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SCENARIOS AS TRANSITION TOOLS ?

THE CASE OF SUSTAINABLE FOOD CONSUMPTION

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Summary

How do scenario tools and the (policy) domain of sustainable consumption relate to each other? Is the scenario approach a relevant tool for Transition Management-like planning processes which focus on the specific issue of consumption?

Scenarios are an important aspect of a new range of planning approaches focused on innovation, like the Dutch Transition Management (TM) approach (Rotmans, 2001). Indeed, this planning approach relies on the construction of transition scenarios in order to frame under a common guiding 'vision' the objectives and actions proposed by policy actors (Loorbach, 2007, p.116). Efforts are dedicated to develop this type of innovative policy processes, since handling the complex and long-term challenges of SD seem to call for participative, reflexive and adaptive processes to planning (Voss and Kemp, 2006). The CONSENTSUS project aims at exploring the consumption issue through scenario building in the wider context of transition management and system innovation. To do so, sustainable consumption (SC) was disintegrated into three SC strategies, namely eco-efficiency, decommodification and sufficiency, which were then used as axes for the scenario construction.

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INTRODUCTION : ADDRESSING CONSUMPTION THROUGH SCENARIOS

Uncertainties and the apparent urgency of the contemporary environmental and societal stakes generate policy situations where traditional decision-supporting tools reach many of their limits. Policy-makers, civil society organisations and scientists alike are thus looking for new and refined sets of tools which guide policy towards sustainable development objectives. Scenarios and scenario planning are thought to be such tools, notably because they are said to have the potential to generate thinking and creativity about sustainable development and sustainable development policies. Their use is typically recommended in situations where complexity, uncertainty, long-time horizons, cross-scale and cross-sector interactions are the rule (Alcamo et al. 2005). Sustainable issues have exactly these characteristics (Kates, et al, 2000). More specifically, in approaches aiming at 'managing' systemic transitions towards more sustainable patterns, scenario building is becoming a central tool used to generate future visions of the system at hand and foster interactive processes.

The issue of sustainable consumption patterns is one of the important drivers towards sustainable development. Part of the complexity of sustainable consumption is directly linked to the concept of 'consumption' which can be limited to the purchase of goods and services, or on the contrary, understood within a wider socio-economic context of constructing 'exchange' and provision (encompassing also non-commodities) in order to fulfill human needs. This process of opening up the concept to broader socio-cultural aspects results in a more comprehensive picture of what consumer behavior and practice is (and consequently, what needs to be changed).

The CONSENTSUS project (*'CONstruction of ScENarios and exploration of Transition pathways for SUSTainable consumption patterns'*) is settled within this context. The research aims at exploring the specificity of addressing consumption through scenarios, in the wider context of scenarios for transition management and system innovation. In other words, addressing the question whether or not *scenario approaches could be relevant for Transition Management-like planning processes which focus on the specific issue of consumption?* To generate some insight into this question, the stance taken was to implement during the project a scenario exercise, both in

order to gain insights on the tool's mechanics itself and to identify a series of pathways towards sustainable consumption patterns¹.

In this paper, we present the conclusions drawn from this exercise. We first give an overview of the methodology (Section A). These are structured in two sections. Section B reflects on consumption through scenario construction and specifically on the (re)interpretations which emerge for 'consumption' through presenting the three scenarios (B.1), a first step towards integration (B.2) and conclusions in that regard (B.3). Section C reflects on the implications and specificity of addressing the consumption issue with scenario exercises through structuring the insights of the scenario exercises in terms of scenario 'building blocks' (or mechanics) (C.1) and outcomes (C.2).

A. THE CONSENTSUS METHODOLOGY

1. *From discourses to strategies*

The challenge of the scenario construction methodology was to translate theoretical accounts on sustainable consumption into a practical structure for scenario design. This has been solved with a '*Decomposition Analysis*'. The method allows deducing three interrelated parameters (i.e. macro-economic 'identities') that encompass the construct of sustainable consumption. *Decomposition Analysis* was initially introduced by Kaya in 1989 in the context of climate change and has recently been used in scenarios for carbon reduction (Agnolucci, et al., 2007).

