well-being and **(C/EF)** to the intensity of commodities in natural resources.

Formula (2) shows that sustainability can be improved by increasing **(WB/C),** by increasing **(C/EF)** or both, that is by decreasing the intensity[6] in commodities of well-being, by decreasing the intensity in resources of commodities or both.

Things can be disaggregated further. The term **(WB/C)** can be expressed as:

$$\mathbf{(WB/Se) * (Se/C)}$$

**"Se"** refers to the notion of service as used by Nørgärd (like in the context of energy and not as used in the national accounting context). Indeed, what matters for the energy consumer is not energy as such (Kw/h) but the lighting, mechanical power, etc. brought by energy. Likewise, what matters for the user of a TV-set is not the TV-set as a thing but the services it provides in terms of TV-programs, etc. One way to define the notion of service in a need-satisfier framework is to define it as the interface between the satisfier and the need or as the "satisfying virtue" of the satisfier.

**WB/Se** stands for the productivity of the services in terms of well-being and (Se/C) for "consumption efficiency", the productivity of commodities in producing services**.** The full formula then becomes:

$$\mathbf{S = (WB/Se) * (Se/C) * (C/EF) \qquad (3)}$$

Formula 3 shows that there are three "pure" strategies to enhance sustainability:

1. Increasing the (WB/Se) ratio by decreasing Se while maintaining or increasing WB. This amounts to partly disconnecting well-being from services. It could be called the *de-materialization* of needs satisfaction strategy.

[6] The intensity in resource R of a production P is the inverse of the productivity of the resource R in production P. In others words productivity is measured by the ratio P/R and intensity by the ratio R/P. The more productivity, the less intensity and vice versa.

2. Increasing the ratio (Se/C) by decreasing C. It could be called the *de-commoditization* (of needs satisfaction) strategy. We will refer to it later as "modal shift" in modes of provision strategy.
3. Increasing the (C/EF) ratio by decreasing EF[7.] This strategy aims at decreasing the energy and materials content of consumption. It is what ecological modernization is all about with its well-known motto of "Factor 4", a 75% reduction in natural resources uses of consumption. We will not develop this strategy anymore because it is already well-known in the sustainable development community.

An effective transition to sustainable consumption will be a mixed strategy acting on the three ratios identified here above. This means that innovations cannot be restricted to technology and, more importantly, that it is certainly illusory and probably counter-productive to rely too much on market forces and technological innovation as the ecological modernization, "market transformation" and "transition management" approaches do[8]. Innovations and changes will have to take place at three different levels:

- at the technological level where products and services with a lighter ecological footprint must take the place of less eco-efficient ones;
- at the institutional level where non-market based modes of provision should be promoted alongside marked-based ones;
- At the cultural level where less materialistic values and lifestyles should be developed and fostered without loss in welfare for people.

This means that the so-called "transition management" approach as it is usually conceived is insufficient. Indeed, the "transition management" discourse relies heavily on technological innovations and market forces for driving modern capitalist societies on a more sustainable development path. In other words, it remains prisoner of the "ecological modernization" approach that many such as Jalas (2006) or York and Rosa (2003) hold fundamentally technocratic and conservative, and that according to Smith and Kern (2007) transition management has failed to "reinvigorate and radicalise". On the other hand, there is growing scepticism about the capability of the ecological modernization approach to make sustainable development happen. Many scholars are convinced that the transition to sustainable patterns of consumption will need much wider and deeper transformations than what the advocates of ecological modernization are ready to consider. Jackson (2005:1) for example maintains that sustainable development needs lifestyles changes that are not reducible to improvements in resource efficiency: "There is an emerging realization that efficiency improvements cannot, by themselves, achieve the kind of 'deep' environmental targets demanded (for example) by the Government's climate change programme. Attention must also be focussed on the scale and pattern of consumption. This task, in its turn, involves policy-makers in the need to understand and to influence consumer attitudes, behaviours and lifestyles".

Or, as Lintott (2007:42) puts it "...it is not enough to improve the efficiency of production in order to achieve more consumption for less ecological damage; it is necessary to improve efficiency of consumption so as to achieve more welfare for less consumption. And it is necessary to end consumerism, and not merely to reduce the ecological impact associated with a particular level or pattern of consumption".

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[7] Note that Nørgård's last two ratios are aggregated in our (C/EF) formulation. This means that we don't make a distinction between Nørgård's maintenance efficiency and throughput efficiency.

[8] See Jalas (…for example : "Mere efficiency engineering is a naive solution to the environmental problems of production and consumption, and hardly promoted as such").

Likewise, Shove who seems sometimes to endorse the "transition management" approach states the point very clearly: "Environmental policies that do not challenge the status quo – in terms of division of labour, resources and time, or social and cultural representations of the good life – have the perverse effect of legitimising ultimately unsustainable consumption patterns of consumption." (Shove, 2004:116).

## 3 A three-tiers framework

In order to act effectively on the three ratios identified here above, consumption policies should be based on a correct understanding of the complexity of consumption and, in particular, of its multi-level structure.

Consuming like many other behaviours can be apprehended at several levels of social reality. More precisely, one can distinguish (Desjeux 2006)

- A macro (socio-cultural) level where consumption is referred to the general cultural values, norms and meanings characteristics of whole societies or civilizations as analysed by anthropology, history and macro-sociology
- A meso (technico-institutional) level where consumption is analysed in terms of systems of provisions (Fine and Leopold 1993) or modes of provision (Gershuny 1983) that can be defined as regular patterns of interactions actors-actors and actors-objects (commodities, techniques…) in different institutional settings such as markets, communities and families. It is mostly at this level that macro-economists and sociologists consider consumption.
- A micro (psycho-socio) individual level where consumption is analysed in terms of cognition, motivations, emotions, experiences, etc. Psychology, consumer research and micro-economics are here at home.

The three levels and their interactions are presented graphically in figure 1 below.

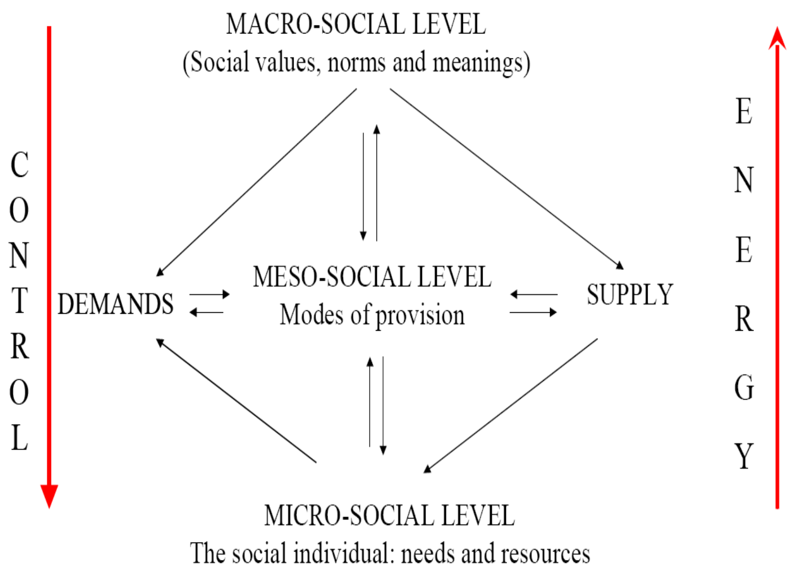


Figure 1.A multi-level framework for consumption analysis and scenarios

One find at the bottom, the individual as an actor motivated by needs and aspirations originating in his/her genetic and cultural heritage and the psychological dispositions coming from her/his primary education[9]. It follows that basic fundamental needs vary in intensity and salience from individual to individual according firstly to their specific genetic and psychological heritage and, secondly, to their age and the physical and mental state that result form their personal history[10]. The “energy” fuelling the individual will be different and leading to different aspirations and motivations. On the other hand, these aspirations and motivations are always sifted, “translated” and channelled by institutions and culture which vary from era to era and from society to society. More precisely, aspirations are moulded by cultural norms, beliefs and values that shape them as specific demands for (access to) socially and institutionally controlled resources.

Indeed, in order to be satisfied, needs must be changed in legitimate ***demands*** for what society in general considers adequate satisfiers (goods and/or services). On the other hand, demands are nothing else than claims on some share of socially controlled resources. The share of social resources accessible to any individual depends on the structure and quantity of **entitlements** s(he) is endowed with. The concept of entitlement has been forged by Sen (1981) in the context of his theory of famines. Indeed, Sen argued (quite convincingly) that far from resulting automatically from a decline in food *availability*, almost all famines result from a decline in *accessibility* of food for specific social groups or large portions of population due to a loss of their entitlements, that is their (socially legitimate) ability to command (i.e. purchase, command, receive or borrow) food. Thus, entitlements consists of assets, income, power, rights and claims for solidarity. Taking into account the fundamental importance of reciprocity (Gouldner 1960) as underlying principle of justice and sociability, entitlements are always regulated by some kind of reciprocity (direct or indirect, immediate or differed, more or less strictly balanced or not). As will be seen later, institutions differ mostly by the kind of reciprocity they enact.

The interplay between the three levels can be illustrated with the example of food. Nutrition is of course a stringent biological requirement at the individual level and one of the main driving factors of human behaviour. It is associated with numerous physiological and psychological processes and the way it is satisfied (quantitatively as well as qualitatively) is of the utmost importance for objective health (allergies, cancers[11], heart diseases, etc.). On the other hand, nutritional requirements vary according to age, gender, personal circumstances (pregnancy, breast feeding, illness), and activity.

Despite – or, perhaps, precisely because of – these deep biological determinations, the way the need for nutrition is satisfied in every society, is through and through culturally and socially framed by norms, values, meanings and symbols which stipulate what can be ate, how, where, by and with whom, when (season of the year, during feast or on daily basis, at what hour of the day…), in what circumstances. For example, in every known society there exist irrepressible disgusts for one or another otherwise eligible animal, disgusts linked explicitly or implicitly to what anthropologists call

[9]The immaturity of the baby at birth – compared to superior mammals – and the length of its dependency to adults that ensues has deep implications for the structuring of the adult personality and behaviour.

[10] It follows that a society where only 5% of the population is more than 65 years old cannot be identical with respect to individual needs to a society where this proportion amounts to 30%.

