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EDITORIAL

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Editorial on *Sustainability* e-Journal

As a member of the Advisory Board of *Sustainability: Science, Practice, & Policy*, I am deeply encouraged by the launching of this new e-journal. The challenging endeavor of launching a new scholarly publication has been supported by an innovative partnership [between CSA, the National Biological Information Infrastructure (NBII), and Conservation International (CI)], who have put together a stellar board of editors to guide the journal as it develops a community of contributors and readers. The professionals, academics, and policymakers who have joined this effort are not only experts in their respective fields but are also committed to promoting productive debate on issues related to sustainability. The goal of the publication — *to establish a forum for cross-disciplinary discussion of natural and social sciences, practices, and policies related to sustainability* — is an important step toward creating achievable sustainable practices through buy-in and consensus.

Starting a journal like *Sustainability* is a critical undertaking. The very term "sustainability" is murky and difficult to define and will only evolve into a coherent discipline through well-informed debate. Disciplines feeding into the field, as well as professionals already examining its practices, come from highly diverse arenas. The beliefs and priorities from different sectors, countries, and cultures are equally divergent. For example, examining how to sustainably manage a large and complex coral reef environment will draw dramatically different views from fisheries managers, scientists, local and indigenous peoples, and political players. Action will not be possible unless all parties are willing to compromise to reach consensus. Such negotiation is a tedious process, which must be held in an open forum. *Sustainability* will be a model for this activity.

In setting its timing, content, and editorial standards, *Sustainability* will address multiple needs in the community of researchers and practitioners concerned with sustainable practices. First, by keeping its editorial focus, it will provide support for — indeed push — stakeholders to construct explicit descriptions of how they see specific problems in which current practices are clearly unsustainable. It is easier to identify a practice that is unsustainable than to identify the core sources of that unsustainability, much less which ones should be addressed first to alter the practice. The problem often centers on defining the core conflicts in a way that is acceptable to all parties involved *and* that will lead toward a change in practices on the ground to enhance sustainability.

Sustainability will also address the need for a coherent, identifiable, and central forum for the diverse community of people working on sustainability solutions. Because studies of sustainable practice problems are, by nature, cross-disciplinary, stakeholders are forced to read and interpret language, models, and references that are outside their home domains. These differences in discourse styles and expectations can, more easily than we'd like to admit, lead to misinterpretation. Much time can be wasted talking about semantics while skirting the substantive issues at hand. The editors and reviewers of *Sustainability* are committed to helping authors articulate their perspectives and the tools they create in ways that will resonate with the broadest possible readership. The journal will be a stable and consistent setting where stakeholders can safely formulate a new, rich language of sustainability, one that exemplifies a broad range of disciplinary cultures. In so doing, the journal expects to become a truly valuable asset for researchers, practitioners, policymakers, and others directly involved in studying sustainability problems and creating lasting solutions.

A third need the journal will fill is serving as a central forum for discussion through the Internet. The Internet now offers us the tools to create new virtual communities by providing multiple channels for sharing information and developing the forward boundaries of expert knowledge. In the past, many research institutions focused primarily on the conduct of science; the work of disseminating and providing access to their information was considered to some extent an "add on." The actual "usability" of the information for those who did not create it was secondary. This historical reality very much parallels the way that early computers — and their instructional materials — were produced. However, just as interface designs and online help systems have now become the litmus tests for the viability of computer software, so have the accessibility and usability of scientific information, particularly that supported by government funds. Today, most government research agencies have grown to think of themselves as information facilitators; they are charged with helping stakeholders easily find, understand, and use the information they produce. In launching this new journal, the partners are stepping forward as leaders, creating and disseminating the information and tools that are critical for understanding, and wisely managing, natural resources. Today, by mining the potential of the Internet, by creating new information technologies, and by supporting publications like *Sustainability*, we are broadening our role not only as an information provider, but also as a facilitator of information sharing and cross-disciplinary problem solving.

Of course, many communities of researchers have been reformed by the Internet, for instance in biomedicine, where centralized free bioinformatics resources like GenBank and PubMed have greatly added to the ability of the community to share and critique information. Without question, the connection between the National Institutes of Health and the National Library of Medicine (NLM) has been a powerful part of that growth. Through the NLM and its gateways, biomedical researchers can search in multiple systems for information from journals, drug trials, encyclopedic listings, toxicology references, book contents, data on clinical trials, abstracts from professional meetings, and dozens of other information resources. This cross searching has been built through collaborations of publishers, librarians, technology experts, and usability gurus to build user-friendly resources for researchers. Today, information providers and research institutions such as CSA, the NBII, and CI, are doing much the same with their collaborative resources. As the health of the environment becomes increasingly important in funding and political realms, the research community will increasingly turn to these powerful information resources to study the complex relationships between the health of the environment and that of human populations.

One way or the other, open access (which is not the same as free access) to scientific resources is inevitable. No doubt, it will take many years for institutions, publishers, librarians, authors, users (a.k.a., readers), and others to adjust to the new routes and costs of retrieving the information they need. Open access will certainly make all those involved in the production, distribution, and consumption of science more aware of how interdependent they are. *Sustainability* will play a central role in defining these components of community structure by presenting clearly written, robustly linked, and well-argued cross-disciplinary science in an open access forum.

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ARTICLE

The role of local ecological knowledge in sustainable urban planning: perspectives from Finland

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This paper is a study of the role of local ecological knowledge (LEK) as lay-expert knowledge in the urban land use planning process in Finland. The research addresses the importance of LEK, and the ways LEK is obtained and used. To obtain data, planning officials, biologists, and representatives of resident and nature associations were interviewed in the Helsinki metropolitan area. The results indicate that LEK exists among nature enthusiast, as well as local residents, and planners can obtain the knowledge in several ways, most notably through networks of knowledgeable key informants and local nature associations. Considering LEK in urban planning is important because it complements scientific ecological data and indicates places important to locals. Some of the challenges of using LEK include collecting it through participatory planning processes, distinguishing it from other information, valuing subjective knowledge, and empowering planning officials to use LEK. To enhance communication between stakeholders, social scientists should be integrated in the planning process. Furthermore, technical improvements, such as registers of key informants and more efficient use of nature associations' knowledge, would be useful in applying LEK.

KEYWORDS: environmental planning, indigenous knowledge, land use, urban planning, environmental awareness, community involvement, social sciences

Introduction

The loss of green spaces as a consequence of urbanization challenges us to consider the importance of urban nature more closely. Although urban nature, in the industrialized countries, is not typically a livelihood resource to residents, it does provide essential ecosystem services, including direct use, as in environmental, recreational and psychological services (Vandruff et al., 1995; Bolund & Hunhammar, 1999; Lankinen & Sairinen, 2000; Korpela et al., 2001), and in a wide array of educational and social services (Berkowitz et al., 2003; Sairinen & Kohl, 2004).

The use of ecological information in the urban land use planning process to preserve green spaces and ecosystem services for urban residents has gained acceptance (Sukopp et al., 1995; Niemelä, 1999; Kansanen, 2004). Presently in Finland, under the Land Use and Building Act of 1999, decisionmakers are required to base land use decisions not only on adequate ecological information from scientific studies, but also on the views and knowledge of local residents, nature enthusiasts, and other user groups and participants, who can provide information on an area's biodiversity.

Local participation with regards to urban nature has the potential to enhance the sustainable development of communities and their green environments (WCED, 1987; Redclift, 1993), especially if participants connected to the green spaces become integrated in planning (Kline, 2001). The literature has recently recognized the importance of such participation, perceived as one dimension of linking ecological and human social systems to guide sustainable urban land use planning (Grimm et al., 2000; Alberti et al., 2003; Pickett et al., 2004; Grimm & Redman, 2004; Yli-Pelkonen & Niemelä, 2005).

Several studies suggest that supplementing scientific data with local and traditional knowledge can broaden the information base needed for better decisionmaking regarding ecosystem and sustainable resource management (Berkes & Folke, 1998b; Berkes et al., 2000; see also Scoones, 1999). Most studies of local ecological knowledge focus on indigenous or rural communities and their ecosystems (Berkes & Folke, 1998a; Huntington, 2000; Olsson & Folke, 2001; Berkes et al., 2003); however a few studies have addressed the potential existence and use of such knowledge among urban ecosystem users (e.g. Colding et al., 2003). Barthel (2005), for example, addresses local ecological knowledge and participation from the perspective of adaptive co-management in urban parks. Devising a method by which local actor groups could make available their knowledge and thereby become an integral part of managing their urban ecosystem services of local green spaces would bring new dimensions to land use planning.

Local Ecological Knowledge

Local ecological knowledge (hereafter also LEK) refers to ecology as a natural science, and includes a person's general knowledge of nature and a more specific local knowledge. The concept can also be understood as lay or experiential ecological knowledge, which can be a blend of learned scientific knowledge and knowledge based on a resident's own observations and experiences from surrounding nature. As such, by definition, LEK is usually a hybrid and thus not strictly local or traditional (Clark & Murdoch, 1997; Nygren, 1999).[1] For instance, Olsson & Folke (2001) defined LEK in rural conditions as "knowledge held by a specific group of people about their local ecosystem" and "a mix of scientific and practical knowledge, being site specific and often involving a belief component." In our information society, science is omnipresent, and experiential knowledge is most likely influenced by scientific information (Folke et al., 2003). Urban residents, whether or not well educated, follow popular scientific journals, newspaper articles, and television programs to obtain information on urban nature and ecology. This can have a great impact when residents are observing and valuing urban nature.

When addressing local resident knowledge, it should be kept in mind that every interaction and interactor has a context and a background, and it is the context from which the construction of knowledge emerges. Furthermore, all knowledge is contextualized (Nowotny et al., 2001) and is a product of a social process (Hacking, 1999). Finally, local knowledge is usually strongly contextualized, containing elements such as experiences, beliefs, and fears that are dependent on the actors' roles in time and space (Kohl, unpublished; see also Hacking, 1999). Conversely, it should also be kept in mind that all research is contextualized (Nowotny et al., 2001), and scientific data can be weakly contextualized, for instance, when scientific experiments or measurements are done systematically and in controlled circumstances. With such weakly contextualized knowledge the author, time, or place do not have the same relevance as with strongly contextualized knowledge (Nowotny et al., 2001; Knorr Cetina, 1999).