In a decomposition analysis, a problem (here, sustainable consumption) is split up in various significant (sub-)ratios. This somewhat formal approach starts from the basic assumption that sustainability can be measured by an indicator of productivity of valuable resources (or of material efficiency) in the well-being production process. This can be expressed in the following formula: (1) $S = \mathbf{WB} / \mathbf{EF}$. The formula is not to be considered as an equation with calculable and interdependent ratios but rather as a meaningful way to formalize a construct and hence to think about its internal causal relationships, hence allowing to organize any discussions on the issues at stake (Agnolucci, et.al, 2007). Formula (1) is then disaggregated in three ratios: $S = (\mathbf{WB}/\mathbf{Se}) * (\mathbf{Se}/\mathbf{C}) * (\mathbf{C}/\mathbf{EF})^2$. This latter formula highlights three discourses on sustainable

¹ The other strand of research aimed at appraising the characteristics of scenarios through a theoretical analysis which yielded their underlying mechanics, potential outcomes and factors of use: these aspects have been developed in another IHDP paper (Mutombo, Bauler, "Scenarios and Sustainable Development Governance"); see also Mutombo, Bauler, 2008.

² Where: **S** stands for Sustainability; **WB**= the level of well-being; **EF**= the environmental load or ecological footprint; **C** = Commodities and **Se** = service provided by a commodity (e.g. as used by Nørgård 2006).

consumption: each of the three ratios represents a 'pure' strategy to enhance sustainability (see Boulanger, 2008 or Paredis et al, 2009):.

- **EE: Eco-efficiency (C/EF)** aims at decreasing the intensity in materials of the production, use and disposal of commodities (Industrial Ecology, the Cradle-to-Cradle movement ...).
- **DC: De-commodification (Se/C)** aims at decoupling the service provided per commodity from the nature of the commodity, i.e. from their market-centered characteristic, in other words limiting as a consequence the influence of markets and increasing the influence of other 'function providing' systems or organisations through which needs and aspirations can be invariably satisfied too (Local exchange networks, communitarian work...).
- **S: Sufficiency (WB/Se)** aims at disconnecting well-being from the services provided by commodities, i.e. in simplified terms, delinking a product's functions from the wellbeing they generate (Voluntary Simplicity, degrowth ...).

These three discourses, or strategies, on sustainable consumption have been at the core of the structure given to the scenario exercise, which was located in the specific case of food consumption. Each of the discourses has been explored through the construction of a scenario illustrating what the world could look like in 2050 if we were to follow strictly the principles of each of these strategies.

2. From strategies to scenarios

Four participative meetings were organized: an introductory workshop to present the project, the methods as well as background information; two scenario workshops to brainstorm on the strategies based on the question "*What happens when great efforts and funds are devoted to the EE, DC or S strategy over the next decennia?*", as well as a feedback meeting to collect reactions on the final product and the whole scenario process. The workshops have generated inputs which were then worked out by the research team, synthesizing and creating coherence among the workshops' results through drafting three images, each describing potential EE, DC or S worlds in 2050. The final output were 3 narratives presenting 3 worlds through daily life examples (for a full methodological account see Paredis et al. 2009).

3. Towards integration of the strategies

Beyond the construction of three scenarios illustrating the main discourses on sustainable consumption, it was necessary to reflect in terms of integration of these three perspectives. The formula presented above shows the logical interconnectedness and complementarities of the

three main discourses in sustainable consumption. Indeed, an effective transition to sustainable consumption will need mixed strategies, acting on the three ratios because each of them taken separately has intrinsic limits. To do this, a statistical analysis, labelled *Q* methodology, was used to highlight elements of consensus and contention among the three discourses on sustainable consumption. Those conclusions were based on a participatory ranking of 37 statements stemming from the three scenarios/discourses by a sample of 45 participants (for a full methodological account see Lefin, 2008).