[11] According to Cummings and Binhgam (1998), up to 80% of bowel and breast cancers are preventable by dietary change. Diet is also responsible of many lung, prostate, stomach, oesophagus and pancreatic cancers.

a “taboo”.[12] Another example of the social and cultural framing of nutrition is the importance of food sharing in human societies.[13]

This translates, at the meso-social level, into various institutionalised practices turning around the acquisition, the preparation and the eating of food. Despite important differences in the institutional setting of nutrition across societies, it is almost always in the family context that food is prepared, shared and eaten. However, food and the sharing of meal play also a fundamental role in friendship, community relations (think for example at the importance of the communion in Christian religion), professional and political meetings, etc. This means that, except in very infrequent circumstances (starvation), eating corresponds to much more than the sole satisfaction of hunger (nutritional need). It is associated with the fulfilment of others needs: identity, status, security, social interactions (meals are usually taken in common, with family members, relatives, friends, etc.), communication and information (conversation is an important component of the pleasure of the meal), etc.

As Fine and Leopold (1993) put it ‘‘(human) food is not fodder; humans do not feed…it is apparent that what is consumed is not obviously determined by physiological or biological needs. Psychological needs also play a role’’. In short, if the need for food is basically biological, it is also psychological and its expression and satisfaction is framed and channelled by the cultural and social institutions in which the individual is immersed with the results that it is almost always intertwined with many other (psychological and social) needs.

So, one can conceive of the three hierarchical level as irrigated by two opposite flows: one flowing from the lowest to the highest level and carrying the energy (motivation) arising from the individual wants to satisfy their needs, another one flowing from the highest level towards the lowest and carrying the information shaping the social and cultural conditions of “legitimate “needs satisfaction[14].

## 3.1 The micro-level: a needs theory of the consumer

The currently dominant (at least in the first world) un-sustainable patterns of consumption have been, for long, supported and legitimised by the utilitarian, neo-classical model of the “sovereign” (free from any social influence) maximising consumer with limited resources but unlimited desires and wants. On the other hand, many contemporary anthropologists and sociologists advocate a vision of the consumer immersed in an immaterial world of communication and of consumption as first and foremost a manipulation of symbols and meanings almost totally devoid (or oblivious) of material constraints and functions. Douglas and Isherwood (1979: 40-1) have given a particularly provocative expression of this kind of approach when writing: “If it is said that the essential function of language is its capacity for poetry, we shall assume that the essential function of consumption is its capacity to make sense… Forget that commodities are good for eating, clothing, and shelter; forget their usefulness and try instead the idea that commodities are good for thinking; treat them as a nonverbal medium for the human creative faculty." Despite its apparent (blatant?) absurdity, this position has

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[12] See Simoons (1994) for an analysis of taboos on the consumption of pork, beef, chicken and eggs, horseflesh, camel, dog and fish.

[13] « Humans share food unlike any organisms do. Many other animals, including eusocial insects (bees, ants, termites); social carnivores (lions, wolves, wild dogs); some species of birds (e.g., ravens) and vampire bats actively share food. However, the patterning and complexity of food sharing among humans is truly unique.” (Kaplan and Gurven, 2005, p.75)?

[14]This idea is borrowed from T. Parsons (1951) who uses it in a slightly different context.

inspired an enormous number of researches and studies in the sociology of consumption. As Warde (1997) noted at the very beginning of his book on food consumption in Great-Britain:

"This book arose from dismay about shifting fashions in sociology. A decade or more of analysis, founded in political economy and developing a materialist perspective on social life, seemed suddenly to be abandoned for a mode of studying culture which operated with wholly antithetical assumptions, according signs, discourses and mental constructs an exclusive role in understanding social activity… My ultimate theoretical concern is to reconcile the achievements of materialist and cultural analysis, which here takes the form of seeking to understand systematically the interrelationships between processes of economic production and patterns of consumption. Currently, the main barrier to this endeavour is the inadequacy and inconsistency of accounts of consumption."

Amazingly, the visions of the neo-classical economists and the one of these "post-moderns" anthropologists and sociologists converge in their denial of any relevance of needs theory in explaining (and more importantly controlling) consumption. But the concept of need is crucial in sustainable development. Admittedly, it is far from being uncontroversial. Briefly, they are two possible uses of the need concept; as en end or as a mean; as a noun or as a verb. In the sentence "A needs X", X is a verb and is to be understood as a mean for reaching an unspecified and implicit goal. In its full formulation it would read "A needs X in order to Y". Example: "A needs a drug (X) in order to cure her illness (Y)". But, in Brundtland's definition as well as in the need theories of Maslow, Max-Neef, Galtung and many others, need is a noun and refers to a goal. It would be written "X is a need of A". "Self-esteem", "security", "love", or "participation" are examples of needs as goals. However, the fact that if left unsatisfied, people are likely to endure some ill-being suggests that even in their substantial sense needs might be considered as means for the overarching goal of well-being. Therefore, it is probably sensible to consider them as constituents of well-being, as "what-is-to-be-satisfied" in order for man to flourish or to reach a satisfactory level of well-being[15].

We need alternative, more realistic, models of individual behaviour than the "insatiable" consumer model of neo-classical economists or of post-moderns sociologists. Amongst the different possibilities (for a review see van den Bergh, Ferre-i-Carbonell, Munda 2000), post-Keynesian consumer theory offers a sensible needs-based alternative. This model takes its roots in the writings of post-keynesian economists like Joan Robinson, Luigi Pasinetti, and some others. Post-Keynesian consumer theory puts forward 6 basic principles (Lavoie 2004):

1. The principle of procedural rationality. Contrary to neo-classical economics, post-keynesian micro-economics discards the "substantial rationality" assumption and endorses the "satisfycing" or procedural rationality framework. The latter emphasises the uses of "rule of thumb" by real economics agents (including the consumers) in decision-making.

2. The principle of satiable needs. This principle is compatible with the decreasing marginal utility assumption of neo-classical economics but only after a certain threshold has been reached in the satisfaction of the need. It has as consequence that, whatever the change in prices, no additional unit of a good is purchased if the consumer has already reached the satiation threshold. Another consequence is the acknowledgement of a hierarchy of needs: some needs are more basic than others and will be fulfilled in priority. Also, some are more easily and quickly satiated than others. This approach makes room also for a distinction between wants and needs (Lutz and Luz 1988): wants evolve from needs; they constitute various preferences within a common category or level of needs.

[15] For a thorough and illuminating discussion on these questions see Jackson, Jager and Stagl (2004).

3. The principle of separability of needs. Needs (and expenditures) are clustered in categories. This means the consumer makes first an allocation of her/his budget among needs or categories of commodities and then spends that allocation among the various wants or subgroups of each needs, independently of what happens to other needs. There will be no substitution between categories or needs but only inside subgroups. On the other hand, a change in the overall price of a group of goods corresponding to a given need will have repercussions on the budget allocation of all needs. For example, a general increase in food prices will induce consumers to re-allocate their budget between food, housing, clothes, leisure, etc. expenditures. On the contrary, a change in the relative prices of some foods will trigger substitutions but only inside the food category.

4. The principle of subordination of needs. There is a hierarchy in needs, at least there is a distinction between necessities (necessary needs) and discretionary ones. According to the principle of separability and to the principle of subordination, households allocate first their budget between necessities and discretionary needs. Actually, "all the previous principles culminate in the hierarchy of needs: needs are separable and the most basic needs are first taken care of in their order of priority, until they are satiated at some threshold level."(Lavoie 2004, p.645).

5. The growth of needs. A consequence of the subordination of needs, when a need has been fulfilled up to a satisfying threshold, households start attending to the next upward need in the needs hierarchy, at least if enough income is left after providing for inferior needs. It follows that any growth of income leads to a growth of needs. Therefore, the fulfilment of new needs and the purchase of new goods or services are related to income effects and income effects are much more important than relative prices ones in the evolution of consumption.

6. The non-independence principle. Contrary to the standard assumption of neo-classical economics, consumers' preferences and behaviours are non independent one from another. Consumers imitate each other, learn from each other or want to distinguish themselves. Most of all, their decisions are influenced by commercials and other marketing practices.

These principles make sense and most of them are corroborated by empirical research, be it experimental or observational. In particular, the assumption of lexicographic preferences that underpins all of them (with the exception of principle 6) is consistent with many empirical findings, notably in environmental issues (Spash and Hanley 1995). Look, for example, at the evolution of households expenditures in France between 1960 and 2000 (Langlois 2005). Predictions form the post-Keynesian consumer theory are corroborated for categories such as food whose share in total expenditures decreased steadily from 23,2% in 1960 to 11,4% in 2000, or for clothes whose share decreased from 9,7% to 4,0%. Likewise, the expenditures on leisure and communications behave as predicted, that is increased steadily during the period. But the evolution of expenditures on housing, which everyone would consider a basic need, increased from 10,7% of total budget in 1960 to 19,1% in 2000 (it almost doubled) and private health related expenditures grew from 1,5% to 2,9%. In 1960, the three principal expenditures where firstly on food (23,2%), secondly on housing (10,7%) and thirdly, on clothes (9,7%). In 2000 the figures are: housing (19,1%), transport (12,2%) and food (11,4%). The changes that occurred might be the result of changes in the relative prices of the different categories of satisfiers of basic needs. In USA also, Segal (1998) observed a rise in the share of housing and transportation and a fall in food and clothing expenditures, in American household budget between 1970 and 1994. These changes are clearly related to corresponding variations in prices. For instance, the median sales prices for existing homes in USA rose from $23.000 in 1970 to $109.800 in 1994, adjusted for inflation. After having looked similarly at the evolution of prices for other "basic needs" satisfiers such as food, clothing, education, health care, transportation, etc., Segal concludes:

"Yes, over the years Americans have increased consumption expenditures considerably. Much of this increase in household expenditure has gone to meet fundamental needs, either because needs were previously unmet or because in real terms the cost of meeting these needs has increased dramatically. What emerges is a quite different picture than that commonly portrayed with respect to our affluent society. For most Americans the subjective experience that they always need more money than they have is not to be explained by inflation in their appetites or their standards of decency ("I must have more square feet, a newer car, better furniture, new gadgets") but rather, by socioeconomic conditions that have resulted in unmet needs or in increased cost of meeting long-existing needs. This is true of housing, transportation, education and income security." (Segal, 1998, p.192). In short, according to Segal, it is the Need-Required Income" (NRI) that has raised not the consumers' wants or desires. It is to be noted that part of this increase in NRI comes from the shift from a one-career model of family to a two-careers model which created new needs (a second car, day-caring of children, etc.).

To conclude, the post-Keynesian model seems quite plausible but it is probably incomplete and the principles of subordination and separation of needs might be too crude as they don't take into account the differences in quality of goods. On the other hand, it overlooks the importance of psychological and social needs in consumption and their association with material needs in most consuming activities.

There is another explanation of the trend of rising consumption: it would be that people have to satisfy more wants than necessary otherwise, because their wants don't fit their real (objective) needs. Figure 2 portrays the general relation between wants and needs. It shows how real objective wants might be left unsatisfied while un-needed wants might be fulfilled.