Traditionally, expertise has been understood as emerging from a specific professional occupation or knowledge (Stehr, 1994), but according to Beck et al. (1994) institutional and scientific experts do not always know better, and strongly contextualized lay or experiential local knowledge can extend the concept of expertise (see Saaristo, 2000). In fact, who is an expert depends on the context (see Knorr Cetina, 1999) and each of us has much contextual expertise (Saaristo, 2000).

Unlike *ecological research information*, which includes precise scientific knowledge about species composition, diversity, habitat requirements and characteristics, and population sizes (Yli-Pelkonen & Niemelä, 2005), LEK is not a result of a systematic scientific study; its strength is in a lengthy series of local observations (Folke et al., 2003). It is essential to incorporate this type of knowledge in planning through participation.

Local Participation

The social science literature has broadly described ideas regarding local participation and its link to ecological modernization and global participation. Ecological modernization (as a political program, on one hand, and as a theory of social change on the other (Spaargaren, 2000)) has described new possibilities for citizen participation, but its challenges have also been widely recognized (Spaargaren, 1997). According to ecological modernization theory, the relationship between lay-actors (non-scientists) and experts (scientists), and the relationship between science and, for example, environmental policymaking, has undergone fundamental changes now that scientific uncertainties are no longer an internal matter for the scientific community (Spaargaren, 2000).

Furthermore, a potential enthusiasm for local participation can be seen as a reflection of global participation (Yearley, 1996). Global environmental problems (loss of biodiversity, pollution, etc.) as well as local crisis (such as natural catastrophes) that have worldwide effects on variable scales (see also Gunderson, 2003), have (with the help of global media) increasingly compressed the world. At least to some extent, global environmental problems are giving citizens, governments, and corporations a sense of global ties and of global identity for the occupants of spaceship Earth, which can make residents more willing to participate in the development of their local environment (Yearley, 1996).

Literature on public participation experiences in Finland (e.g. Paldanius, 1997; Kortelainen, 2000; Bäcklund, 2002; Koskiaho, 2002; Niemenmaa, 2002) has highlighted the challenges of local level participation. Urban planning situations have the same general challenges of local participation that Paldanius (1997) outlined. Key questions include: (a) who is able to participate, (b) what kind of attitudes and resources (knowledge, skills, and time) for

[1] *Local* refers to those urban people who live in or near the area of concern, or are in intense interaction with the area (such as people who live further away, but use the area's recreational services).

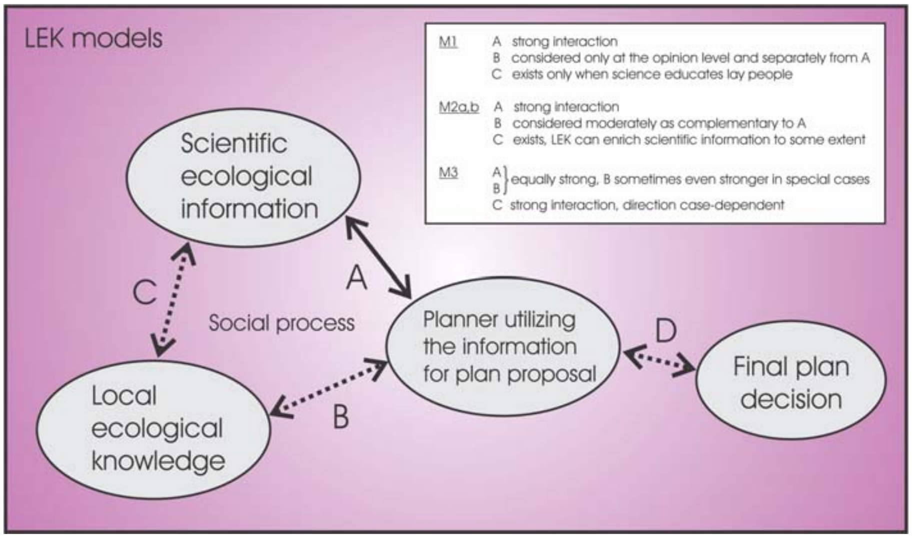

Figure 1. The relationship between Local Ecological Knowledge (LEK) and scientific ecological information in planning and decision-making can differ according to the models M1, M2 and M3 of Callon (1999). The arrows A, B, C and D depict the interactions between the elements, which are all part of the social process of planning. The dash lines of the interactions B, C and D illustrate their conditional existence.

participation do stakeholders (residents, associations, and land use planners) have, (c) are the right participatory methods used in relation to plan situations and participation objectives, and (d) how is local participation integrated into the land use planning and decisionmaking process.

One of the key issues in this study is the commitment with which lay people can participate in information production for decisionmaking. In order to understand lay people's role in the production and dissemination of scientific knowledge, Callon (1999) focuses on the diversity of possible modes of non-specialist participation in scientific and technical debates. He presents three models to address and clarify this issue; *the public education model* (M1), which "is based on theirreducible opposition between scientific and popular knowledge"; the *public debate model* (M2), in which lay people have different levels of knowledge and can to some extent participate in information production; and *the co-production of knowledge model* (M3), in which "lay people are actively involved in the creation of knowledge concerning them." This study uses these models as a framework to examine the real-life case of using LEK in an urban setting (Figure 1). The models are not necessarily contradictory, but, depending on the situation, can co-exist and complement each other.

According to Callon's **model M1**, the subjective LEK of lay people has nothing to contribute to objective scientific ecological information on which planning and decisionmaking is almost solely based (interaction A). Due to the prevailing mistrust between lay people and science, and in order to reduce this mistrust, and thus reduce critical opinions (interaction B) and reach rational decisionmaking, scientific experts have to intensify educational and informative actions towards lay people (interaction C).

According to **model M2**, local or lay knowledge, gathered by inquiries and public hearings from different actors or groups of actors, can enrich scientific expert information (interactions C and B), which forms a basis for planning and decisionmaking (interactions A and D), but even at its best is incomplete. Here this model is subdivided into **M2a and M2b** in order to better describe the different forms of participation (Kohl & Sairinen, 2004; Kohl, 2004). In M2a (called the **public hearing model)**, planners hear local knowledge directly and genuinely from participants, and participation can influence the planning process. M2a illustrates the aim of the new participatory policy and, if this model is accurate, participation is working as the policymakers expected. However, even if participants are heard, there is a great risk that the participation still has a little influence on the final plan (interaction D).

In **M2b (**called the **public representation model**), local knowledge is heard, but indirectly through representatives of local participants. These can be, for instance, local resident or nature associations. Local knowledge has the potential to influence the planning process as well as in M2a, but the knowledge users have to remember that they are hearing the interpretation of the representatives. However, these representatives can potentially present the knowledge to users better than individual participants.

If the **model M3** proves to be the most appropriate for our case, then lay people have an essential role in the collective production of knowledge and scientific information (interaction C). With regards to planning and decisionmaking, LEK has become equally as strong as formal science (interactions A and B), or, in particular circumstances, has become more important (interaction B). This could happen, for instance, when scientific ecological information is scarce and LEK is perceived as an essential part of combined information production (see also Weber & Word, 2001). In all these models (such as in M2), it is possible that parts of both scientific information and local knowledge received by a planner through interactions A and B are lost in the process and may not be transmitted to the final plan (interaction D).

This paper's fundamental objective is to study the existence and the role of local ecological knowledge in Finnish urban areas, and to propose how it can be best used in the urban land use planning process as *lay-expert knowledge*.

The study focuses on Finnish urban development, specifically in the Helsinki metropolitan area, where a great deal of nature has been retained within and around an urban area due to flexible residential planning and building. The potential existence of LEK in the Finnish urban settings is substantiated by the long tradition of Finns living close to nature in rural conditions, where the use of natural resources for livelihood and recreation resulted in lay people acquiring a deep knowledge of nature (Kangas & Kokko, 2001; Relve, 2002). Although rapid urbanization after World War II changed this tradition, many Finns residing in urban areas still have a close relationship with nature and regularly use nature areas for recreation (Lankinen & Sairinen, 2000; Sievänen, 2001).

Based on the aforementioned framework, the following research questions are addressed:

1. Is LEK seen as an important factor in urban land use planning?
2. What types and categories of LEK can be identified?
3. What are the challenges associated with obtaining and using LEK in urban land use?
4. In what ways can obtaining and using LEK be enhanced during the planning process?

Methods & Data Gathering

The study area was the Helsinki metropolitan area in Finland, which is a densely populated urban area, with 76400 hectares (188792 acres) and 960,000 inhabitants. Within this metropolitan area, numerous parks, forests, lakes, rivers, seashores, and inner bays are extremely important recreational resources (e.g. Lankinen & Sairinen, 2000).

The data were collected using semi-structured expert interviews (Flick, 1998; Huntington, 2000), a partly informal, conversation-like method that may reveal matters unlikely to be discovered using such methods as questionnaires (Flick, 1998). Direct verbal and non-verbal interaction allowed the interviewer to target specific data collection and to elicit motives behind the answers (Hirsjärvi & Hurme, 2000).

The selection of interviewees was based on a snowball sampling and saturation methods (Hirsjärvi & Hurme, 2000; Berg, 2001). Several relevant and known key informants related to the planning of three districts in the Helsinki metropolitan area were first interviewed (Silverman, 2000). These informants were then asked to suggest associates who would be good sources of LEK information. Many of the suggested interviewees were also connected to the planning of these particular districts, but since the interviewees were asked to express their experiences and views related to LEK use in a more general level in urban planning, the description of the districts is not presented here. This sampling strategy was not truly random, but was used to gather information from individuals knowledgeable about the subject matter (Berg, 2001).