B. THE RELATIVITY OF CONSUMPTION

1. Three scenarios of sustainable food consumption

Three scenarios have thus been produced along the three strategies. None of them represents a catastrophic, non-sustainable future to be avoided; and opposite, none of the scenarios presents a sustainable world as such. The following discussion wants to show the different stances which can be taken of consumers' perspectives when social change occurs in favour of sustainability.

In the ***Eco-efficiency (EE) scenario***, consumers are defined as decision makers, as autonomous shoppers whose aggregate choices determine the future of food production. The concept of **consumer sovereignty** stands central in this perspective. The market is considered as a mechanism for translating individual preferences, including the eco-efficiency oriented belief-set. The central argument goes that choosing for green products through the market steers society towards sustainable food production, provided that the right incentives are given. Sovereignty implies that a consumer is purposeful and goal oriented. The EE scenario portrays a relatively passive consumer, whose participation and reflexivity in terms of sustainability criteria is integrated at the level of the purchase act, through the types of product and services bought. (S)he trusts technological progress. The EE consumer is in a customer relationship with the retailer, without effective contact with the producer, and as a consequence is in demand for precise, comprehensive and understandable information from firms and authorities to assess food quality.

In the ***De-commodification (DC) scenario***, the consumer can be seen as a citizen-entrepreneur. This type of consumer has significant influence on the way the food supply is organized outside of the market: both individually as well as in groups, the citizen-consumer shapes the socio-technical food system through local governance systems (consisting of local citizens and

municipal actors). Consumers in a way are 'entrepreneurs', taking actively part in the management of the food system, even in the production of food. In this less commoditized world, a **political consumer** emerges: not a 'voting 'at the check-out consumer' (Jacobsen and Dullard, 2007) but a concerned civic actor. Local, seasonal production and consumption patterns lead to bottom-up partnership-types of relationships. The DC scenario is characterized by co-production, blurring the distinction between consumption and production and empowering the 'consumer' with a high level knowledge and practice of the food system. Responsibility and active engagement are important drivers of action.

In the **Sufficiency (S) scenario**, the consumer is labelled a **self-reflexive consumer**. The sufficiency scenario features a highly self-conscious consumer, analysing his consumption behaviour through 'cost/benefit' analysis in terms of impact on personal and social well-being, direct and global environment... This consumer has come to question the underpinnings of consumption practices as such. Aware of the cultural relativity of behavioural patterns, this type of consumer debates on how the good life can be defined and operationalized. The consumer in the sufficiency scenario has acknowledged the existence of inevitable underlying complexity (i.e. personal complexity and process-related cultural complexity). Uncertainty, unpredictability, uncontrollability and cultural relativity are concepts that one tries to tackle in decision processes in consumption situations, which calls for an S consumer which is characterised by a high degree of self-knowledge (or reflexivity) as the basic condition to a more efficient relationship between the desired service and the experienced satisfaction.

2. Towards an integration of the three strategies: Q-methodology

Each of the 3 strategies individually is an answer to provide a 'sustainable consumption'-oriented world, but each of them is only a partial response to the challenges of sustainable consumption. A fully sustainable consumption world would need to combine elements of the different scenarios, or combine the 3 worlds. The integration of the 3 scenarios is thus a major question which was addressed by applying a Q-methodology.

Without presenting the details of the process, the final conclusions are summarized below (for a full account of the methodology, process and results, see Lefin, 2008). The Q methodology highlighted themes which garner either consensus or disagreement among the 3 strategies, as well as possible ways of combining elements from the three strategies. The clearest point of agreement is the recognition by all that education is a fundamental aspect for sustainable consumption. The most important outcome of this analysis is a certain form of validation of the

scenario method through the confirmation of the 'discursive' stability of the 3 strategies (and their narratives). The three strategies which we identified and developed in the scenarios are effectively existing and operant in the representations of participants. Amongst our (non representative) sample of participants, groups of people could be identified that really 'think' one should follow either an EE, DC or S strategy in order to lead the future of food consumption towards more sustainability. This analysis confirms that the performed scenario exercise has an anchor in reality.