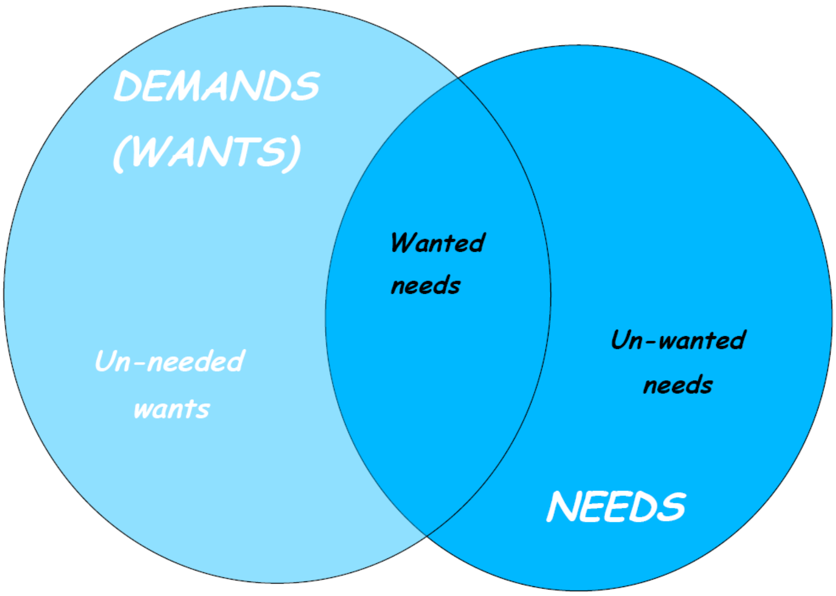


Figure 2. General relations between needs and wants (adapted from Gasper 2004:11.).

This explanation would support Max-Neefs' observation that not all "satisfiers" are equally efficient in fulfilling needs and that some can even be considered as destructive of satisfaction. In general, he argued that satisfiers could be classified as:

- Destroyers: satisfiers which, while intended to satisfy a need, make the very satisfaction of this need (and usually some others as well) impossible. Max-Neef gives the example of the arms race as destroyer of the need for security.

- Pseudo-satisfiers: elements that generate a false sense of satisfaction of a given need. Examples given by Max-Neef are: mechanistic medicine (protection), exploitation of natural resources (subsistence), chauvinistic nationalism (identity), etc.

- Inhibiting: satisfiers that by oversatisfying a specific need hamper the possibility of satisfying other needs. As examples, Max-Neef mentions the overprotective family which by oversatisfying protection curtails the fulfilment of other needs such as identity, freedom, etc.

- Singular: satisfier specialised in the satisfaction of a particular need and neutral with respect to others. According to Max-Neef (1992: 34) "They are characteristics of plans and programs of assistance, cooperation and development".

- Synergic: satisfiers that satisfy a given need whilst stimulating and contributing to the fulfilment of other needs.

- Exogeneous or endogeneous.

This explanation is supported by Kasser and Ryan (1993) findings on the relation between the pursuit of material values and goals and a feeling of insecurity. Amongst other interesting findings, they showed, for instance, that teenagers whose parents had a less-nurturing parental behaviour were more likely to express materialistic values (Kasser 2002). Parental divorce increases also the probability of adopting more materialist goals. Researches conducted by Inglehart and his associates on differences in value orientations between whole nations seem to confirm this link between materialism and insecurity. Inglehart hypothesised two basic families of values characterizing Western societies: Materialist values, respecting the need for physical or economic security, and Postmaterialist values, transcending these immediate physical or economic needs (e.g., aspiring to greater democratization and involvement of people in the political process). Using this taxonomy, Inglehart has accumulated a body of findings (that are based on surveys of thousands of participants in more than 60 countries, including most countries of Europe and North America) that suggests that Western societies have become increasingly Postmaterialist in their orientation since the second World War (e.g., Inglehart, 1981). Their comparison of different cultures and nations led them to conclude that materialism is especially valued by a) the older cohorts of western Europeans who experienced substantial economic and national insecurity in their youth; b) people surveyed during periods of high economic inflation and c) people in poorer nations. He argued that improvements in the standard of living since the two world wars have led to decreased anxiety over basic survival needs (regular meals, a roof over one's head, etc.) and that, as a result, people who have never experienced material scarcity are turning towards Postmaterialist concerns (Inglehart and Abramson 1994).

To sum up: "…materialistic values are both a symptom of an underlying insecurity and a coping strategy taken on in attempt to alleviate problems and satisfy needs…The problem is that materialistic values are rather poor coping strategy…Negative associations between materialistic values and well-being certainly suggest that such a coping strategy is not especially useful in alleviating people's problems" (Kasser 2002:42).

On the other hand, the history of consumption can be read as a slow but never-ending transformation of wants into needs, that is of un-needed wants into wanted needs. This process can well be correlative of a parallel downshifting of previously wanted needs into un-needed wants or even in un-wanted needs in which case it would induce some loss in objective well-being. As Wilk observes, these transformations have been overlooked by social scientists so far.

"While generations of social scientists have remarked on the ratchet-like way that wants gradually become emplaced as needs, they have given the process little serious empirical study (though see Sanne 1995). Instead they focus on the way that new wants are generated and cultivated in a marketplace through advertising, spectacle, and mass media, as a consequence of modernity. Therefore they miss the key counter-movement that naturalizes wants as needs, takes them out of contention, and embodies them as taste, urge, and impulse, sometimes reducing or eliminating needs." (Wilk 1999)

What was once un-needed (luxury) wants become needed ones either because the general living conditions make them necessary (the refrigerator and the car are examples of luxuries becoming necessities because of the way they have changed systems of provision of food and of transport) or because they are progressively integrated in the definition of minimum standard of living. Precisely, it is often because they have overlooked this fact that "basic needs" policies have been blamed. They didn't take account of the "naturalization" of wants. Furthermore, they have too often been guilty of deciding in place of people what they really needed[16]. Indeed, only people themselves duly placed in a suitable institutional setting can, in a rational deliberation, decide what their real needs (and essential satisfiers) are, taking into account their cultural, economic and technical context.

A third explanation is that what characterises precisely the consumer society is that *needs (or values) that were previously satisfied in a non consumer way are therein fulfilled by consuming practices.* Nowadays, the four kinds of needs identified by Kasser (2002) as necessary for human survival, growth, and optimal functioning would be at stake in consumption practices. These needs are 1) safety, security and sustenance – the human desire to remain alive and avoid premature death; 2) competence, efficacy, and self esteem – the human desire to demonstrate inherent positive attributes in one-self that propels one to accomplish one's missions, goals and objectives; 3) connectedness – the human desire for intimacy and closeness with other humans - the desire for belonging; and 4) autonomy and authenticity – a desire for freedom to act on one's own and to have a feeling that one is self directed. The analysis by Jackson and Marks (1999: 442) of the evolution of household consumption in UK between 1954 and 1994 give some support to this explanation: "First, we find that— in spite of its material nature — much of the increase in consumer expenditure in the last 4 decades can be construed as an attempt to satisfy social and psychological (nonmaterial) needs rather than material needs such as for food and shelter."(Jackson and Marks (1999: 442). But this is not incompatible with our second explanation: "Secondly, we find little evidence to support the idea that increased consumer expenditure in these 'non-material' categories leads to increased satisfaction of the underlying needs" (op.cit.).

Take, for example, the need for identity and self-esteem. In traditional "ascription" societies, the need for identity is fulfilled by the social status ascribed by society according to lineage and family (and therefore the caste or status group). These societies can be highly stratified and non egalitarian but identity personal doesn't pose problem therein. The only problem is to behave in accordance with the ascribed status. A sense of *honor* dictates the way to behave, which depends on the social status. In case of failure to conform, the penalty is social disapproval which results in *shame.* In achievement societies where social status (and therefore identity) is not ascribed but achieved through participation in production or in public life (at the community level at least), identity, self-esteem, etc., depend on merit, which consists in behaving in accordance with moral norms and values such as hard-working, self-restraint, thrift, etc. The social personality corresponding to this kind of societies has been characterised as "inner-oriented" by the sociologist David Riesman in "The Lonely Crowd"[17] which

[16] In a paper titled « Asking people what they want or telling them what they 'need'?", Tom Lavers reports of members of a Peruvian Andes community who decided to use the money received in compensation for the negative effects of mining activities on their environment, in buying musical instruments for a band to play at community fiestas instead of in building a water sanitation infrastructure or a school…

[17] *The Lonely Crowd* was first published in 1952. It is however still up-to-date in many aspects, and principally on the analysis of consumption. Riesman notably already discovered the importance of diversification of goods in the consumer society and this, long before what some have called the "post-fordist" stage in the evolution of consumerism, precisely characterised by the vanishing of "mass consumption" and the birth of a diversified consumerism. Riesman writes, for example: "La production massive comme la distribution massive, parvenues à leur stade ultime, permettent et exigent une augmentation considérable non seulement en quantité, mais aussi

what was the first in depth analysis of the nascent consumer society. To the inner-oriented personality, characteristic of the early capitalism, Riesman opposed the new type of social personality, characteristic of the coming consumer society that he called “other-oriented”. While the former is guided by his/her inner gyroscope, the behaviour of the other-directed individual is governed primarily by his/her set of peers. Other-directed individuals have internal “radar” for sensing and responding to their peers that makes them “capable of a rapid if sometimes superficial intimacy with and response to everyone.” He also noted that while inner-oriented people suffer from *guilt* if their behaviour departs from the direction indicated by their gyroscope, other-oriented people are more likely to feel *anxious* when failing to orient themselves in society and develop one’s individuality in conformity with others’ expectations.

This multi-functionality of consumption has been nicely analysed by Holt (1995) in his paper “How Consumers Consume: A Typology of Consumption Practices”. Table 1 shows Holt’s (1995) basic categories for analyzing consuming. They consist of a double distinction (1) between autotelic (which are end-in-itself) and instrumental (directed towards another goal) consumption actions and (2) between activities that interact mainly with objects versus those that interact mainly with others (using consumption objects as focal resources).

***Table 1. Holt’s metaphors for consuming***

| | | PURPOSE OF ACTION | |
|---|---|---|---|
| | | Autotelic Actions<br>(end) | Instrumental Actions<br>(means) |
| STRUCTURE OF ACTION | Object Actions | Consuming as experience | Consuming as integration |
| | Interpersonal Actions | Consuming as play | Consuming as classifi-cation |

Source: Holt 1995.