Altogether eleven land use planning professionals (architects, landscape architects, and engineers), three biologists (a consultant, an environmental planner, and a researcher), four representatives of local nature associations (three biologists and a nature photographer), and three local resident activists were interviewed. Considering the research resources (time and money) and the lack of new information in the last interviews (saturation), the twenty-one interviews were considered adequate.

It is accepted that a relatively small number of interviews can cause biases and lower representativeness, but then again the conducted interviews were meant to be in-depth and detailed, to gather more nuanced perspectives. In addition, the sampling and interview methods can result in biased views if not treated critically. Each interview situation is always unique, and it is possible that in another situation the same person could have given slightly different answers (Flick, 1998). The interviewees were aware that the results would be published, and therefore it is possible that they gave ”socially desirable” answers. This should be acknowledged when applying or comparing the study findings to other urban areas.

Interviews

The interviewees were given the study's goals and an outline of the interview questions a week prior to the interviews to prepare themselves. The interview questions addressed the following issues: the existence of LEK in urban areas, what kind of residents can be LEK sources, the importance of LEK in urban land use planning, the methods to obtain LEK and integrate it in the planning process, challenges related to obtaining and using LEK, and potential ways to promote LEK in urban planning. The concept of *LEK* was introduced to the interviewees in order to make sure they understood the study's focus. The interviews were carried out on suitable premises during August 2002 - March 2004. The interviews lasted between 60 and 90 minutes and were recorded on Minidiscs, which were later transcribed word-by-word. The interview data were then analyzed using qualitative content analysis (Flick, 1998; Patton, 2002). The data transcribed were first classified by specific themes and categories, and then condensed for the most relevant phrases or parts (Kvale, 1996). The language of the interviews was Finnish and the interview excerpts presented here, in the results section, are translations into English.

Representativeness and Validity

It should be kept in mind that this study's conclusions are based on the results from a relatively small number of interviews from the Helsinki metropolitan area, which means that the situation in different urban areas, and with different participants, may be different. Thus, the study's conclusions cannot be generalized (Berg, 2001), and are merely suggestions about how LEK could work in other

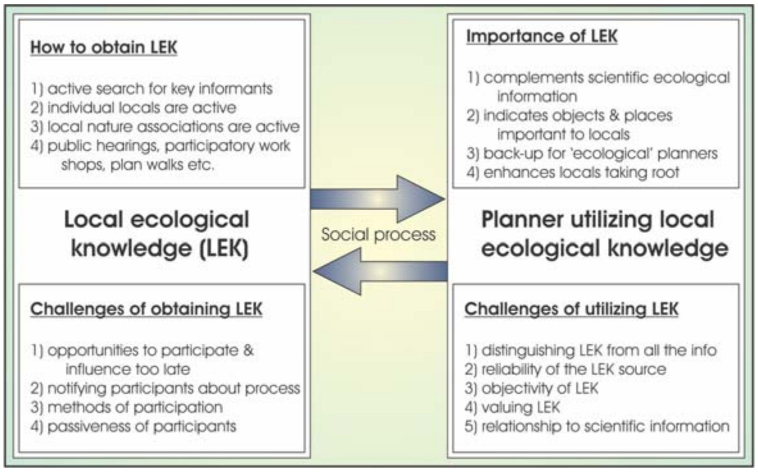

Figure 2. The results in a conceptual flow chart, with the ways and challenges of obtaining LEK are listed on the left-hand side, and the importance and challenges of using LEK on the right-hand side. The feed-back arrow from right to left indicates that the perceived importance of LEK and challenging elements in using LEK also affect obtaining LEK in the first place. This flow of knowledge can be seen as an interactive social process.

urban areas. Although the Helsinki metropolitan area is by no means the largest and most dense urban area in Finland, we believe that some of the same processes regarding LEK could take place in other urban and urbanizing areas. In addition, given the wide experience and deep perspectives of the interviewees on land use planning, the results of this study could work as a starting point for addressing the issue of LEK in more detail and with a comparative approach in other urban areas.

Results

The results are presented according to the following categories: the conceptual meaning of LEK, the importance of LEK in urban land use planning, the ways that planners obtain LEK, the challenges of obtaining LEK through participation, and the challenges of using LEK. Figure 2 illustrates the results in a conceptual flow chart, with the ways of obtaining LEK listed on the left- hand side, and the importance and challenges of using LEK on the right-hand side

Concept of Local Ecological Knowledge

The interviewees were first asked if they agree with the given definition of LEK. After some minor clarifications, all of them agreed with the underlying concept. The name of the concept itself was not directly familiar to all the interviewees, but understanding the existence and use of such knowledge had already become commonplace to most of the interviewed planning professionals. In addition, some of the interviewees added their own comments regarding the concept (Table 1, excerpts A-B).

Importance of Local Ecological Knowledge in Urban Planning

According to the interviewees, it is essential to consider the knowledge and opinions of people who know the area well, especially if planning aspires to be for the good of local users (Table 1, excerpts C-E). LEK can be an important addition to scientific ecological information and may become increasingly important where little or no nature studies are done in the area. For instance, local users may be aware of occurrences of important species. Population dynamics of certain species may vary from year to year, and local observations during a longer period of time may provide a better basis for decisionmaking.

Table 1 Interview excerpts depicting how the interviewees understood the concept of LEK (A-B) and why they considered LEK important (C-E)

A	"I think this ecological knowledge of people can also be rather emotion-based and subconscious. People who have grown and resided among nature, have an ability, in a way, to feel that nature inside themselves, and that is local knowledge." (planning official, architect)
B	"There are of course different levels of local ecological knowledge. For instance, there is usually a large gap (of knowledge) between nature enthusiasts and true nature experts." (nature association representative, biologist)
C	"When it's about a place with high nature values, the local knowledge, which can only be obtained from users, is important. But how we are able to value this knowledge, it's more difficult. I think it very much depends on planners' decisions, because they are the ones who convey the matter forward and wear it to words and decisions." (planning official, architect)
D	"People who have worked here for longer time have often known about these nature enthusiasts - there have been networks by which these enthusiasts are to be found. If there is a place which is important to people, although there is not a specific nature value, it may have a huge meaning to the people living there." (planning official, landscape architect)
E	"I think local ecological knowledge and nature issues in general will have a significant role in planning in the future. I have seen that 'soft values' have become more popular and there is a kind of new fascination in the nature enthusiasm. Especially as the large age classes become older, they have more time to use and they may want use that in nature." (nature association representative, nature photographer)

The nature enthusiasts interviewed noted that if research information were available, local residents and nature enthusiasts could use these studies to find out more about the species in the area and thus confirm their occurrences. Some of the places important to local users may not necessarily be a habitat of certain species or include specific conservational values, but may nevertheless be of great personal importance. Local nature can be important to local users primarily through the world of experience and only secondarily through species occurrence.

The interviews also revealed that a planner could be under competing pressure from the expectations of his or her own planning bureau and those of residents. In situations when the planner feels that official colleagues criticize her or his views (perhaps too ecology oriented) about area development, arguments from residents can become an important backup.

Furthermore, as an interviewed landscape architect noted, the existence and accumulation of LEK may enhance local residents taking root in their home area, and thus lead to greater appreciation. For example, urban farmers in the vicinity of Helsinki know of several generations on their land, and are thus very much attached to it. In order to create good environments when developing new areas, it is worth listening to the people who are”rooted” in their environment.

Obtaining Knowledge

The interviewed users (planners, consultants, and environmental officials) can obtain LEK in several ways. First, they can actively look for local residents and enthusiasts who are interested in, and knowledgeable about, nature in the plan area. Second, residents and other participants, on their own initiative, can contact planning officials by means of statements or through a participatory process (Table 2, excerpts A and B). According to interviewed planners, persons knowledgeable about local nature, and at least somewhat familiar with scientific ecology, are the best sources (Table 2, excerpt B). More experienced planners may know several nature enthusiasts in the city, and additional knowledgeable and collaborative persons can be found as needed through personal networks (Table 1, excerpt D). However, establishing such local contacts may be a long-term project (Table 2, excerpt C).

In addition to individual participants, knowledge can be found within local nature associations, which are important contacts, especially as information sources, but also because of their ability to gather, store, and distribute species information over time. For instance, if nature studies are to be made in the district, the associations can help in informing local nature enthusiasts about the need for additional information. Quite often nature associations will write their own statements regarding the plan. According to representatives of nature associations, people who have come to know an area’s nature, for instance through hiking, contact them. However, although they know the area thoroughly, they often feel that they do not have enough theoretical expertise to support their views. For instance, if they think that a particular area should be protected, the nature association could be an expert party, whose statements can weigh more than those of individual residents.

Public hearings that incorporate participatory planning process are forums where certain themes can be discussed publicly, and matters regarding nature are more often reviewed (Table 2, excerpt D). However, the interviewed representatives of nature associations also criticized public hearings and participatory workshops (which will be addressed later). Furthermore, the interviewed planners emphasized the usefulness of ‘plan walks,’ where planners and local participants walk a route in the plan area and stop in places regarded as important. Participant comments, such as that “there are many frogs and snakes here in springtime,” are written down as planning information.

Urban residents are heard both at the detailed and master plan levels. According to the interviews, residents are often more interested in the detailed plan level, unless the master plan concerns their own neighborhood. Here the difference between residential districts becomes clear; residents in certain areas are more active than elsewhere, possibly due to demographics. This applies to activities concerning green spaces, but also to challenges regarding participation and interaction. Perhaps due to the ”my own backyard” principle, matters regarding nature are discussed more often with residents during the detailed planning process, when specific resident knowledge can be considered.