Based on the on the Q methodology results, the specificity of the three strategies can also be termed as follow. In the eco-efficiency scenario, the belief lies in the human capacity to strive towards well-being and preserve the environment through institutions and a form of societal organization which is able to direct and regulate markets as well as science and technological progress. The decommodification strategy seems to favour the notion of responsibility, of societal inclusiveness and active engagement, while investing in community-based interventions. The sufficiency scenario seems to be characterized by an acceptance of limitations with regard to the finitude of the world and of one's own needs, which highlights the belief in a (rational) human being who constantly activates a highly reflexive behaviour.

Looking at the issue of consumption, entails to notice that the very concept changes over the three different strategies/discourses derived from the decomposition analysis. Consumption appears to be an equivocal concept when it is considered through alternative discourses of sustainable development. The underpinnings of 'consumption' are particularly different in each scenario. The word 'consumption' implies and reinforces a different meaning in a different discourse (Foucault 1969). In this sense, the term 'consumption' will have highly alternative 'discoursal functions' within this web of (reproducing) interrelationships, hence potentially leading to very different possible realities. This leads us to consider the importance of the argument of how different starting points lead to alternative social arrangements. The alternative meanings of 'consumption' entail a multitude of highly complex societal evolutions and (in some instances) behavioural changes. Working for our own food, incorporating inter-personal wellbeing in our daily decisions or systematically internalizing externalities in business, each of these operationalisations of the three different 'objectives/strategies for sustainable consumption' implies a fundamental change in human organization and/or behaviour. Paradoxically, the question rises whether such multiple natures of the discourse on

consumption are captured by the initial concept when the aim is to link the practices of obtaining, preparing and eating food with the objectives of sustainability.

C. THE SPECIFICITY OF CONSUMPTION

1. *Analysing consumption along 'Building Blocks' of scenario construction*

In order to discuss the adequacy of using scenarios as transition tools for consumption issues, we analyze the CONSENTSUS scenarios along a theoretical framework which allows to highlight five important dimensions or generic characteristics of scenarios. These five building blocks compose scenario approaches and exercises to different degrees, and allow to assert an identity to individual scenario exercises : ***Future-oriented thinking, Collecting and integrating information, System thinking, Story-like approach, Dialogue interface*** (see also Mutombo and Bauler, 2008).

FUTURE-ORIENTED THINKING

Addressing sustainable consumption has led to an original scenario construction approach in terms of methods and modes of thinking. Indeed, the CONSENTSUS scenario exercise is a hybrid of normative and explorative modes of future-thinking. The approach addresses "*specific targets*", the EE, DC and S worlds, but leaves those targets rather undefined. Simultaneously, it initiates an *exploration* of the possible EE, DC and S worlds by asking the question "*what can happen if we follow the principles of each strategy?*". An explorative mode of thinking was thus endorsed, but within a predetermined (normative) framework of driving forces, i.e. the three strategies. It is this pre-determined framework that affirms the normative character of the exercise.

One of the differences between our hybrid approach and classic explorative scenarios is that, in the latter, there are no pre-determined driving forces and that the subjective and normative dimensions in the selection of the '*most important and uncertain*' variables (e.g. performed through brainstorming or Delphi exercises) is legitimated by the participation of experts and/or stakeholders. In the CONSENTSUS exercise, this form of initial participatory legitimisation has not been addressed within the process nor with the participants. The choice has been made to rather support the credibility and salience of the exercise on the basis of sustainable consumption literature (i.e. consolidated peer-reviewed knowledge), which highlighted - through decomposition analysis - a scenario approach based along three strategies.

The CONSENTSUS approach used the scenario process as a simulator with regard to pre-determined uncertainties and driving forces, rather than as a revelator of those ‘most important and uncertain’ variables. What is ‘revealed’ however, are the underlying assumptions associated to each of the three strategies and moreover the possible and plausible multiplicity of perspectives which coexist around the issue of sustainable food consumption. As a result, the CONSENTSUS approach highlights the ambivalence of SD.