- Consumption as experience. By this Holt emphasises the cognitive (interpreting, accounting), evaluative (assessing, comparing to norms and baseline expectations) and emotional (appreciating, feeling) aspects of consumption. The example (watching a baseball play) used by Holt to illustrate what he calls “metaphors of consuming” is unfortunately something only American consumers can understand for having experienced it but it is possible to grasp what he means with experiencing by thinking at the subjective feelings experienced during a dinner in a grand restaurant or the tasting of a “grand cru”. However if the experience aspect of consuming is particularly salient (and noticeable) in exceptional or outstanding consumption events, it is not by any means restricted to such situations. The most important result of experiencing is of course pleasure but it can also be the satisfaction of becoming more competent, a sense of achievement, self-esteem, etc. Note that all these positive feelings have also their negative counterparts: disappointment, frustration, anxiety…

dans les différences de qualité….Cela signifie que l’élève consommateur d’aujourd’hui doit apprendre beaucoup plus de choses qu’au début de l’ère industrielle. (French Translation :113). Or: « De nos jours, la future profession de tous les bambins, c’est d’être des consommateurs qualifiés » (p.118). Or « Le consommateur ostentatoire de Veblen cherche à jouer le rôle qu’exige de lui la position qu’il occupe, ou qu’il espère occuper, dans la vie ; alors que le consommateur extro-déterminé recherche des expériences plutôt que des objets et aspire à être guidé par les autres plutôt que de les éblouir ». (168).

- Consumption as integration. Consuming as integration “references the methods used by consumers to enhance the perception that a valued consumption object is a constitutive element of their identity” (Holt, p.6). This amounts to breaking down the institutional distance between the consumer and the consumption object either by 1) assimilating (gaining competence in the three experiential practices described here above; 2) Producing (participating in the production of the object) or 3) personalizing (altering the object to assert the individuality of their bond with it). This is what Belk (1995:72) refers to when writing that: “…certain goods may come to be seen as extensions of self (…). These things extend our grasp, our abilities or our ego. They provide a sense of mastery of the environment, others and the self. They are expressive and aid feelings of identity, continuity and even immortality. And they often provide us with a sense of past – both individual and shared with others. (…). Such things may become a part of self through appropriating and controlling them, creating or buying them, knowing them, becoming habituated to or contaminated by them, or by literally incorporating them into self.”.

- Consumption as classification. When consuming-as-classification, consumers make uses of the object of consumption as a means to classify themselves with respect to (significant) others. Objects of consumption (be they goods like a car or services like holidays or journeys) are thus endowed with social and personal meanings through which people communicate who they are. While Bourdieu (1979) has seen only the distinction aspect of consuming-as-classification, the affiliation aspect is at least as important. Truly, both dimensions are inseparable because to affiliate is always to distinguish oneself from those with which one doesn’t affiliate and to distinguish is always a claim to an affiliation with a reference group. The consumption-as-classification metaphor is the most often referred to in the sociological and anthropological literature (Douglas & Ischerwood 1979) but it is often restricted to a classification-through-object point of view. Holt shows that there is also a classification through actions: “consumers also use the manner in which they experience the consumption object to classify. For object classification, the particular meaning associated with a consumption object provide the content of the classificatory act, while for action classification, object meanings are irrelevant – what matters is *how* one interacts with the object” (Holt, p.11).

- Consumption as play. In consuming as play, actors use commodities as resources to interact with fellow consumers. “Playing practices capture the autotelic dimension: consumer-object-consumer that has no ulterior end, interaction for interaction’s sake” (Holt, 1995:9).

All these experiences participate to the pleasure consumers expect from and find in consumption. The “pleasurable” dimension of consumption is gaining more and more importance in the way people report on their consumption activities, as Table 2 shows:

Table 2 Is consumption more a pleasure or a necessity ?

| YEAR | NECESSITY | PLEASURE | BOTH | DON’T KNOW | TOTAL |
|---|---|---|---|---|---|
| 1993 | 29,3 | 11,3 | 59,1 | 0,3 | 100 |
| 1994 | 32,8 | 8,8 | 57,4 | 1,0 | 100 |
| 1995 | 35,6 | 10,6 | 53,1 | 0,7 | 100 |
| 1996 | 26,7 | 14,1 | 59,0 | 0,2 | 100 |
| 1997 | 25 | 14 | 61 | - | 100 |

| | | | | | |
|---|---|---|---|---|---|
| 1998 | 30,6 | 13,3 | 55,8 | 0,3 | 100 |
| 1999 | 30 | 19 | 51 | - | 100 |
| 2000 | 26,7 | 15,5 | 57,1 | 0,7 | 100 |
| Source: Langlois 2005, p.174 | | | | | |

The pleasure dimension is gaining importance but not in a uniform steady way. It declines during the periods 1994-1995 and in 1998 but peaks at his higher in 1999. These variations are correlated with the fluctuations in general economic conditions (unemployment, growth…).

Therefore, the challenge is to account for the fact that, in extant consumer societies, consumption is more multi-functional than ever and that individuals, facing a diversity of commodities and services unknown until now, have more opportunities than ever to choose elements of their lifestyle if not their whole lifestyle itself. On the other hand, one has to keep in mind the hard fact that this choice is nevertheless still deeply moulded by materials (financial) constraints, the "hidden persuasion" coming from a flourishing advertising and marketing industry, and the locking-in of the consumer in dominant modes of provision shaped by the producers or the retailers and not by the consumers.

## 3.2 The meso-level: systems and modes of provision

However, not all consuming activities carry the same amount of pleasure, experiencing, playing, integrating or classifying and it is very important to distinguish between ordinary, or "inconspicuous" consumption", and "display" or "hedonic" consumption. The former refers to consumption driven by routines[18] and habits or practices in which consumers are "locked-in" by dominant modes of provision or by social and economic constraints of which they are usually unaware:

"To take one simple and relevant example, the fuel consumption associated with heating our home is determined (amongst other things) by the available fuel supply, the efficiency of the conversion devices, the effectiveness of thermal insulation in the dwelling, and the level of thermal comfort programmed into our thermostats. These factors in turn are constrained by the historical development of the fuel supply and appliance industries, the institutional design of the energy services market, the social norms associated with personal convenience and thermal comfort, and our individual responses to those norms". (Jackson, 2005:21).

Another example of the way historical development has changed dominant modes of provision is given by Wilkinson in his pathbreaking ecological analysis of economic development,: "the need for larger quantities of packaging materials is linked to the wider problem of preserving perishable goods as supply lines get longer and distribution systems become more complex. Much of our food is now tinned, dried, frozen, vacuum-packed or has artificial preservatives added. In pre-industrial societies it was only necessary to smoke, dry or salt some foods for winter, but modern preserving methods are now essential all the year round for such basic items as foreign meat, fruit and vegetables" (Wilkinson 1977, p.177). More generally, Wilkinson (1977) shows how the processes of industrialisation and of urbanisation constitutive of the industrial revolution created new needs that were unknown (or

[18] "A consumption routine is an executable capability for repeated consumption that has been learned or acquired by groups of consumers in response to social pressures or contexts" (Harvey et al. 2001).

negligible) in the pre-industrial societies. The new working and living conditions and the decline of local communities pushed up the need for education, transport, leisure and communication, clothes, hygiene, etc. The structural factors that surround and frame consumption are systematically overlooked by the individualistic, economic utilitarian as well as cultural "post-modern", theories of the consumer[19]. However, consumption practices cannot be understood without taking account of the general both material and institutional conditions of living (household dimension and composition; housing conditions, urban structure…), of working or making for a living in general and, finally of consuming.

Satisfiers such as food, shelter, transport, etc., are accessible to households through different organisational and technological systems called "systems of provision" (Fine and Leopold 1993) or "modes of provision" (Gershuny 1983).

"The particular means that a household employs to satisfy its needs for a particular function – the 'mode of provision' for the function determines the household's pattern of expenditure on final commodities. Over time, the relative desirabilities of … alternative modes of provision for a particular function may change …This change in the mode of provision for particular functions (or, at the societal level, change in the distribution of modes of provision) will be referred to as 'social innovation'."(Gershuny (1983:1-2)

It may be better to keep the concept of "system of provision" for referring to the concrete material and institutional arrangements by which households have access to the needs satisfiers and the notion of "mode de provision" for referring to the general patterns underpinning extant systems of provision, as in Table 3.

Table 3. A typology of modes of provision.

| Mode of provision | Manner of obtaining service | Who does work | Who pays (if anyone) | Principle over which service is obtained |
|---|---|---|---|---|
| Market | Commercial purchase | Paid employees | Consumer | Market exchange |
| State | Claim to entitlement | Paid employees | State (tax payer) | Citizenship right |
| Communal<br><br>(cooperatives<br><br>LET) | Personal interconnections | Neighbours or acquaintances | No money involved | Reciprocal obligations |
| Domestic | Household<br><br>Do-it-yourself | Members if household | No money involved | Family obligation |

[19] Sanne (2002) distinguishes a third model, which he calls "differentialist". It refers to the "classifying" function of consumption (to say it in Holt's language) as depicted by Veblen and, more recently, by Bourdieu. In my opinion, this differentialist conception, if truly individualistic can be considered as part of the cultural model ("consumption as communication") and, if referring to positional goods, is fundamentally non-individualistic but on the contrary based on an over-socialised conception of man.

Source: Harvey et al. (2002:63).

From a sociological point of view, what makes institutions different is the model of reciprocity on which they are based. Indeed, reciprocity can be direct or indirect, immediate or differed, strictly balanced or not. It is direct if A reciprocate to B and B to A; indirect if A reciprocate to B, B to C and C to A. It is immediate if reciprocity must follow very shortly the action to reciprocate; otherwise it is differed. Finally, it is balanced if the reciprocate “cleans” the transaction without leaving a surplus or a deficit (what the receiver reciprocates has the same value than what he received).

Family is characterised by direct or indirect but necessarily differed and unbalanced reciprocity between parents and children. In most traditional societies, for example, children are supposed to reciprocate to their old parents the care they received during childhood. On the contrary, in complex societies with formal social security and pensions systems, reciprocity is indirect (and balanced) because it is generation C that repays (more or less identically, or at least proportionally) generation B for having paid the pensions of generation A. On the other hand, reciprocity relations between spouses are direct, differed and not strictly balanced. Markets are characterised by direct, immediate and strictly balanced reciprocity, LETS (Local Exchange and Trade Systems) by indirect, differed and balanced reciprocity. Hierarchies (bureaucraties, firms, ...) are characterised by direct, differed and approximate reciprocity: the employer exchange money for effort with the employee but the money is usually not paid immediately and the balance is seldom strictly respected between the amount of contribution and the retribution due to the difficulties in assessing efforts. On the other hand, goofing off is often the only possible way for the employee to try to re-balance in his favour a usually unequal exchange.