Table 2 Interview excerpts depicting how the interviewed planning professionals obtain LEK (A-D), and the challenges of obtaining LEK through participation (E-H)

A	“We try to keep a small unofficial register of nature enthusiasts in Vantaa, whose observations are important to us, and can even give new information on some species. For instance, if a chicken hawk has been seen nesting somewhere in Vantaa - it is rare. Sometimes this kind of information can be very knowledgeable, because a lot of nature specialists live in Vantaa. But given that we have many such experts here, they seem to be rather passive about their own environment and contacting us.” (environmental planner and biologist working at a local environmental center)
B	“I have received maps and letters, had conversations, it has all been good. However, the best collaboration I have had with such local residents who have been somewhat or well familiarized themselves with scientific ecology.” (planning official, landscape architect)
C	“It is a result of rather long-term work to find right and co-operative persons. The knowledge is compiled as small narratives, but often and unfortunately they stay just between the ears of planners. But that is part of the data we collect, and when the decisions are made, I argue that all those narratives have their own effect. Although we can’t write down all of them, the image we get about the situation comes both from the discussions with residents and facts.” (planning official, architect)
D	“In my opinion it is not so terribly difficult to bring ecological knowledge out in the open - nature matters often come up more easily than social matters.” (planning official)
E	“Residents should be able to participate the planning process at very early stage. If a planner has already done a lot of work with the plan and formed a strong vision/opinion about the plan, it is harder for outsiders to influence it ... it’s the planner’s baby!” (resident activist, retired architect)

F	"Public hearings or discussions are often kind of eyewash, not very useful for us nature associations – people who really know do not have a change or time to express their knowledge there. We can better influence by written statements." (representative of nature association, biologist)
G	"Resident associations are active but they often mainly care about their own 'backyard' and work very purposefully in that sense. It is better for nature associations to keep the distance from their territorial battles." (representative of nature association, nature photographer)
H	"Local ecological knowledge easily stays between the ears of a person. The knowledge may exist, but these people have to also be socially active in order to bring out the knowledge. There are a lot of nature enthusiasts who are "lone wolves" – they don't much talk to anybody, but may nevertheless have a massive knowledge base." (resident activist, nature photographer)

Challenges of Obtaining Local Ecological Knowledge Through Participation

The interviews revealed that residents and nature enthusiasts often think that influencing the plan with their opinions and knowledge is rather difficult. One challenge seems to be timing; when a sketch of a new plan is introduced to the public, a certain number of basic conditions have already been determined, such as the master plan, aim of surface area to be built, and architectural vision. The planners are judicially obliged to consider the participants' information, but if reservations have already been made regarding the construction, the new information cannot affect the plan proposal or the final implementation (Table 2, excerpt E). According to the legislation's spirit, participants should be viewed as partners in the planning process; however participants sometimes perceive themselves as competitors with planners. But as was mentioned, even if planners would like to incorporate LEK, their hands can be tied by earlier decisions.

Another challenge, according to the interviews, is notifying the participants publicly about the plan. Planning officials inform the public concerning the availability of plan preparation material, but these information channels do not always reach all interested parties. Local residents, and other participants, may feel that the release of information is inadequate or late. Participants have to keep their eyes and ears open, or they may read in the newspaper that the plan has just been approved. Participation requires devotion, tenacity, and interest in urban development.

Yet another challenge is the method of participation. Public discussions are aimed at all interested parties, but it is rather uncommon that all participants are able to attend the forums at the same time. As excerpt F in Table 2 shows, some participants perceive that other methods of influencing the plan are more useful than public discussions. The success of the plan workshops depends largely on the kind of individuals that represent the local people and on their motives and values (Table 2, excerpt G). Furthermore, LEK can be obtained actively by means of questionnaires, which, as emphasized by the interviewed planners, need to be very clearly written. Moreover, it is not a given that the answers cover a wide enough array of residents to provide balanced information. The loudest opponents may well get their voices heard, while those who are satisfied stay silent. When considering all the obstacles, people may feel that influencing the process is very difficult, and if their opinions do not count much, they may stop participating.

As several interviewees noted, there is a vast amount of LEK and ecological expertise about Finnish urban areas, but in order to use that knowledge, its holders have to be active participants. One reason for passivity (Table 2, excerpts A and H) can be the challenge of presenting knowledge and opinions publicly and in a language that can be understood by decisionmakers.

Challenges of Using Local Ecological Knowledge

Although much LEK can be available, the interviewees regarded using the knowledge as challenging. Planners receive a variety of information and opinions through public hearings, workshops, written statements, and other methods of communication. However, it is challenging to analyze the information in order to use it in the plan. Received information regarding local nature may vary from opinions, feelings, and experiences to very knowledgeable species observations and well-founded perspectives on the development of urban green areas. Although all of these can be useful for the planner, it is sometimes difficult to recognize accurate ecological knowledge, such as observations on species and biotopes and their functions.

Planners prefer well-founded and reliable knowledge, but they must be able to determine how reliable the knowledge source is (Table 3, excerpts A-C). The interviewed planners emphasize that local knowledge must be treated critically, because it may easily contain inaccuracies. In the case of species or biotope observations, planners principally trust LEK sources, and this information can be verified on location if necessary. The situation becomes more difficult if the observation is several years old, because circumstances may have changed. However, an old observation may indicate that the area is of potential importance for biodiversity. If the local green spaces are obliterated or altered, the species lose their potential habitat.

The issue of knowledge reliability and validity is related to its objectivity and subjectivity, and therefore to how it is valued. The interviewees often regard LEK as subjective (associated with opinions and feelings), which creates challenges in how to use the knowledge (Table 3, excerpts D-E). LEK can be very emotional, because ordinary residents may not be able to argue clearly about their experiences and opinions. However, as the interviewed planners note, emotional stances have their reasons, and a good planner tries to interpret what is at the root of these emotional outbursts. Furthermore, local participants can appreciate different elements of nature in different ways. For instance, for some residents certain trees can be close and familiar, i.e., associated with numerous memories, whereas others may see the same trees as "just shading." A planner, however, has to take both into consideration as a part of the planning process. The different perspective of each resident may thus become a dilemma for the planner who tries to incorporate these conflicting messages.

What type of emphasis and value should LEK have, compared to scientific research information collected

Table 3 Interview excerpts depicting the challenges of using LEK

A	"Obtaining the knowledge and its reliability are challenges; if a resident tells about personal observations, it may not be as reliable as information from a consultant. But at least knowledge from residents would set ground for consultant studies - so I think that local ecological knowledge should be included in planning." (planning official, architect)
B	"Whoever has produced the information of a species or other matters, it has to be critically assessed in what kind of circumstances the observation was made in - some know species better than others, some are into birds for instance, and their observations are of course more credible. Lay observations are more uncertain, but have to be checked because the observation may nevertheless be just right." (biologist working as consultant)
C	"We have the background assumption that local residents are the experts of their own living environment; and we thus ask for all observations, also clearly about the nature. I don't know what would be the method that would increase ecological knowledge or matters related to it coming up. And reliability; perhaps our environmental center could be used to verify that information." (planning official, architect)
D	"Science, beliefs, and interests are mixed together in the local ecological knowledge, and it makes it hard to value the knowledge. Matters that do not seem to fit into a situation may be left unmentioned unintentionally or half-unintentionally." (planning official)
E	"I think that opinions, emotional matters and aesthetics are strongly a part of the local ecological knowledge - they clearly shape the knowledge for everyone, which is not necessarily a bad thing (to certain limits). Based on opinions, the individuals can start looking for more information and thus gain more knowledge." (representative of nature association, biologist)
F	"Often the knowledge of nature enthusiasts is kind of common knowledge, like for instance I have. The knowledge of a specialized researcher is number one compared to that. But even an enthusiast finds, because the professional researcher does not necessarily step on the very place where something grows or is to be found. However, without the research fact and the judicial power it brings, there is just a battle of values on what should or should not be preserved." (representative of nature association, nature photographer)
G	"It is very important that planners and decision-makers receive opinions and knowledge on nature from residents, particularly because the people in Finland have strong views on ecology and nature. These views should not, however, affect too overwhelmingly to decision-making, but the ecological questions in the planned area should be answered mainly based on scientific ecological expert information." (representative of nature association, biologist)

and produced by ecological experts, such as biologists working as consultants? Ecological research information is usually considered objective and the ”best available” information (Table 3, excerpt F). However, sometimes its reliability and objectivity have to be scrutinized, especially if the studies are made within a relatively short period of time or by inexperienced consultants. In these cases, LEK can be more reliable than an official study. Nevertheless, the presence of a nature conservation area next to the plan area requires official research information or at least very specific LEK (which has to be scientifically verified anyway).

Due to the wide spectrum of lay-expert knowledge, some interviewed planners and biologists note that, from the city planning perspective, ecological expert information and lay participant knowledge and opinions should be processed and valued separately and then weighed against each other. Excerpt G (Table 3) depicts the relationship between ”research information” and LEK from a biologist's viewpoint.

Discussion

Types and Categories of Local Ecological Knowledge

Based on this study's results, we developed a model that has five *types* of LEK, in order to understand the wide spectrum of such knowledge (Figure 3). Placing an individual under a certain type is highly context-dependent; for instance, an individual can be an ecological specialist and not possess local special knowledge. The descriptions of the different types of LEK include the degree of nature enthusiasm and participation and the related organizations that an individual may belong to.

Our study also indicated that certain *elements* of LEK could be found in almost all types of LEK. We have categorized those elements as follows:

1. Observations on local species and biotopes (patterns of nature) and their function (nature processes), including both spatial and temporal variability – embedded in all types of LEK except A, and emphasized in types D and E.
2. Single local nature entities, such as objects that are familiar and valuable to participants (e.g. forest patch, meadow, brook, tree) – important in all types of LEK except A.
3. ”Emotional matters,” such as opinions, feelings, and aesthetic values that can also result in silent or hidden appreciation of local nature, or a lack of appreciation – relevant in all types of LEK, also in A. Both 2 and 3 include temporal variability – residents today may have different values than residents 20 years ago.

An important issue in using LEK is how end-users are able to separate observed elements (categories 1 & 2) versus elements related to aesthetics and feelings (categories 2 & 3). Opinions and subjective viewpoints are important, and it is not always possible, or even necessary, to separate them. However, as the interviewed planners emphasize, if LEK's observational elements are to complement ecological research information, the planners have to be able to distinguish natural scientific knowledge (such as what grows or lives where and when, and how these patterns have changed over time) from what participants regard as valuable.