On another level of observation, it is interesting to analyze the nature of the ‘futuristic’ and intuitive ideas, which were identified during the scenario workshops (like edible packaging, local community barter systems, a technological device measuring food intake...). It is not that these ideas as such were really innovative. Their relevance is related to the different strategies and how identical ideas are coloured differently in each scenario. Simultaneously, while these examples of practices are put forward to illustrate the life in the EE, DC and S worlds within a time horizon of 50 years, these very same practices prove in fact to be deeply linked to present and historical references. For example, the main reference popping out during the scenario brainstorming when exploring non-market policy options remains the very negatively connoted communist practices in the soviet countries’ block. All the same, the most innovative elements which were identified are actually ‘seeds of change’ which are already today on the drawing tables of industry or policy makers. For instance, the ‘food delivery mailboxes at household level’ identified as central innovation within the EE scenario (e.g. rendering a higher degree of efficiency for transport and delivery of food), have been implemented in a recent architecture realization in Leuven⁶ (Belgium) which proposes apartments with minimized kitchens and with external delivery boxes for food. Such anecdotic but recurrent occurrences confirm to a certain extent that scenario construction is more about how ideas are re-structured, than about ‘creating future knowledge’.

COLLECTING AND INTEGRATING INFORMATION

The decomposition analysis and the three strategies are the result of a synthesis of sustainable consumption literature and resulted in the integration/disintegration of various elements of information related to discourses around sustainable consumption. The CONSENTSUS scenario process highlighted consumption as being a very wide field of investigation without clear and precise boundaries. Indeed, collecting information on *food* consumption turned out to be highly demanding. It requires researching a vast array of topics and sources of information: from meat consumption, to vegetarianism practices, through artificial meat and protein drinks; from

⁶ www.tweewaters.be

agriculture to marketing; from international organizations to national and local data providers. Connecting and integrating these different types of information is necessary, for example, when studying alternative consumption practices (like vegetarianism), and implies to take into account various levels of analysis. Applying the three strategy-discourses resulted in providing some order to integrating these different strands of information.

Second, *Q*-methodology allowed to reach another level of integration of the collected information, namely the configuration of an integrated strategy for sustainable consumption based on the entire set of ideas and perspectives generated during the scenario exercise. The analysis has delivered hints for the integration of the different perspectives through highlighting connections and disjunctions among them.

SYSTEM THINKING

From a *production* point of view, the delineation between production and consumption seems robust and leads to study a rather closed system, from raw material to final product. Often studied from an economic and environmental resources-oriented stance, addressing production also implies the use of rather formalized analytical frameworks, such as Life Cycle Analysis, which endorse a traditional form of system thinking. However, when endorsing the *consumption* perspective, the distinction between production moments and consumption prerogatives suddenly appears artificial. Thinking in terms of consumption asks to open up the investigation field to a vast array of societal and individual practices based on habits, values, standard of living..., which are mirrored in the production and distribution processes and, hence, ask to widen the perspective taken to the entire chain of production-distribution-consumption.

As a consequence, consumption is composed of these various aspects along the production-distribution-consumption chain which are grounded in different sectors and disciplines. Consumption is difficult to apprehend because of the lack of a stabilized analytical multi-disciplinary, multi-sector, multi-actor framework. As a reaction to this situation, the CONSENTSUS research processes mobilized multiple frameworks⁷ which helped taking into account the food system as a whole, but did not really lead to systemic analysis across sub-dimensions (in the sense of pinpointing specific interrelations between precise variables).

⁷ The Consensus research processes mobilized multiple frameworks like the '*micro-meso-macro*' framework (individual needs and resources, modes of provision and social values, norms and meanings associated to the current food system (Boulanger, 2007); the multi-level perspective composed of landscape (i.e. contextual environment), regime (i.e. dominant structures) and niches (i.e. alternative innovative elements) stemming from system innovation and transition theory has structured the diagnosis of the current state of food consumption (see among other Loorbach, 2007); and the STEEP(D) framework (Socio-cultural, technological, economic, environmental, political and demographical aspects) has framed the brainstorming on the contextual environment of the three scenarios.