The relative importance of the different institutions (and thereby of norms of reciprocity) in society in general and in the production, distribution and consumption of food in particular depends on the technology available, the environment and the cultural system of the society. As is well-known, modernity as described by Marx, Weber, Durkheim, Tönnies and de Tocqueville is characterised by the supremacy of markets and bureaucracies at the expense of communities and families. This amounts to saying that direct and strictly balanced reciprocity dominates social relationships at the expense of indirect and differed one.

Sustainable consumption correspond to a “modal split” in the distribution of alternatives modes of provision through population, and a corresponding change in the relative importance of patterns of reciprocity. In particular, it means the substitution of non-commodity (non-market) based modes of provision to commodity based ones. The term “commoditization” is used by Manno (2002:70) for referring to the “tendency to preferentially develop things most suited to functioning as commodities – things with qualities that facilitates buying and selling – as the answer to each and every type of human want and need”. It is slightly equivalent to what Hirsch called the “commercial bias” or “commercialization effect” characterized by the fact that “an excessive proportion of individual activity is channelled through the market so that the commercialized sector of our lives is unduly large”(Hirsch 1977:84).

Manno operates an interesting distinction between goods and services with high commodity potential (HCP) and those with low commodity potential (LCP). The commodity potential is a measure of the degree to which a good or service carries the qualities that are associated with and that define a commodity. These qualities are:

- Alienable: the ease with which ownership can be asserted, assigned and transferred;
- Standardizable: independence from the particularity of geography or culture;
- Autonomous: the ability to be used independently, outside the constraints of social relationships;
- Convenient: the ease with which it can be used;
- Mobile: the ease with which something can be packaged and transported.

As an example, Manno considers the need children have for playing. At the most commercial end of the scale, it can be satisfied with mass-marketed toys such as Barbie dolls which are inexpensive, marketed worldwide, whose production and distribution is energy and waste intensive. In the middle of the scale, one finds locally produced, handcrafted toys, dolls and games usually made from renewable materials and with local or culturally idiosyncratic designs. Finally, at the far-end of the commodity-potential scale are activities and games that don't necessitate commercial objects.

The problem is that the market economy acts as a "milieu" exercising selection pressures on satisfiers that are more favourable to commodities than to non-commodities, giving the latter less opportunities to survive. This doesn't mean that one cannot find localized niches for less commoditized ways to satisfy needs but these, by definition, remain marginal.

"Given the selection pressures of commoditization, however, unless public policy deliberately intervenes, HCP goods and services inevitably outcompete LCP goods and services…Commoditization pressures act over time to gradually and inexorably expand the number of commodities available, the geographic spread of their availability, and the range of needs for which commoditized satisfactions exists." (Manno 2002:72-73).

Therefore, de-commoditization is more or less synonymous of de-marketisation. Limiting the influence of markets and economic institutions in general is therefore an important lever of a strategy of sustainable development. Indeed markets, as Bowles (1998) convincingly showed, do more than allocate goods and services. They also influence the evolution of values, tastes and personalities.

"The production and distribution of goods and services in any society is organized by a set of rules, among which are allocated by fiat in states, firms, and other institutions, patriarchal and other customary allocations based on gender, age and kinship (as for example takes place within families), gift, theft, bargaining and of course markets. Particular combinations of these rules give entire societies modifiers such as "capitalist", "traditional", "communist", "patriarchal", and "corporatist". These distinct allocation rules along with other institutions dictate what one must do or be to acquire one's livelihood. In so doing they impose characteristics patterns of interaction on the people who make up a society, affecting who meets whom, on what terms, to perform what tasks, and with what expectation of rewards. One risks banality, not controversy, in suggesting that these allocations rules therefore influence the process of human development, affecting personality, habits, tastes, identities and values." (Bowles 1998, 76).

In particular, markets:

- Favour thinking of goods in an abstract and comparative way, leading to compare things that pertain to very different ontological worlds.
- Foster extrinsic motivations in place of intrinsic ones.
- Reduce the scope and effectiveness of social norms. More precisely, they undermine the reproduction of "nice traits" in a given population by lessening the functioning of mechanisms such as: retaliation, reputation, segmentation, group selection.

De-commoditization is also a condition for meeting non-environnmental requirements of sustainable development: concerns for producers' earnings, working conditions and human rights; worries about animal welfare in husbandry practices, etc. Because markets as institutions are networks of abstracts, universalistic and specialised relationships between actors considered only as bearer of economical characteristics, they rule out concerns for the people as persons as well as any consideration alien to the instantaneous economical exchanges of which they are woven.

In general, the trade-off when shifting from market-based modes of provision to others, non-market ones, is between income-intensive *versus* time-intensive satisfiers. This is especially true for domestic and community-based modes of provision. This can be explained by the fact that, contrary to markets where transaction are mostly anonymous and neutral from an affective point of view, transactions in families and communities are never affectively neutral nor purely functional. This has costs in terms of extra time devoted to the maintenance of personal "rich" relationships. In fact, it has often be observed that what characterizes modern occidental societies is the fact that people herein accept to trade leisure against consumption even after their basic needs have been satisfied. This is something that would have been hard to understand for our ancestors in pre-industrial era.

As Wilkinson (1973:84-85) puts it: "That some societies show what is called a "leisure preference" has been the despair of many development economists. Many societies have shown a tendency to use improvements in techniques which have reduced the amount of time necessary to produce their subsistence, to increase their leisure time. Economists who have attached a higher priority to increasing the output of goods would have preferred the extra time to have been used to increase production. A leisure preference is a clear indication of the relative sufficiency of a society's material means of subsistence and should be regarded as a feature of societies in ecological equilibrium".

## 3.3 The macro-level: cultural values and norms

It has often been observed that "…interventions aimed at reducing consumption will be most effective if they bring about higher-level changes in the socio-economic-cognitive system – i.e. by changing cultural values or worldviews." (Brown and Cameron, 2000, p.34). Indeed, the high level of consumption could not stand without a socio-cultural conception of well-being and happiness that legitimate the pursuit of "materialistic" values ('indulgence', 'pleasure", 'comfort') instead of the non-materialist values of self-control, spirituality, simplicity, etc.

From a consumption perspective, socio-cultural patterns of values and norms can be considered as collectively shared ways of:

- Structuring and ranking the different needs for members in general and subgroups in particular (men/women, infant/adult, young/aged, manual workers/intellectual workers, etc.)
- Drawing a border between fully legitimate (needs), acceptable and illegitimate wants.
- Shaping the expression of needs in demands and indicating the adequate satisfiers;
- Arbitrating between needs and resources.

The first and more ambitious attempt to characterise and analyse such general socio-cultural conceptions have been undertaken by the American (formerly Russian) sociologist Sorokin with its 4 volumes "Social and Cultural Dynamics" published in 1937-41. Sorokin used the term "mentality" to refer to such paradigmatic conceptions of:" (1) the nature of reality; (2) the nature of needs and ends to be satisfied; (3) the extent to which these needs and ends are to be satisfied; (4) the methods of satisfaction". (1957, p.25). More precisely:

> 1) Reality can be apprehended as nothing more than what the organs of the senses can perceive or, on the contrary, as something behind (or beyond) the perceived world. In the latter case, what the senses perceive is only a misleading appearance (if not pure illusion) hiding the true reality which is immaterial and transcendent.
>
> 2) Needs may be viewed as purely (or mainly) sensual or mainly as spiritual "like salvation, of one's soul, the performance of sacred duty, service to God, categoric moral obligations and other spiritual demands which exist for their own sake, regardless of any social approval or disapproval" (p.26). But Sorokin considered also the possibility of a mixed conception "like the striving for superiority in scientific, artistic, moral, social and other creative achievements, partly for their own sake and partly for the sake of human fame, glory, popularity, money, physical security and comfort, and other 'earthly values' of an empirical character" (p.26).

3) Concerning the extent to which needs are to be satisfied, different levels are possible form the most luxurious to the barest minimum.

4) Sorokin distinguished three strategies for satisfying needs: two "pure" strategies and one mixed. The first consists in modifying the milieu in order to yield the means of satisfying needs. The second consists in modifying oneself: "one's body and mind, and their parts – organs, wishes, convictions, or the whole personality- in such a way as to become virtually free from a given need, or to sublimate it through 'readjustment of self'". The mixed strategy consists in acting both on the self and on the environment. This is especially relevant for sustainable consumption macro-policies.

On this basis he distinguished two "pure" mentalities: the "sensate" and the "ideational" one and a mixed type he called "idealistic".

Table 4 ***Sorokin's theory of mentalities***

| The ideational, sensate and idealistic mentalities according to Sorokin | | | | | |
|---|---|---|---|---|---|
| | Ascetic ideational | Active Ideational | Active Sensate | Passive Sensate | Idealistic |
| Reality | Ultimate reality, eternal transcendental | Both with emphasis on eternal non-material | Sensate, empirical, material | Sensate, narrow and shallow | Both equally represented |
| Main needs | Spiritual | Both with predominance of spiritual | Manifold and richly sensate | Narrow sensate | Both equally represented |
| Extent of satisfaction | Maximum | Great but moderate | Maximum | Maximum for narrow sensate needs | Great but balanced |
| Method of satisfaction | Mainly self-modification | Both with prevalence of self-modification | Mainly modification of environment | Utilisation (exploitation) of environment | Both ways |

These different mentalities manifest themselves in all cultural productions of society: art, science and philosophy, law and justice, and personality.

Sorokin's model is probably too crude to provide practical guidance for sustainable consumption policies. Indeed, even if one could accept the hypothesis of the domination of a homogeneous cultural paradigm in many historical societies, it is much more difficult to accept concerning modern industrial societies which are order of magnitudes more complex and differentiated[20].

However, there exists a more recent theory of culture that also claims to cover all possible existing cultures. It is known either as “grid-group” theory (Douglas) or as “cultural theory” (Thompson, Ellis and Wildavsky 1990). The core of the theory consists of a typology formed by the articulation of two modes or dimension of sociality: “group” which refers to the extent to which individuals are incorporated in bounded units and “grid” which denotes the degree to which individual choice is circumscribed by externally imposed prescriptions. Asymptotically, both dimensions reduce to two possibilities: plus (+) or minus (-).

- Group +: means that individual’s life is totally absorbed and sustained by group membership (rich interdependencies and strong solidarity)
- group -: characterises a condition marked by individual autonomy and inter-individual competitiveness;
- Grid + : social roles are greatly constrained and discriminated;
- Grid -: roles are loosely specified and individuals have a wide negotiation space

Institutions and cultures (and the people sharing them) are therefore classified by cultural theory as:

- Egalitarians (Group +, Grid -):
- Hierarchs or Bureaucrats : (Group + , Grid +)
- Entrepreneurs (Group -, Grid -)
- Fatalists (Group -, Grid +).
- Hermits (or Autonomous) who withdraw from social interaction.