Furthermore, it is difficult to determine who has the right to decide which observational elements are most important (Söderman, 2003), or if the observational elements are more important than opinions, or which opinions are most important. Planners face this challenge when balancing different values related to plan areas. Today in Finland, certain species and biotopes are perhaps regarded as more valuable than just beautiful or revered

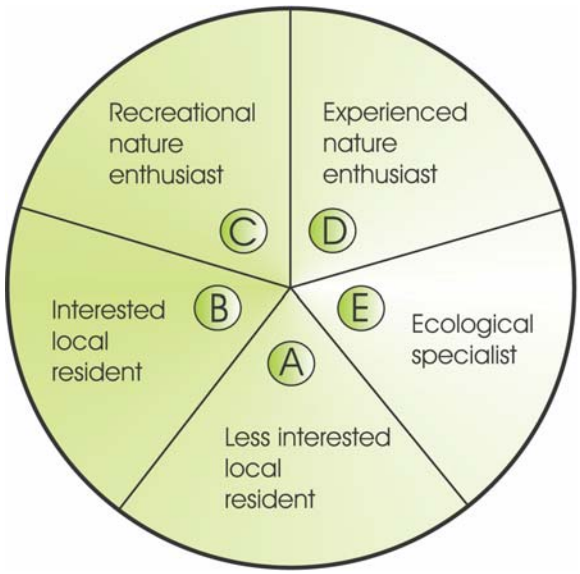

Figure 3. Five Types of Local Ecological Knowledge (LEK).
(A) Less interested local resident; does not use local nature for recreation or otherwise, does not know or care much about (local) urban nature or nature in general (although may appreciate and have knowledge on pristine nature), does not care to participate locally. Related organization: none usually.
(B) Interested local resident; does not much use local nature, but still regards it important and has some knowledge and opinions about it, may participate to some extent. Related organization: sometimes 'local agenda' or resident association.
(C) Recreational nature enthusiast (local resident or a non-local user); a moderate use of local nature, has basic nature knowledge, has learned to know the area quite well by recreational use, enjoys being in nature, may participate. Related organization: 'local agenda' work group or resident association.
(D) Experienced nature enthusiast (local resident or non-local user); has good general and local nature knowledge, may know some taxa quite well (e.g. birds, butterflies), has will and time to participate, may belong to a nature association. Related organization: general (or local) nature or environmental association (e.g. city level).
(E) Ecological specialist (local resident or non-local user); high level of special knowledge of certain taxa or species, or ecology in general, usually through profession or/and long-term enthusiasm, may not always have time or will to participate, few in numbers, valuable support for local enthusiasts. Related organization: specialized nature association (e.g. birds or insects).

landscapes or natural objects. This may be because 'observational' information is easier to measure and legitimize than more aesthetics-based, and thus more subjective, information. Nevertheless, quite often these elements of LEK are tightly linked in an individual participant, as captured by the words of a nature enthusiast: "apparently nature appreciation is a kind of 'all-inclusive package'; it includes both the species and the aesthetics they bring with them."

Meeting the Challenges of Local Participation: Obtaining and Using Local Ecological Knowledge

Harrison & Burgess (2003) suggest that contextualized perspectives from local communities offer new insights about how individuals are engaged with society, and how more effective strategies for environmental communication and decisionmaking can be developed with participatory approaches. But this study demonstrates that such a participatory lifestyle is not suitable for all residents, since they often do not have enough resources, such as knowledge, time and skills, to participate effectively or at all. Moreover, other life situations can result in lack of participation, even if the residents could have relevant knowledge for planners. Moreover, if a resident puts time and effort into participation, many barriers often block actual influence. Such lack of success can lead to passive and frustrated attitudes toward participation (Arola, 2002). One solution is offering participants information, training, literature, and counseling (Paldanius, 1997). Lapintie (2002) noted the following challenges, which are familiar to all who have been involved in public participatory hearings or forums: too few participants given the extent of the impacted population, difficulties in finding a common language, hostility awakened by a too-complete plan sketch, and participant attempts to prevent any changes in their local environment (see also Fagence, 1977).

Finding the right communication methods is one of the central issues. Although the knowledge and opinions of local participants might be expressed in a ”common” language, with less sophisticated terms and arguments than planners or decisionmakers use, the critical and deeply complex issues fundamental to the society-nature relationships and their transformation to planning decisions are voiced in local words (Davies, 2001; Yli-Pelkonen & Niemelä, 2005).

Thus, it is necessary for planners in a participatory process to understand appropriately the language of locals (see also Bäcklund, 2002; Staffans, 2004). This may not be a simple task, especially with ecological issues, due to the complexity of ecological systems and their value-laden understanding both to planners and locals (Kilvington et al., 2000). While planners are experts assigned to lead the planning process, they have to be ready to consider participants' thoughts, knowledge and values, and through their own expertise ”filter” this information for planning and decisionmaking purposes. At times, it can be challenging for planners to cope with the uneven distribution of knowledge and activities of different focus groups. As Davies (2001) notes, "the big question is, how is it possible to consider the range of different views to make a just and equitable decision." In order to develop methods to cope with these challenges, and to control both the ecological and social impacts of land use change, social scientists need to be involved in the planning process (Sairinen 2004; Sairinen & Kohl, 2004).

When developing participatory methods in urban planning, local participation should be innovative i.e. produce new knowledge with the special role of experiential knowledge, and communication should be as open and transparent as possible, so as to strengthen local democracy (Staffans, 2004). The participation process in planning projects is often bound to time (periodic); nevertheless, there should also be more established and continuous practices for participation to support and build a foundation for the periodic processes.

In order to help lay participants (mainly LEK types A-C) to articulate their ecological knowledge and opinions as part of the planning process, participants should become more familiar with scientific ecology and with language used by ecologists and planners (Weber & Word, 2001), and also develop general skills of interactive participation and argumentation. Small technical solutions, such as better visualization, could improve the chances of LEK reaching the end-users' attention (Tyrväinen et al., 2003). For instance, it would be more illustrative if participants sent planning officials their observations, experiences, or opinions in map form, with additional comments attached. It would be rather easy, then, for the officials to check the situation on the marked location, if needed. In this way, LEK use could shift from Callon's model M1 towards models M2 and M3.

Slightly different measures apply with LEK types D-E, where Callon's models M2 and M3 are potentially already working. As was noted, a vast number of specialists and nature enthusiasts with various interests dwell in urban areas. Local environmental centers (potentially in association with local nature associations) could keep a register of those nature enthusiasts, who could work as key informants, as is being done in some cities. This would direct important knowledge to city officials, while at the same time preventing controversies in advance.

Urban planning could take into account more specialized ecological knowledge available in the national archives (e.g. data collected by bird enthusiasts) (Söderman, 2003). This would require better communication between city officials and nature associations with these useful archives, and connection with GIS based municipal databases (e.g. Pedersen et al., 2004). In their own right, the specialized nature associations can use their own networks of local enthusiasts to monitor and respond to new plans in a wider area. For instance, a Helsinki-based bird-watchers association is setting up their own 'plan board,' in which bird enthusiasts all over southernmost Finland are networked. In each smaller area, local enthusiasts would take responsibility to monitor all the planning and inform the board about needed statements. Such large-scale networking requires extensive voluntary work and is thus not easily implemented.

This study gives some support to the theoretical assumptions of the LEK models, although the design limitations presented in the methods section have to be kept in mind. According to this study, all the LEK models (M1, M2a,b, and M3) presented are visible in the Finnish urban detailed planning process, depending on the planning project and LEK type in question. Model M1 prevails when decisionmaking requires strictly official research information (e.g. due to a nature conservation area next to the plan area), or when participants are not able to transfer their potential knowledge to end-users. Reasons for the latter can be: (1) participants or planners think that there is not enough usable LEK available, (2) usable LEK is available, but the participants are not able to present it coherently to planners, (3) usable LEK is available, but even though the participants are able to communicate it, the planners, for some reason, do not use it.

Model M2 (a,b) works when (1) both participants and planners see that such LEK, which complements ecological research information, is available; (2) participants are able to bring their LEK forward in the participatory planning process; and (3) planners are able to obtain LEK from participants according to the principles of participatory planning. This seems to work best with LEK types D-E, but types A-C are also considered. The potential non-transmittance of LEK to the final plan decision remains a problem. Model M3 can work in situations where ecological research information is scarce, and LEK (mainly types D-E) is known to be available. Nevertheless, this calls for informed and communicative planners and participants, who have the time and will to participate.

Conclusions

Based on Finnish legislation, land use planners must consider the knowledge of local stakeholders, who have information on an area's biodiversity, in addition to scientific ecological studies. This article presents study results that support Local Ecological Knowledge (LEK) in urban areas and its importance in land use planning. The study's findings indicate that land use planners can obtain LEK from local key informants and nature associations. Based on the findings, the individuals who possess LEK can be roughly divided into five different types: less interested local residents, interested local residents, recreational nature enthusiasts, experienced nature enthusiasts, and ecological specialists. LEK from all these types can be useful to planners, although LEK from more experienced nature enthusiasts and specialists is regarded as easier to interpret. Moreover, almost all these types possess elements of LEK that can be categorized into species and biotope observations, single nature objects valuable to individuals, and emotional matters (opinions and aesthetic values).

Considering LEK in urban planning is important because it can complement ecological research information and indicate objects and places important to stakeholders. Collecting LEK faces numerous challenges, many of them related to general difficulties of public participation. The challenges found in using LEK include distinguishing LEK from other information, valuing subjective knowledge, and the capability of planning officials to use it. In order to develop methods to meet these challenges and control both the ecological and social impacts of land use change, social scientists should be integrated into the planning process. With help in participant and planner communication, planners could better learn to interpret LEK of all types. Furthermore, technical improvements, such as key informant registers and more efficient use of nature association knowledge, would be useful. We hope that this study's findings can work as a starting point for land use planners and other stakeholders in facilitating better understanding of the role of LEK in urban planning.