Studying consumption from a systemic point of view revealed thus some difficulties with regard to drawing clear boundaries around a 'food consumption system'. Combined to the multiplicity of perspectives on consumption, understanding and exploring the final act of consuming opens a whole world of knowledge and of potential interrelations.

STORY-LIKE APPROACH

The story like approach, i.e. the elaboration of the scenarios and narratives, has been divided in the CONSENTSUS exercise between (1) the elaboration of the three images as a synthesis of the workshops' brainstorming sessions, and (2) the writing of narratives to illustrate the EE, DC and S worlds through daily life stories.

The elaboration of the images and the writing of the narratives proved useful to highlight and correct some problems in the developed EE, DC or S worlds such as a certain lack of coherence or blind spots in the 'mechanics of the worlds'. However, some of the incoherencies and imprecisions could not be solved in the context of this exercise; for instance, in the DC scenario there remains a blind spot as to the configuration and operationalisation of the coordination mechanism which will help that demand and offer for food are met (in the absence of a monetary exchange system).

DIALOGUE INTERFACE

As a consequence of the difficulty to draw clear boundaries around a 'food consumption system', selecting participants implied to target actors from a variety of sectors in order to favour diversity. From a basic point of view, and like any participative meeting, the scenario workshops allowed of course for interpersonal dialogue. Independently of the consumption perspective, the research nature of the project had implications on this aspect.

Scenario exercises have the potential to be 'boundary organizations' (in their procedural reading) or to generate 'boundary objects' (in their substantive reading). This means that - as other policy-making tools such as indicators for SD or participative evaluation processes - scenarios can act "*as interfaces between a series of interconnected arenas*" (Bauler, 2007, p.161) such as policy, science, society. For example, '*Limits to growth*', the Meadows&Meadows report of the *Club of Rome* in 1972, has reached the level of boundary object as it became not only a scientific or policy reference, but succeeded in highlighting and linking together different types of discourses generating a number of debates at the societal level. Parallel to the first image of the Earth from space and the oil shocks, this report did help to change the way people in the 1970s were looking at resources and pollution.

The generation of such 'boundary objects' is highly contingent in general and can probably not be expected from a research project. CONSENTSUS is a rather experimental R&D project with its own scientific objectives, and despite a participative phase, the project was not driven by societal or political goals. However, CONSENTSUS showed that consumption issues, as complex as they are, can be used as main foci of scenario approaches and can in principle allow the emergence of 'boundary organisations' in order to realize the emergence of the necessary policy arenas to realize a transition at the level of consumption practices.

The issue of sustainable consumption revealed to be a very specific topic of research when it comes to study it through systemic-oriented tools and approaches as is illustrated through this scenario exercise and as can be extrapolated to the implementation of a transition management process on consumption patterns. The specificities of consumption highlighted here revolve, among others, around the difficult closure of a 'consumption system'. This observation contributes to support the accent given to the second phase of the project, i.e. to question the wider field of system innovation and transition theory including the role that consumers and their daily practices can play in system innovations.

2. Learning and strategizing : the outcomes of the CONSENTSUS scenario exercise

The theoretical framework of scenarios developed in this research allows to characterize scenarios along five building blocks, and link these to two generic scenario outcomes: 'learning' and 'strategizing'. 'Learning' has been interpreted here as a conceptual type of 'policy use' of the scenario exercise. 'Strategising' pertains to an instrumental, direct type of 'policy use' (see also Mutombo and Bauler 2008). In this final section, conclusions are drawn with regard to these potential policy outcomes and policy uses of scenario exercises which investigate sustainable food consumption.

LEARNING

Policy learning, i.e. conceptual use of information for policy processes, implies in our case that scenarios can influence a user's understanding of a problem or situation, even if the information is not used to base decisions in a direct way (Hezri, 2006, pp.134-137). Learning processes are disaggregated in different types (Brown, 2003): ***first order learning*** (i.e. internalizing facts and causal logics) and ***higher order learning*** (i.e. learning with regard to problem definitions,

norms, values, goals of policy actors). The conceptualisation of higher order learning can thus be extended to include ***congruent learning***, which translates in our case the fact that the scenario exercise generates a shared understanding of the issue at hand (Mutombo, Bauler, 2008).