What is interesting in cultural theory is the assumption that these cultural types are complementary and that a well-balanced society comprises a mix of all of them.

“A well-run community needs some hierarchy in the sphere of government, some enterprise on the part of Individualists, some criticism from Enclaves (Egalitarians), and it cannot avoid having some passive members in the sector of Isolates (Fatalists). If the Positional (Hierachical) culture dominates, it will make things hard for those in the lowest positions. If the Individualist culture dominates, ruthless competition will make the weak suffer. If the Enclave (Egalitarians) suffers, the heavy hand of moral censorship will calcify the cultural scene. If the others combine to suppress the Enclave (Fatalists), violence will erupt as the enclavists will not be silenced. » (Douglas 2005:p.13)

Cultural theory has been put at work at several occasions on sustainable development and consumption issues. Thompson and Rayner (1998) clustered attitudes to sustainable development in terms of Cultural Theory and Dake and Thompson (1999) found from a household survey in Britain that lifestyles and consumption patterns were correlated with these cultural types. Seyfang (2003) analysed the different discourses on food sustainable consumption in terms of the cultural theory categories and concluded that if cultural theory could be useful as an heuristic device it lacked explanatory power.

Likewise, Jackson and Michaelis (2003) link different attitudes, values and beliefs related to sustainable consumption and the environment to the traditional, individualist and egalitarian types of cultural theory.

[20] But perhaps this is only an optical illusion due to our being too close to them to be able to grasp their fundamental specific nature.

Table 5.Cultural theory categories and sustainable consumption

| | Traditional/hierarchy | Individualist/market | Egalitarian/community |
|---|---|---|---|
| **Example** | 20th century civil service or large company | stock exchange, Silicon Valley | monastery, professional association |
| **Goals/moral goods** | stability, order, solidarity | liberty, opportunity, efficiency | equality, fairness, solidarity |
| **Social role of consumption** | communicate/affirm status/role | self-expression, affirm individual identity | membership of group, affirm collective identity |
| **Problems with consumption** | tastelessness of mass consumption; loss of traditional foods, crafts, social structure. | market distortions and barriers constrain freedom of choice: insufficient consumer information/empowerment | inequity between consumers; exploitation of workers; unfair terms of trade. |
| **Diagnosis of environmental problems** (Thompson and Rayner, 1998) | population growth, irresponsible behaviour by firms, individuals | lack of market signals reflecting environmental goods/costs | profligate consumption, pursuit of power/self-interest by firms, individuals |
| **Preferred solutions for sustainability** | regulation, pollution control, better planning | internalisation of environmental costs, better frameworks for technological/business innovation | public/stakeholder dialogue leading to shared goals/solutions |
| **Preferred mode for sustainable consumption** | consuming responsibly | consuming efficiently | consuming less |

Source: Jackson and Michaelis, 2003, p.44.

Michaelis and Lorek (2004) use cultural theory as an heuristic device for categorizing consumption patterns (see figure 3 below) and for structuring scenarios of changes therein.

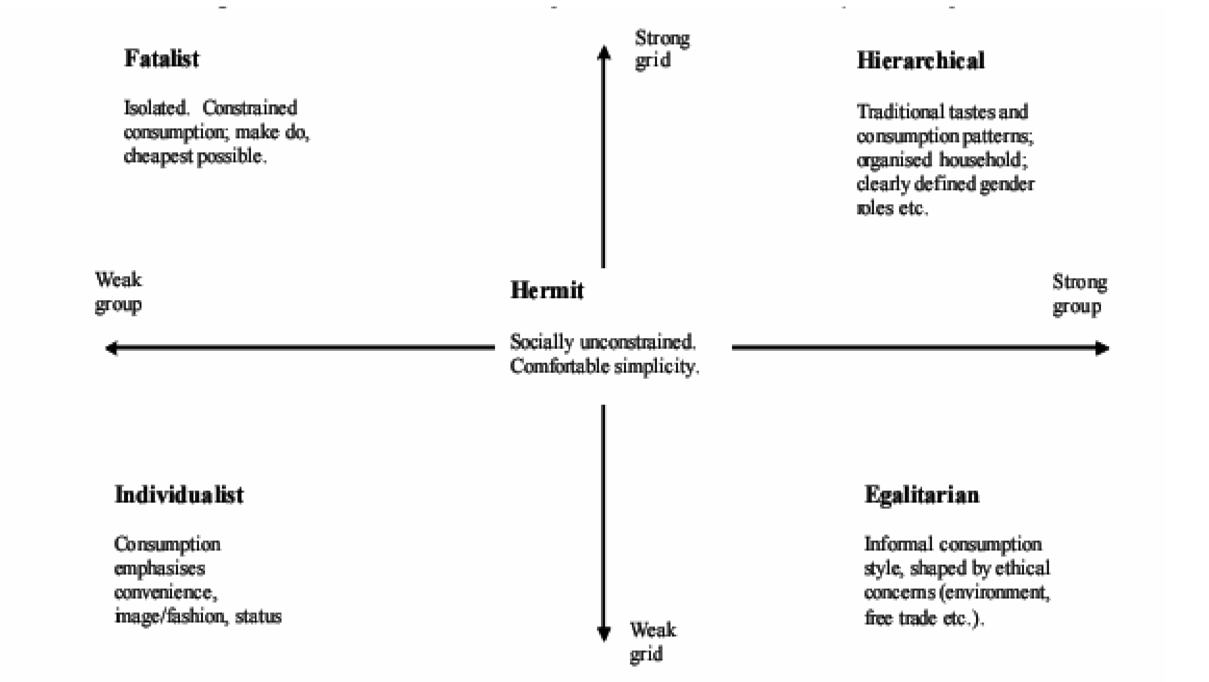


Figure 3. Consumption patterns according to cultural theory. Source: Michaelis and Lorek (2004), p.67

It is tempting to draw a connection between cultural theory categories and Max-Neef's list of needs. Table 6 shows a first attempt to organize some of Max-Neefs's fundamental human needs in the cultural theory framework.

Table 6. Cultural types and fundamental needs

| | GRID + | GRID - |
|---|---|---|
| GROUP + | Identity | Participation |
| GROUP - | Security | Freedom |

Thus, cultural theory can easily account for some of the fundamental human needs defined by Max-Neef. However, things are more complicated with other needs such as subsistence, leisure, creation and understanding. Sorokin's sensate-ideational opposition could be a plausible candidate, in which case one would find subsistence and idleness on the sensate side and creation and understanding on the ideational one. Inglehart's "materialism post-materialism" dichotomy would give more or less the same configuration.

Schwartz's theory of universal values offers other interesting possibilities to complement (or modify) the Grid-Group dimensions of cultural theory. Schwartz defines values as: "Desirable, trans-situational goals, varying in importance that serves as guiding principles in the life of a person or other social entity. Implicit in this definition of values as goals is that (i) they serve the interests of some social entity, (ii) they can motivate action, giving it direction and emotional intensity, (iii) they function as standards for judging and justifying action, and (iv) they are acquired both through socialisation to dominant group values and through the unique learning experiences of individuals" (Schwartz, 1994 p.21).

According to Schwartz, there are only ten universal human values that account for "all the core values as recognized in cultures around the world" because they correspond to three universal requirements of the human condition: needs of individuals as biological organisms, requisites of coordinated social interaction and survival and welfare needs of groups. These 10 values are:

1. *Self-Direction*. Independent thought and action; choosing, creating, exploring.
2. *Stimulation*. Excitement, novelty and challenge in life.
3. *Hedonism*. Pleasure and sensuous gratification for oneself.
4. *Achievement*. Personal success through demonstrating competence according to social standards.
5. *Power*. Social status and prestige, control or dominance over people and resources.
6. *Security*. Safety, harmony and stability of society, of relationships, and of self.
7. *Conformity*. Restraint of actions, inclinations, and impulses likely to upset or harm others and violate social expectations or norms.
8. *Tradition.* Respect, commitment, and acceptance of the customs and ideas that traditional culture or religion provide the self.
9. *Benevolence.* Preserving and enhancing the welfare of those with whom one is in frequent personal contact (the 'in-group').
10. *Universalism.* Understanding, appreciation, tolerance, and protection for the welfare of all people and for nature.

These ten values have congruence or conflict relation between each other. For example, the pursuit of achievement values may conflict with benevolence. On the other hand, it can be congruent with the pursuit of power values. The figure below shows the 10 values organised in a circular structure in which congruent values stand nearby each other and facing those with which they conflict. The closer any two values in either direction around the circle, the more similar the underlying motivations. The more distant any two values, the more antagonist their underlying motivations. Empirically, congruence translates in positive correlation between variables related to nearby values and negative correlations with variables indicating opposite values. More specifically (Schwartz 2007):

- Values that are adjacent in the structure should have similar associations with other variables;
- Associations of values with other variables should decrease monotonically in both directions around the circle from the most positively to the most negatively associated value.

For example, voting for a party with a left orientation correlates positively mostly with values such as universalism and mostly negatively with security. Then, going from universalism round the circle to the right (benevolence, tradition, conformity, security) correlations are likely to become less positive and more negative. The same can be said going from universalism round the circle to the left. As another example, figure 4 portrays the Pearson correlation coefficient between approving the following statement “Gays should be free to live as they like” and the ten values. Hedonism is the value the most positively associated with tolerance for gays, conformity and tradition the most negatively correlated. Going from hedonism round the circle to the left, we the correlations rapidly vanishing then becoming negative. It is less clear going from the right because other values shows are rather similar correlation than hedonism with tolerance towards the gay way of life.

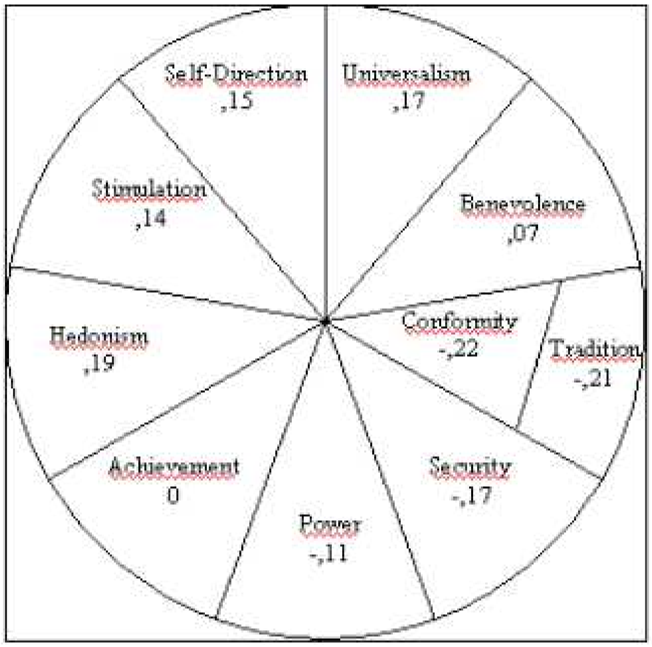


Figure 4. Correlation between value orientation and tolerance towards gay and lesbians. Source: Schwartz (2006).