Even if all the measures that we present as ways to advance LEK use, and to complement scientific ecological information, were implemented, the core issue still is *how* the knowledge is finally used (Olsson & Folke, 2001). If, alongside scientific information, LEK is available, and the tools to obtain and use it exist, decisionmakers still need the will to enhance sustainability by maintaining a certain amount of urban green space with a certain ”ecological quality level” under the pressure of planning new residential areas for the growing urban population. This will largely depend on the prevailing values of urban residents, key professional actors, and, perhaps most importantly, politicians.

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ARTICLE

Integrated water resources management: evolution, prospects and future challenges

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This paper analyzes the evolution of the concept of Integrated Water Resources Management (IWRM) at international conferences over the past three decades and addresses the prospects of IWRM in resolving the current water crisis. It also identifies seven crucial challenges to implementing IWRM. Our rivers and aquifers are the life-blood of the planet. To achieve sustainable development, we must manage our most vital natural resource, water, in an integrated manner, or precisely through Integrated Water Resources Management. Since water is fundamental to many aspects of life, and to the surrounding natural environment, there is a need not only to review IWRM's evolution in the last three decades, but also to identify future challenges to its implementation.

KEYWORDS: water resources, water management, sustainable development, conferences, international agreements, rivers, world problems, developing countries, water conservation

Introduction

In 2002, at the Johannesburg World Summit on Sustainable Development (WSSD), The Technical Advisory Committee of the Global Water Partnership defined Integrated Water Resources Management (IWRM) "as a process, which promotes the coordinated development and management of water, land and related resources in order to maximize the resultant economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems," and emphasized that water should be managed in a basin-wide context, under the principles of good governance and public participation.

Historically, we can go back centuries, if not millennia, to discover forerunners of the present IWRM paradigm. In a number of countries, water management has been institutionalized in an advanced and integrated way over centuries. In Valencia, Spain, for example, multi-stakeholder, participatory water tribunals have operated at least since the tenth Century. Embid (2003) writes that Spain was probably the first country to organize water management on the basis of river basins, as it adopted the system of confederaciones hidrográficas in 1926. Over the last several decades, there have been serious attempts to implement IWRM in different global regions. In the 1940s, an early version of IWRM occurred when the Tennessee Valley Authority began to develop the water resources for that region (Barkin & King, 1986; Tortajada 2004). A later example occurred in 1960 in Hessen, Germany, where Integrated Water Resources Management Planning was prepared on the basis of a multidisciplinary integrated approach (Berg, 1960, cited in Kaitera, 1963).

At the United Nations Conference on Water in the Mar del Plata (1977), IWRM was the recommended approach to incorporate the multiple competing uses of water resources. Although in the 1980s, water disappeared, for the most part, from the political agenda, the situation changed in the 1990s, thanks to the efforts of a number of conferences and international organizations. Efforts such as the International Conference on Water and Environment (1992), Second World Water Forum (2000), International Conference on Freshwater (2001), World Summit on Sustainable Development (2002) and Third World Water Forum (2003) collectively led to breakthroughs that thrust IWRM onto the political agenda.

Driven by the question of the main challenges to implementing IWRM, this paper reviews the evolution of IWRM as a concept from Mar del Plata 1977 to Kyoto 2003 and address the prospects of IWRM in resolving current water crises. It then identifies seven crucial—but often overlooked—challenges in current practice, which should be addressed when implementing IWRM.

IWRM in the International Agenda FROM Mar del Plata 1977 to Kyoto 2003

A critical review of the evolution of IWRM in the international agenda, from the UN Conference on Water held in Mar del Plata in 1977 to the Third World Water Forum of Kyoto in 2003, follows.

United Nations Conference on Water (Mar del Plata 1977)

In 1977, the UN Conference on Water was held in Mar del Plata, Argentina. Its goals were to assess the status of water resources; to ensure that an adequate supply of quality water was available to meet the planet's socio-economic needs; to increase water use efficiency; and to promote preparedness, nationally and internationally, so as to avoid a water crisis of global dimensions before the end of twentieth century.

The conference approved the Mar del Plata Action Plan, which was the first internationally coordinated approach to IWRM. The plan had two parts: a set of recommendations that covered all the essential components of water management, and twelve resolutions on a wide range of specific subject areas. It discussed assessment of water use and efficiency; natural hazards, environment, health and pollution control; policy, planning and management; public information, education, training and research; and regional and international cooperation (Biswas, 2004).

The Mar del Plata conference was a success, in part due to the active participation of the developing world and the discussions on various aspects of water management, specifically the country and region specific analyses. The conference considered water management on a holistic and comprehensive basis, an approach recognized as one of the key IWRM issues in the 1990s. To provide potable water and sanitation facilities to all, and to accelerate political will and investment in the water sector, the conference recommended the period 1980 to 1990 as the International Water Supply and Sanitation Decade.

The Mar del Plata conference was undoubtedly a major milestone in the history of water resources development for the 20th century. Viewed from any direction, the conference has become an important yardstick in water resources management, particularly for IWRM. Regrettably, transboundary water resources management was not discussed comprehensively, and an implementation scheme for the Action Plan was not developed during the discussion (Biswas, 2004).

While the 1980s were key as far as implementing the Mar del Plata principles, gradually, water faded from international agendas, so much so that the Brundtland Commission Report (WCED, 1987), which laid the cornerstones to the concept of sustainable development in international policy, hardly addressed the issue of water.

International Conference on Water and Environment - Dublin 1992

Fifteen years after the Mar del Plata Conference, water was back on the international agenda. In January, 1992, the International Conference on Water and the Environment (ICWE) was held in Dublin, Ireland to serve as the preparatory event, with respect to water issues, to the Rio United Nations Conference on Environment and Development (UNCED) Conference.

The Dublin Conference was expected to formulate sustainable water policies and an action program to be considered by UNCED. The conference reports set out the recommendations for action at the local, national, and international levels, based on the following four guiding principles (ICWE, 1992):

- Principle one recognized fresh water as a finite, vulnerable, and essential resource, and suggested that water should be managed in an integrated manner.
- Principle two suggested a participatory approach, involving users, planners, and policymakers, at all levels of water development and management.
- Principle three recognized women's central role in the provision, management, and safeguarding of water.
- Principle four suggested that water should be considered as an economic good.

The fourth principle became highly debated and was opposed by water professionals from the developing world. They argued that no water development initiatives could be sustainable if water was considered an economic good without considering the issues of equity and poverty.

The main successes of the Dublin conference were that it focused on the necessity of integrated water management and on active participations of all stakeholders, from the highest levels of government to the smallest communities, and highlighted the special role of women in water management. The Dublin conference recommendations were later consolidated into Chapter eighteen of Agenda 21 in Rio de Janeiro, 1992.

The major limitations of the Dublin conference were that it was, for the most part, a meeting of experts rather than an intergovernmental meeting, and that it did not consider the outcomes of Mar del Plata. Unlike Mar del Plata, there was a lack of active participation from the developing world, which was later heavily criticized. Many water professionals and decisionmakers from the developing world not only criticized the Dublin principles, especially the fourth, but also criticized the failure of the participants to indicate how the principles could be implemented in the context of complex water management scenarios in the developing countries.

The shortcomings of the Dublin Principles would later be addressed in the Second World Water Forum and the concurrent Ministerial Conference in 2000. In spite of the aforementioned problems, current thinking regarding the crucial issues of IWRM is heavily influenced by the Dublin Principles.

Second World Water Forum & Ministerial Conference (The Hague 2000)

On 17-22 March 2000, the Second World Water Forum was held in The Hague, the Netherlands, with more than 5,700 participants from all over the world. Unlike Mar del Plata and Dublin, this Forum did not just gather intergovernmental participants and experts, but included a range of stakeholders related to water management from the developing and developed world. This would become key to the Forum's success, and to its participants' satisfaction.

With its theme, *From Vision to Action*, the Forum brought together a wide array of documents addressing visions produced and structured by the World Water Council and invaluable views in reforming the water sector, better addressing the need to integrate water management. Unlike Dublin, The Hague Forum carefully considered the outcomes of previous water initiatives and acknowledged water's social, environmental, and cultural values.

The participants of The Hague forum suggested applying equity criteria, along with appropriate subsidies to the poor, when systematically adopting full-cost water pricing. The Forum acknowledged that food security, ecosystem protection, empowerment of people, risk management from water related hazards, peaceful boundary and transboundary river basin management, basic water demands, and wise water management are achievable through IWRM.

To meet the challenges related to IWRM, the Ministerial Declaration (WWC, 2000) called for institutional, technological, and financial innovations; collaboration and partnership at all levels; meaningful participation of all stakeholders; establishment of targets and strategies; transparent water governance; and cooperation with international organizations and the UN system.

"Making Water Everybody's Business" was another theme. Water privatization and public-private partnerships were widely promulgated as means to achieve the vision objectives. However, many water professionals opposed privatization, arguing that the water sector is interrelated to many functions that demand government presence, i.e. flood control, drought alleviation, water supply, and ecosystem conservation (Shen & Varis, 2000).

The Forum also acknowledged that the right to land and access to water is key to breaking out of the poverty trap. Moreover, it was pointed out that water could empower people, and women in particular, through a participatory management process.

Unlike Mar del Plata and Dublin, at the Hague Forum the main challenges to implementation were discussed extensively and, afterwards, the Forum's visions were converted into action programs for the participating countries. This led to the birth of the Global Water Partnership, which now plays a central role in coordinating the *Framework for Action*.

The Second World Water Forum was successful not only for putting IWRM on the political agenda, but also for endorsing the active participation of the developing world's water stakeholders, and for gathering world water leaders and communities together.