It appeared difficult, in practice, to draw the line between ***first*** and ***higher order learning***, notably because it proved impossible to identify whether or not 'new' factual information has been generated through this exercise. The main innovative piece of information for the participants was linked to conceptualising SC in terms of the three strategies, their logic and driving forces, which potentially contributes to structure their understanding of sustainable consumption-oriented information and actions. This insight on consumer perspectives can be related to ***higher order learning***, i.e. the influence of the scenario exercise on underlying assumptions, norms and beliefs around sustainable food consumption. Indeed, among the three strategies, eco-efficiency is rather well known. 'Discovering' and reflecting on the two other sustainable consumption strategies has proved to change the problem definition related to consumption.

In terms of ***congruent learning***, i.e. of convergence between the participants, few elements could be observed. While the participants did get along during the workshops, they did not report on the creation of 'networking outputs'. Moreover, the CONSENTSUS scenario exercise, as acknowledged in the above discussion of scenarios as '*dialogue interfaces*', did not aim at a societal objective, e.g. of creating common and shared vision of the future for further policy actions. In fact, the chosen approach probably generated a too low level of ownership with regard to the constructed scenarios, a problem which has been repetitively stated by similar R&D-based scenario projects.

STRATEGIZING

Our approach to scenario building does not yield direct instrumental impacts for strategy-development, for instance in the sense of precise scenarios against which policy strategies could be assessed, nor as a normative desirable vision along which to plan policy actions and measures. Nevertheless, these three scenarios have led to learning elements that could be valuable in a strategy planning exercise.

The *Q*-methodology has been used to configure an open-ended participatory 'sustainability' assessment of the elements which compose the 3 scenarios; participants ranked statements with regard to their own definition of sustainable food consumption, inducing a mapping of their societal values with regard to food practices. The *Q*-analysis was not defined to point to a unique integrated scenario, which could then have been used to lead to concrete policy options. More

importantly, its configuration has confirmed the existence of three different perspectives on sustainable consumption within the policy actors of variable stakeholder backgrounds, as well as elements of junction and disjunction among them. The discussions and reflections around the three strategies and their concrete illustrations through potential images of daily life practices could contribute to redefine the sustainable answers to food-related issues taking into account, not only the drivers of an eco-efficiency scenario, i.e. technological and market-oriented answers (intelligent fridge, GMOs etc.), but also the potential of SD lying in the DC and S drivers, i.e. within the civil society and the community (be it local or global) and within the reflexive stance with regards to the effective needs and limitations of individuals and societies. This could sound trivial with regard to the current state of knowledge within the scientific and stakeholders' communities working with such sustainability issues, but discussions with participants indicate that these perspectives are not widely spread.

Concretely, while some individual elements stemming from the de commodification and sufficiency strategies are starting to reach political arenas (e.g. the degrowth discourse, short food circuits...), it is mainly the 'eco-efficiency' strategy that is given the necessary credibility in political arenas so far. Such an exercise, could be one way not only to inform relevant stakeholders about the accuracy of a tri-folded approach to sustainable consumption, but to really make it part of their personal understanding of the consumption issue.

CONCLUSIONS

The three scenarios and their construction process reveal that scenario exercises provide a framework towards a parallel simplification and 'complexification' of policy discourses (Bauler, 2008 : 70). They provide a general overview of the consumption dimension and, moreover, highlight the complexity of the issue in terms of multiplicity of perspectives and rationalities. Particularly in SD policy-making, it is important to be aware of the ambivalence of objectives and values implied in the now widely used expression of 'sustainable consumption'. The CONSENTSUS scenario exercise illustrates the importance of scenarios to re-emphasize the normative dimension of sustainability issues. Such 'policy problems' require scientific as well as factual answers, but necessitate to highlight the diverse rationalities at stake in sustainable consumption through presenting and questioning perspectives and underlying values. The type of approach pursuit in the CONSENTSUS project contributes to question the quest of scientific a-

contextual truth when the question is, in the strict sense, political and in the wider sense, societal.

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