The circle can be divided in 4 great sections: “Openness to Change” (self-direction and stimulation) opposed to “Conservation” (security, conformity and tradition) and “Self Transcendence” (universalism and benevolence) opposed to “Self-enhancement” (power and achievement). Hedonism shares elements of both openness and self-enhancement. Figure 4 portrays what Schwartz calls the “dynamic” relations of values. It is patent that tolerance with respect to gays living as they like is positively correlated with the general “Openness to change” pattern of values and negatively with the “conservation” pattern. Of course, this is not a scoop but it is reassuring to state that sample surveys corroborate our intuitions.

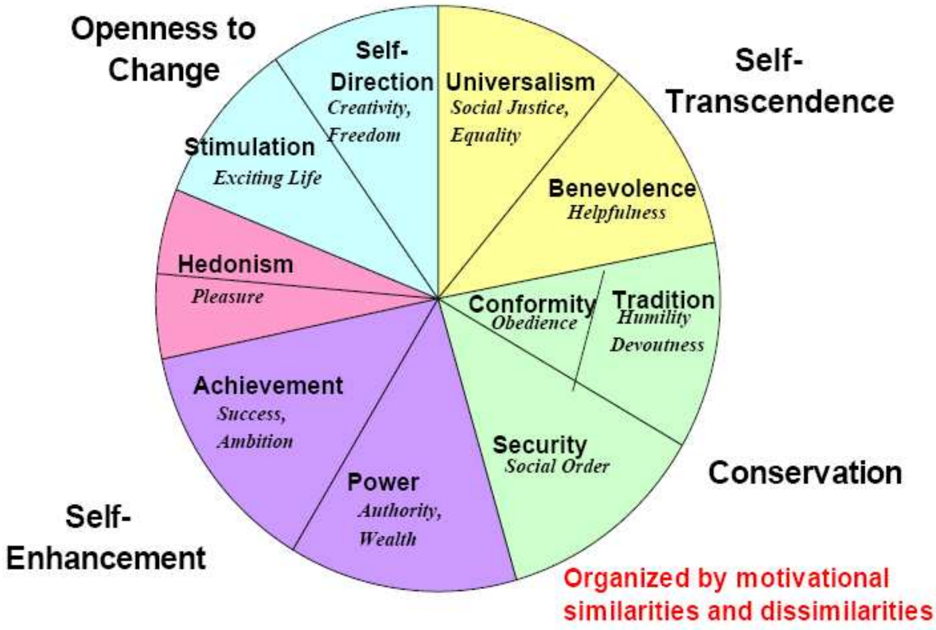


Figure 5. Theoretical model of relations among ten motivational types of values (Schwartz, 2006)

Numerous surveys conducted in Schwartz's values theory have brought the following results:

- People may differ substantially in the importance they attribute to values but the same structure of motivational oppositions and compatibilities apparently organizes their values.
- People's life circumstances provide opportunities (or impose constraints) to pursue some values more easily than others or, otherwise stated, make the pursuit or expression of different values more or less rewarding or costly. Typically, people adapt their values to their life circumstances by upgrading attainable values and downgrading values whose pursuit is too expensive or blocked. However there is an exception for values related to material well-being (power) and security. As Inglehart (1997) showed, people who suffer economic privation and social upheaval attribute more importance to power and security values than those who live in relative comfort and safety.
- Because age, education, gender and other characteristics determine life circumstances, they also determine values.

Wilson (2005) has analysed the relationship between Inglehart's "Materialism vs. Post-materialism" dichotomy and Schwartz's universal values. The main conclusions can be read from figure 6: universalism, benevolence and self-direction are positively correlated with post-materialism, all others are negatively correlated (and therefore, positively with materialism). The highest positive correlation is with universalism, the largest negative one with power. The weakest values are for: benevolence, tradition and stimulation.

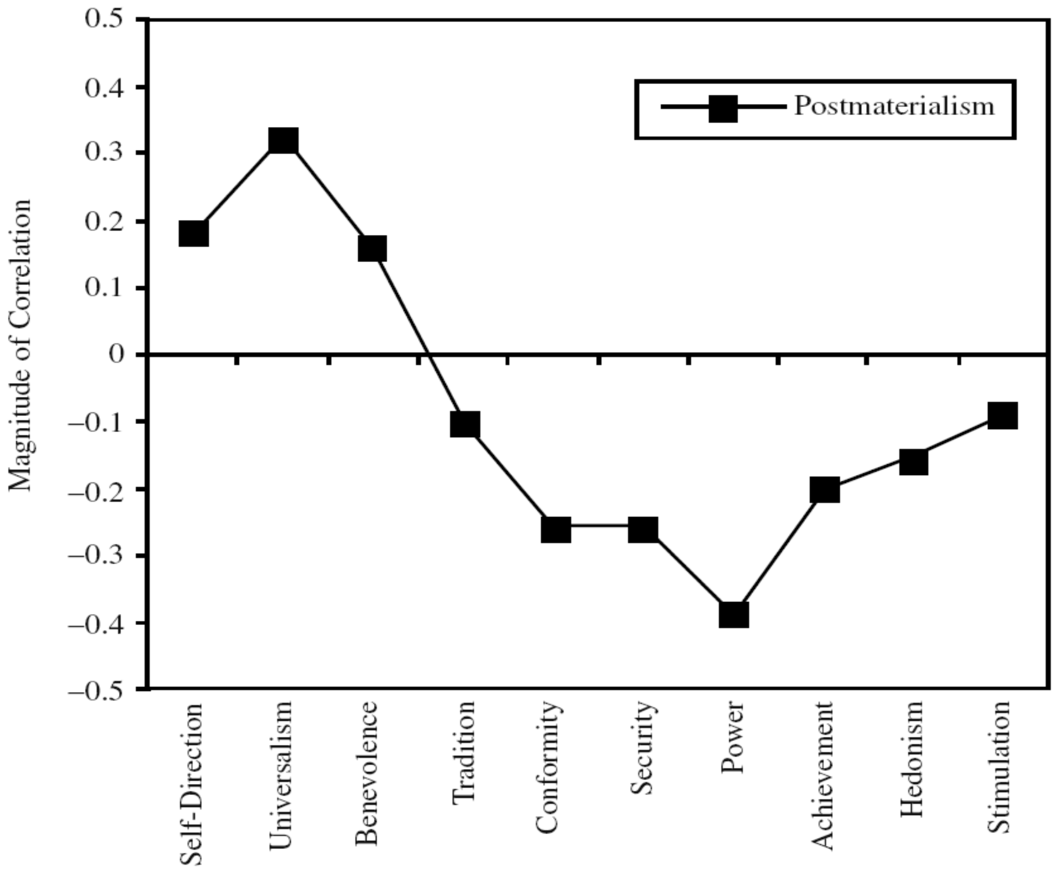


Figure 6. Postmaterialism and universal values. Source: Wilson 2005, p.217.

# 4 Conclusion: strategies and analytical levels

The three efficiency-ratios strategies and the three analytical levels enable the structuring of sustainable consumption transition policies and visions in the following matrix. It expresses the fact that each strategy will need and/or induce changes at the three levels of social reality, even if with varying intensities and salience.

Table 7. Matrix of strategies and analytical levels.

| | Dematerialisation of wellbeing | De-commoditization of satisfiers (modal splits) | Dematerialisation of commodities |
|---|---|---|---|
| Macro-social (general cultural norms and values) | | | |
| Meso-social (systems of provision, institutions) | | | |
| Micro-social (individual resources, needs and wants) | | | |

For instance, de-materialization of the conceptions of the good life (wellbeing) is mainly a macro-social and micro-social process because it means that important changes will occur in the definitions of legitimate needs, aspirations and satisfiers with important consequences for the way individuals obtain and allocate their resources (money and time).

De-commoditization of satisfiers will give more importance to currently marginalized modes of provision (state, communal and domestic-based) which both necessitates and foster changes in the criteria with which individuals evaluate goods and services and in the trade-off they are going to make between time and money. On the other hand, as the recent (and ongoing) communist experiences demonstrated, it is counter-effective and anti-democratic to impose institutional arrangements that overlook individual needs for autonomy, competence and diversity.

De-materialisation of commodities is probably the less demanding strategy insofar as it could be restricted to changes at the meso-level (and mainly on the supply side) and at the micro-level (but only by changing consumers' routine behaviours) without directly impacting the macro levels. This is probably the reason why it is the road most easily taken.

What remains to be known is how far each strategy taken alone can lead us on the way to sustainable consumption and development. Many people - mainly from the political and business communities and from some influential international agencies - assume that the de-materialization strategy will do and that it is possible to settle a truly sustainable society without questioning our general cultural systems and the now dominant conceptions of the good life. By unfolding (in imagination) each strategy's internal logic as far as it can goes, a scenario approach can help making more perceptible their foreseeable possibilities but also their limits, contradictions and possible unwanted consequences. It is the more expectable that only mixed strategies will allow us to settle a sustainable society without jeopardizing our most valued social and political achievements.

# Bibliography


Bairoch, P. (1997).*Victoires et déboires. Histoire économique et sociale du monde du XVIème siècle à nos jours.* Tome I, Paris: Gallimard.

Belk, R.W. (1995). "Studies In The New Consumer Behaviour", in D. Miller, ed; *Acknowledging Consumption*. London and New-York: Routledge. pp. 58-91.

Boulanger, P.-M. (2007) "What's wrong with consumption for sustainable development: overconsumption, underconsumption, misconsumption?" in ZaccaÏ, E.(ed). *Sustainable Consumption, Ecology and Fair Trade*. London and New York: Routledge. 17-33.

Bourdieu, P. (1979). *La distinction. Critique sociale du jugement*. Paris: éditions de Minuit.

Bowles, S. (1998). "Endogeneous Preferences: The Cultural Consequences of Markets and Other Economic Institutions". *Journal of Economic Literature*. Vol **XXXVI**, pp. 75-111.