International Conference on Freshwater - Bonn 2001

In close co-operation with the United Nations, Germany hosted, in December 2001, the International Conference on Freshwater in Bonn. The aim of the conference was to contribute to solutions for global water problems, and to support preparations for the World Summit on Sustainable Development (WSSD) in Johannesburg, 2002, and the Third World Water Forum in Kyoto, 2003.

The conference reviewed all previous water resources development principles and recognized that there was often a gap between policy development and practice. In a novel way, the Bonn Conference focused on practical implementation, not only identifying challenges and key targets, but also recommending action programs to implement policies in the field (ICFW, 2001).

The Bonn Keys, which summarized the conference discussions, highlighted the key steps toward sustainable development through meeting water security needs of the poor, and promoting decentralization and new partnerships. To achieve these steps, it suggested IWRM as the most capable tool.

The Bonn Conference recommended prioritizing actions in the fields of governance, mobilizing financial resources, building capacity, and sharing knowledge. The *Bonn Recommendations for Action* addressed, at the lowest appropriate level, issues such as poverty, gender equity, corruption mitigation, and water management. The Conference identified a set of actions necessary to mobilize financial resources: strengthening public funding capabilities, improving economic efficiency, and increasing official assistance to developing countries. In the field of capacity building, it prioritized the need for education and training regarding water wisdom, research, effective water institutions, knowledge sharing, and innovative technologies. The Conference also recommended that WSSD harmonize water issues with overall sustainable development objectives and integrate water into national poverty reduction strategies.

The Bonn Conference should be commended by the water world for connecting the views of the developing and developed world and impartially divulging practical implementation problems. It also provided action programs, a historical milestone for making IWRM truly effective in the field. The key success of the Bonn Conference was the adoption of the *Bonn Recommendations* in the *WSSD Plan of Implementation* (WSSD, 2002).

World Summit on Sustainable Development - Johannesburg 2002

The World Summit on Sustainable Development (WSSD), held in Johannesburg, South Africa, in 2002, should be recognized as a success because it put IWRM at the top of the international agenda.

The *WSSD's Plan of Implementation* includes IWRM as one of the key components for achieving sustainable development. It provides specific targets and guidelines for implementing IWRM worldwide, including developing an IWRM and water efficiency plan by 2005 for all major river basins of the world; developing and implementing national/regional strategies, plans, and programs with regard to IWRM; improving water-use efficiency; facilitating public-private partnerships; developing gender-sensitive policies and programs; involving all concerned stakeholders in a variety of decisionmaking, management, and implementation processes; enhancing education; and combating corruption.

For the most part, it seems that the Bonn Conference recommendations were adopted within WSSD, and IWRM has now become the most internationally accepted water policy tool. The WSSD outcomes also encouraged major donors to commit themselves to implementing IWRM in the developing world. A number of broad strategic partnerships were declared at Johannesburg; the EU, in particular, launched a series of partnerships on Water for Sustainable Development with Africa, Eastern Europe, the Caucasus, and Central Asia.

The international political recognition, at WSSD, of IWRM as the mechanism to achieve sustainable water management will dramatically and positively change the water world for the years to come. It is probable that IWRM will become the most integral part of all water initiatives, as was observed at the third World Water Forum in Kyoto, 2003.

The Third World Water Forum - Kyoto 2003

Over 24,000 people from around the world attended the third World Water Forum, held in March 2003 in Kyoto, Japan. The key issues were safe, clean water for all, good governance, capacity building, financing, public participation, and various regional topics (TWWF, 2003a). A two-day Ministerial conference resulted in the release of a ministerial declaration on a range of water issues, including water resource management, safe drinking water and sanitation, water for food and rural development, water pollution prevention and ecosystem conservation, as well as disaster mitigation and risk management (TWWF, 2003b).

The forum again recommended IWRM as the way to achieve sustainability regarding water resources. The ministerial declaration addressed the necessity of sharing benefits equitably, engaging with pro-poor and gender perspectives in water policies, facilitating stakeholder participation, ensuring good water governance and transparency, building human and institutional capacity, developing new mechanisms of public-private partnership, promoting river basin management initiatives, cooperating between riparian countries on transboundary water issues, and encouraging scientific research.

The ministerial declaration also vowed support to enable developing countries to achieve the UN Millennium Development Goals, and for developing IWRM and water efficiency plans in all river basins worldwide by 2005, the target set at the World Summit on Sustainable Development (TWWF, 2003b). Putting stakeholders and water ministers from around the world together in a Multi-Stakeholder Dialogue (MSD) table for the first time in water history was another key achievement. In addition, a proposal to establish a network of websites to follow the Portfolio of Water Actions received the fullest support of all participants. This will result in information sharing and promote cooperation between countries and international organizations.

A range of organizations and countries-including the World Water Council, Global Water Partnership, UNESCO, UN-HABITAT, FAO, UNEP, IUCN, UNICEF, Australia, the Netherlands, the EU, and Japan - made commitments to develop the water sector. Over 100 such commitments have been confirmed, and this number could double (TWWF, 2003a).

IWRM: Overly General Maxims Must Be Avoided

Seven Factors Towards a Successful IWRM Implementation

The last three decades of summits and mega-conferences were essential in raising the international community's awareness of the urgency of integrated water management. Over time, wise water management has been recognized as an effective way to improve quality of life. Three decades of conferences have resulted in many commitments to IWRM that, unfortunately, were often not implemented.

Although IWRM is the current buzzword of water resources development, future challenges remain in reducing the gap between theoretically agreed policies and implementation.

The integration of different sectors related to water management is very challenging. Moreover, the problems and solutions associated with IWRM implementation in different regions may not be universal. Overly general or universal policies and guidelines for implementing IWRM may become counterproductive.

Below, we highlight seven points and approaches that need to be addressed by water professionals far more carefully than in the contemporary guidelines to successfully implement IWRM.

Privatization

Privatization and public-private partnership were extensively disseminated at the Hague forum, the Bonn conference, and the WSSD summit. Although the privatization concept presently discourages subsidies, it overlooks the fact that, in Europe, initial water infrastructure development was based on massive subsidies. Some critics fear that privatization may encourage fragmentation, which IWRM seems to overcome. Privatization of the marketable aspects of water may result in single-purpose planning and management, which raises a question of open information channels and transparency. Moreover, for the developing world where basic infrastructure is not yet complete, a question remains of whether applying full cost recovery is ethical or practical.

Water resource management by public or government organizations also has many success stories, e.g. in Finland and other European countries (Shen & Varis, 2000). It is important that IWRM not only deals with water supply and wastewater treatment, but combines many other functions, including flood control, poverty alleviation, food production, ecosystem conservation, drought management, and sustainability, and that the government's presence is vital in the effective implementation of IWRM.

Therefore, privatization of the water sector needs to be approached with caution, and the issue's many facets must be considered far more than is happening in today's ideological debate.

Water as an Economic Good

Water is recognized as an economic good in many international declarations, such as those reviewed above, as well as in the policies of major lenders and donors. However, there is a risk in fostering the notion of water as a commodity, because it shifts the public perception away from a sense of water as a common good, and from a shared duty and responsibility. A simple and straightforward solution, designed on the basis of pure economic efficiency, has the potential of ending up unsustainable.

For the improvement of water infrastructure in the developing world, subsidies are vital. The principle of full cost recovery sometimes handicaps developing nations that are striving to provide basic needs by subsidizing their basic water infrastructure (Rahaman & Varis, 2003).

However, water is a basic human need and access to minimum quantities of safe water (20 liters per person per day) should be everyone's right. Lack of access to safe drinking water, sanitation, and irrigation is directly related to poverty and poor health. For example, in South Asia 300 million people have no safe drinking water and 920 million people have no adequate sanitation (WWC, 2000).

In many developing countries, the very poor actually pay a great deal for water relative to their income, but these costs are often hidden. Water is priced by all urban societies, and the poor often have no choice but to pay high prices, spending between 5-10% of their income; however, in contrast in most industrialized countries, the lower-middle class spends 1-3% of their income on potable water and sanitation (Selborne, 2000). For example, in OECD countries, households spend about 1% of their income on water; on the other hand, in Onitsha, Nigeria, the poor spend as much as 18% of their income on water (Rogers et al., 2002).

The application of economic principles to the allocation of water is acceptable, and provides a simple tool for the development of water services in a more efficient direction. However, water should not be treated as a market-oriented commodity when it comes to domestic use for very basic needs (Gunatilake & Gopalakrishnan, 2002), particularly for people in extreme poverty. More discussion, analysis, study, and commitment are needed in deciding whether water is a common or an economic good.

Transboundary River Basin Management

Water should be recognized as a tool for community development, peace building, and preventive diplomacy. Water can have an overreaching value capable of coalescing conflicting interests and facilitating consensus building among societies. To incorporate all of the physical, political, and economic characteristics for a river basin, a process for cooperative watershed management is vital. For this reason, water should be managed based on river basins, not only on administrative boundaries.

The necessity of river basin management received positive attention at the Hague Forum, the Bonn Conference, and the WSSD summit; however, no clear mechanism for implementing the river basin management concept into practice has been suggested. Existing river basin commissions all over the world face difficulties enforcing basin plan provisions in other sectors, as well as regarding riparian governments. Other challenges include the lack of effective local participation, the absence of formal agreements on international water allocations, the limits on pollution, and the economic and military power imbalance between upstream and downstream countries.

An increasing number of countries are experiencing water stress;[1] nevertheless, in most river basins, mechanisms and institutions to manage water resource disputes are either absent or unsatisfactory (UNESCO & Green Cross International, 2003). Not only should plans and goals be developed, but so should practical frameworks for implementing joint river basin management through efficient institutions and productive participation of all riparian states. In addition, a greater focus on legal institutional arrangements is necessary, as it is practically absurd to implement integrated policy without some legal bindings. A common policy, including a supporting legal framework, is vital for implementing integrated transboundary river basin management.

Restoration and Ecology

In the last three decades, the highly visible effects of environmental degradation have sparked public outcry, particularly in the United States and Europe, resulting in river restoration initiatives. "Channelization" is the term used to embrace all processes of river channel engineering for the purposes of flood control, drainage improvement, maintenance of navigation, reduction of bank erosion, and relocation for highway construction.