Brown, P.M. and L.D.Cameron (2000). "What can be done to reduce overconsumption? *Ecological Economics*, **32**, pp 27-41.

Campbell, C (1995), "The Sociology of Consumption" in D. Miller, (ed.); *Acknowledging Consumption*. London and New-York: Routledge., pp.96-127.

Common, M. (2007) "Measuring national economic performance without using prices", *Ecological Economics*, under press. Available online August 2007.

Common, M. and S.Stagl (2005). *Ecological Economics. An Introduction*. Cambridge: Cambridge University Press.

Comte, A. (1969). *Système de politique positive, publié, entre 1851 et 1854.* Extraits des tomes II et III. Paris: Presses Universitaires de France.

Cummings, J.H. and A. Binhgam (1998). "Diet and the prevention of cancer", *British Medical Journal* 317, 1636-40.

Dake, K. & M. Thompson (2006). "Making Ends Meet – in the Household and on the Planet"", in Jackson, T. ed. (2006). *The Earthscan Reader in Sustainable Consumption*. London, Sterling VA: Earthscan, pp.346-357.

Daly, H. (1991). *Steady State Economics*. Washington D.C. : Island Press.

Desjeux, D. (2006). *La Consommation*. Paris: Presses Universitaires de France.

Douglas, M. and Ischerwood, B. (1979). *The World of Goods: Towards an Anthropology of Consumption*. London: Routledge.

Douglas, M. (2005). "Grid and Group, New Developments" Workshop on Complexity and Cultural Theory. London School of Economics, 27 June 2005.

Fine, B. and E. Leopold (1993). *The World of Consumption*. London: Routledge.

Gasper, D. (2004). “Conceptualizing Human Needs and Well-Being”, International Workshop on “Researching Well-Being in Developing Countries.Hanse Institute for Advanced Study, Delmenhorst (Bremen), Germany, 2-4 July 2004. The paper has been published in a slightly different form in: I. Gough and J.A. McGregor (eds.), 2007, Wellbeing in Developing Countries. From Theory to Research. Cambridge, Cambridge Univ. Press, pp.47-71.

Geiser, K. (2001). *Materials Matter. Toward a Sustainable Materials Policy*. Cambridge, Mass. : The MIT Press.

Gershuny, J. (1983). *Social Innovation and the Division of Labour*. Oxford: Oxford University Press.

Giddens, A. (1991). *Modernity and Self-Identity: Self and Society in the Late Modern Age*. London: Polity Press.

Gouldner, A.W. (1960). “The Norm of Reciprocity: A Preliminary Statement”. *American Sociological Review*, **25**, 161-178.

Harvey, M. A. McMeekin, S. Randles, D. Southerton, B. Tether & A. Warde (2001). “Between Demand & Consumption: A Framework for Research.” CRIC Discussion paper N°40. University of Manchester.

Hirsch, F. (1976). *Social Limits to Growth.* London and Henley: Routledge and Kegan.

Holt, D.B. (1995). “How Consumers Consume: A Typology of Consumption Practices”. *The Journal of Consumer Research,* Vol. **22**, 1:1-16.

Holt, D.B. (1997). “Poststructuralist Lifestyle Analysis: Conceptualizing the Social Patterning of Consumption in Postmodernity”. *The Journal of Consumer Research. Vol.**23**, 4:326-350.*

Inglehart, R. (1977). *The Silent Revolution: Changing values and political styles among Western publics*. Princeton HJ: Princeton University Press.

Inglehart, R. and P.R. Abramson (1994). “Economic security and value change”, *American Political Science Review*, **88**, 336-354.

Jalas, M. (2005) “ The temporal orientations of ecological modernization and sustainable consumption”, In: Hertwich E, Briceno T, Hofstetter P,Inaba A, editors. Proceedings. *Sustainable consumption: the contribution of research.* Oslo (Norway). Trondheim: NTNU (IndEcol); 2005. p. 309e20. Report no. 1/2005.

Jalas, M. (2006). Sustainable consumption innovations- instrumentalization and integration of emergent patterns of everyday life. In: M. Munch Andersen and A.Tukker (eds.) *Perspectives on Radical Changes to Sustainable Consumption and Production (SCP)*. Proceedings of the workshop of the SCORE-network. Denmark, 20-21 april 2006.

Jackson, T. and N. Marks (1999). “Consumption, sustainable welfare and human needs - with reference to UK expenditure patterns between 1954 and 1994”. Ecological Economics, 28, 421-441.

Jackson, T. and L. Michaelis (2003). “Policies for Sustainable Consumption”. A Report to the Sustainable Development Commission.

Jackson, T. (2005) “Lifestyle Change and Market Transformation. A briefing paper prepared for DEFRA’s Market Transformation Program. Centre For Environmental Strategy. University of Surrey.

Jackson, T., Jager, W. and Stagl, S. (2004). “Beyond insatiability: Needs theory, consumption and sustainability” in L. Reisch, and I. Ropke (eds) *The Ecological Economics of Consumption*, Edward Elgar, Cheltenham, pp.79-110.

Jackson, T. ed. (2006). *The Earthscan Reader in Sustainable Consumption*. London, Sterling VA: Earthscan.

Kaplan, H. and M.Gurven (2005). “The Natural History of Human Food Sharing and Cooperation: A Review and a New Multi-Individual Approach to the Negotiation of Norms”, in H. Gintis, S. Bowles, R. Boyd and E. Fehr (eds.), *Moral Sentiments and Material Interests*. Cambridge, Mass., London UK: the MIT Press, pp.75-115.

Kasser, T. & R.M. Ryan (1993). “A dark side of the American dream: Correlates of financial success as a central life aspiration”, *Journal of Personality and Social Psychology*, **65**, 410-422.

Kasser, T. (2002). *The High Price of Materialism*. Cambrigde Mass.: the MIT Press.

Langlois, S. (2005) *Consommer en France*. Les éditions de l’aube.

Lavers, T. (2007). “Asking people what they want or telling them what they ‘need’”? Unplished. Bath: Wed Research Group, Bath University.

Lavoie, M. (2004). “Post Keynesian consumer theory: Potential synergies with consumer research and economic psychology”, *Journal of Economic Psychology* 25, 639-649.

Lintott, J. (2007). “ Sustainable consumption and sustainable welfare”; in Zaccaï, E. ed. *Sustainable Consumption, Ecology and Fair Trade*. London and New York: Routledge. pp. 41-57.

Lutz, M.A. and K. Lutz (1988). *The Challenge of Humanistic Economics*. Menlo Park: Benjamin Cummings.

Manno, J. (2002). Commoditization: Consumption Efficiency and an Economy of Care and Connection” in Prinzen, T. M. Maniates and K. Conca (eds), *Confronting Consumption*. Cambridge, Mass.: the MIT Press., pp. 67-101.

Max-Neef, M. (1992). *Human Scale Development*. New York and London: The Apex Press.

McCracken, G. (1986). “Culture and consumption: a theoretical account of the structure and movement of the cultural meaning of consumer goods”. *The Journal of Consumer Research*, **13,** 71-84.

Michaelis, L. and S.Lorek (2004). “Consumption and the environment in Europe. Trends and Futures”, Environmental project N° 904. Danish Environmental Protection Agency.

Nørgärd, J.S. (2006) “Consumer Efficiency in conflict with GDP growth”, *Ecological Economics* **57** 15-29.

Parsons, T. (1951). *The Social System*. The Free Press of Glencoe.

Riesman, D. (1952). *The Lonely Crowd*. Yale University Press. Trad Française: Riesman, D. (1964) “La Foule Solitaire : Anatomie de la société moderne. Paris : Arthaud.

Røpke, I. (1999). « The dynamics of willingness to consume », *Ecological Economics*, **28**, 399-420.

Sanne, C. (1995). “Willing consumers – or locked-in? Policies for a sustainable consumption” *Ecological Economics*, **42**, 273-287.

Schwartz, S. H. (2006). “Les valeurs de base de la personne: théories, mesures et applications”. *Revue française de sociologie*, **45** (4), 929-68.

Segal, J.M. (1998). “Consumer Expenditures and the Growth of Need-Required Income”, in D.A. Corcker and T. Linden (eds.). *Ethics of Consumption*. Lanham, Boulder, New York, Oxford: Rowman & Littlefield.pp.176-198.

Seyfang, G. (2003). “From Frankenstein foods to veggie box schemes: sustainable consumption in cultural perspective”. CSERGE Working paper EDM 03-13, Norfolk: University of East Anglia.

Sen, A. (1981). *Poverty and famines: an essay on entitlement and deprivation*. Oxford: Clarendon Press.

Shove, E. (2004), ‘Changing Human Behaviour and Lifestyle: A challenge for sustainable consumption’, in Reisch, L. and Ropke, I. (eds) (2004), *Environment and Sustainable Consumption*, Cheltenham, UK: Edward Elgar, pp. 111-131.

Simoons, F.J. (1994). *Eat not this flesh: food avoidances from prehistory to the present*. 2nd edition. Madison, Wisconsin: University of Winconsin Press.

Smith, A. and F. Kern. (2007). “The transitions discourse in the ecological modernisation of the Netherlands”. SPRU Working Paper (May 2007), University of Sussex.

Sorokine, P. (1957). *Social and Cultural Dynamics*. Boston: Porter Sargent Pub.

Spash, C.L. and N.D. Hanley. (1995).”Preferences, information and biodiversity preservation”. *Ecological Economics*, 12, 191-208.

Thompson, M., R. Ellis and A. Wildavsky (1990) *Cultural Theory*. Boulder, San Francisco and Oxford: Westview Press.

Thompson , M. & S. Rayner (1998). “Cultural Discourses » in S. Rayner and E. Malone (eds.) *Human Choice and Climate Change*. Columbus: Battelle Press. 265-343.

van den Bergh, C.J.M., A. Ferrer-i-Carbonell, G. Munda (2000). “Alternative models of individual behaviour and implications for environmental policy”, *Ecological Economics*, **32**, 43-61.

Warde, A. (1997). *Consumption; Food & Taste*. London, Thousand Oaks, New-Delhi: Sage Pub.

Wilk, R. (1999) “Towards a Useful Multigenic Theory of Consumption”, Annual Summer Study of the European Council for an Energy Efficient Economy. Mandelieu, France, May 30- June 4, 1999.

Wilkinson, R.G. *Poverty and Progress. An Ecological Perspective on Economic Development*. New-York, Washington: Praeger Publishers.

Wilson, M.S. (2005). “A Social-Value Analysis of Postmaterialism”, *The Journal of Social Psychology*, **145**(2),209-224.

York, R. and E.A. Rosa (2003). “Key Challenges to Ecological Modernization Theory”. *Organization and Environment*, **16**, 3, 273-287.