Channelization, together with a myriad of other activities, such as construction, land-use change, urbanization, and waste disposal, creates a wide range of biological impacts, principally on benthic invertebrates, fish, and aquatic vegetation. In addition, due to the lowering of water tables in adjacent floodplains, natural vegetation and wildlife are also threatened (Brookes, 2002).

In North America, Europe, and the former Soviet Union, 71% of the large rivers (premanipulation mean annual discharge >350 m^3/s) are affected by dams and reservoirs, inter-basin diversion, and water abstraction (Buijse et al., 2002). Headwaters are impacted by the construction of dams, which cause the most damage, whereas lowland sections are mostly affected by floodplain reclamation and channelization.

As a consequence, riverine floodplains are among the most endangered landscapes worldwide (Olson & Dinerstein, 1998). In Germany (Junk, 1999) and along the Mississippi (Gore & Sheilds, 1995), for example, only about

[1] A country is said to experience "water stress" when annual water supplies drop below 1,700 cubic meters per person.

10% of the former floodplains are in a near natural state. In most riverine systems after damming or channelization, hydrological connectivity between the river and its floodplain is restricted to groundwater pathways in which geo-morphological dynamics are mostly absent; migration of permanent aquatic organisms, such as fish or aquatic mollusks, has ceased, affecting overall biodiversity (Buijse et al., 2002).

IWRM principles do not clearly focus on or address the mechanism of river restoration, which is necessary for the sustainable water resources management in areas that have undergone or are presently subjected to notable modifications.

Fisheries and Aquaculture

Fisheries and aquaculture are crucial for human survival and poverty reduction; they provide an inexpensive source of protein to meet nutritional demands in many parts of the world, and therefore should command special attention within IWRM.

Unfortunately, fisheries are generally undervalued in terms of their contribution to food security, income generation, and ecosystem functioning (LARS2, 2004). FAO (2000) estimates that between 15 and 20% of animal protein consumed by humans is derived from aquatic animals, and that fish is eaten more than any other type of animal protein. In 1999, the world average consumption of fish, crustaceans, and mollusks was 16.3 kg per person. Among the world's thirty countries with the highest proportion of fish consumption, twenty-six are developing nations. Fish is particularly important for the nutrition of the poor.

Aquaculture is the most rapidly growing industry when looking at protein production for human consumption. Although aquaculture and coastal and marine fisheries do not directly rely on freshwater, the input of nutrient and sediment from inland streams, particularly into estuaries and coastal zones, results in an interplay between marine and inland water ecosystems that is not addressed sufficiently in the present IWRM debate. The same goes for fisheries.

Need to Focus on Past IWRM Experience - Integrating Lessons Learned

Although IWRM has received increasing international attention in recent decades, historical precedents present lessons. The current IWRM mechanisms have not properly considered similar previous attempts. Lessons from past initiatives are vital to the implementation of IWRM principles and policies. During the 1970s, many European countries implemented a considerable number of comprehensive watershed plans that resemble today's IWRM plans. One example is Finland, which produced basin-wide plans,[2] institutionalized the process by establishing the National Board of Waters, and implemented those plans. One of many implementations was the countrywide construction of municipal wastewater treatment plants, which at that time were already more advanced than current plants in many countries that promote IWRM worldwide. Unfortunately, the current IWRM mechanism does not focus on this kind of highly balanced experience in integrated plans, which would facilitate more concrete IWRM development**.**

Spiritual and Cultural Aspects of Water

Water is the common symbol of humanity, social equity, and justice. It is one of our compelling links with the sacred, with nature, and with our cultural heritage (Dooge, 2003). A case in point is the Ganges River in South Asia, which has a very strong spiritual and cultural significance to all Indians, Bangladeshis, and Nepalese. Regrettably, the current IWRM mechanism does not acknowledge water's spiritual and cultural dimensions. Without recognizing these, it is possible that all efforts towards sustainable water resources management may be piecemeal and ephemeral.

Conclusion

IWRM has unquestionably become one of the mainstream initiatives discussed by governments. The major challenge remains its effective implementation in the field. The conviction that IWRM can provide sustainable water security for every citizen into the twenty-first century has forced water professionals and IWRM to become more responsible to world citizens, especially towards the poor.

The main hurdle lies in the practical implementation of the theoretically agreed-upon IWRM policies (Lahtela, 2001, Biswas, 2005). IWRM could be reduced to an idealistic buzzword if water professionals fail to overcome this hurdle. The seven points discussed in this paper should be incorporated within IWRM policies and principles to overcome implementation challenges and to ensure sustainable water resources management.

A practical challenge to the concept of IWRM is found at two levels. First, water is related to development and societies in countless ways. Its priorities and relative importance vary enormously from one place to another. Second, water must be seen as one factor in a broader context (Varis, 2005).

We have a feeling that, whereas summit meetings scrutinize and promote concepts such as Integrated Water Resources Management, Integrated Forestry Management, Integrated Pest Management, and so forth, the different concepts and related policies are not integrated. This paper has discussed only some of the shortcomings in meeting IWRM challenges. The palette examined was not comprehensive since, as mentioned before, conditions vary enormously, but these issues are important in many localities, even though neglected in the concurrent IWRM discourse. We leave the second level of challenge to future analyses, since it, indeed, deserves a profound and focused analysis. The water sector is sparse in integrating its integrated plans, compared to other tightly related sectors, such as energy, agriculture, and forestry. This would be comical if it were not true.

[2] see, e.g., the plan for the Lower Kymi River; NBWF 1974, which served as a guiding framework for water districts authorities in Finland after Vakkilainen, 2003.

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ARTICLE

Sustainable consumption in national context: an introduction to the special issue

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International institutions over the past decade have begun to emphasize the need to reduce the environmental impacts of heavily consumerist lifestyles in affluent nations as a precondition for sustainable development. Originally outlined in Agenda 21, and discussed at the 1992 Rio Earth Summit, sustainable consumption has now emerged as a definable domain of global environmental politics. At the level of high environmental politics, the Organization for Economic Cooperation and Development (OECD), the United Nations Commission on Sustainable Development (UNCSD), and the United Nations Environment Program (UNEP) have played key roles in reframing environmental deterioration as a consumption problem, rather than a production problem. However, within specific national contexts policymakers and social activists are seeking to engage with the difficult conceptual and political dilemmas posed by contemporary modes of material provisioning. This introductory overview highlights the historical background on the nascent issue of sustainable consumption and summarizes the three comparative case studies that follow: the Netherlands, France, and the United States. The experiences of these countries suggest that the concept of sustainable consumption is quite malleable, and its practical application is shaped by the political culture and policy styles of specific national contexts.

KEYWORDS: sustainable consumption, environmental impact, international agreements, politics, environmental policy, cultural values, case studies

Introduction

The common assessment, rendered even before the formal proceedings began, was that the 2002 World Summit on Sustainable Development (WSSD) in Johannesburg was a dismal failure. It is true that this desultory follow-up to the carefully scripted jamboree held in Rio ten years earlier did not climax any monumental agreements. However, with the passage of time, the conference in South Africa may come to be seen as a strategic turning point. One of the most significant outcomes of the so-called Rio+10 gathering was the decision enjoining the international community—and more specifically wealthy nations—to redouble their attention during the coming decade on the environmental costs, economic inequity, and social malaise associated with heavily consumerist lifestyles.

This commitment, if it proves durable, represents a policy realignment of historic proportions. After all, for the past thirty years, international institutions (and national governments) have actively underplayed the role of material and energy consumption as a source of unsustainable patterns of development and failed to recognize consumers as serious interlocutors in policy design and implementation. Although prominent reports, such as *Limits to Growth*, stressed the implications of unprecedented volumes of resource throughput, they did not conceptualize consumers as purposeful actors. Implicit in these treatments was the notion that shopping—necessary though it might be—was a sordid activity, one aggravated by the cunning ploys of unscrupulous marketers, who goaded hapless consumers to buy a seemingly endless arsenal of frivolous products.

Absent a well-founded understanding of consumer motivation, it is not surprising that the producers (as opposed to the consumers) of goods became the targets of regulatory scrutiny. From the earliest days of the modern environmental era during the late 1960s and early 1970s, the common wisdom has been that air pollution, toxic waste, and so forth are the unfortunate outcomes of producers' failure to internalize a sense of proper stewardship. Policy makers formulated a variety of measures—ranging from the heavily punitive to the vaguely voluntary—to encourage a more resolute commitment and to adapt the system of incentives guiding managerial decisions.

We can trace this sweeping dismissal of consumers—as both intermediaries and end users—to three root causes. First, policymakers typically regard individual consumption as a sovereign domain and, as such, beyond the legitimate reach of public intervention. To be sure, the protective shell around material acquisition is not impervious and the regulation of consumption sometimes occurs. Alcohol, tobacco, and firearms, for instance, are notable consumer goods that most societies subject to heavy controls. Indeed, in many instances, governments have learned how to turn the oversight of these goods into important revenue sources, a dynamic that creates a whole set of issues beyond the scope of this discussion. Nonetheless, in most affluent countries, neo-liberal thinking cautions against using public policy to unduly manage consumer decisionmaking.

Second, governmental legitimacy is heavily grounded in the need to perpetuate economic growth and to ensure steady expansion of the domestic economy (see, for example, Dryzek *et al*, 2003). While it may be appropriate to dampen consumption during inflationary periods, or to discourage a ballooning trade deficit, the general rule is that a little consumption is good, but more is better. To the dominant cast of mind, a purposeful effort to alter—or more pointedly to discourage—consumption seems quite silly.

Finally, it is an article of faith among most policymakers that consumers have insufficient technical expertise about the social and environmental implications of their decisions. The necessary knowledge and institutional capacity to ameliorate consumption's untoward effects are understood to reside in the engineering departments of major corporations. Such thinking conveniently conflates with the vilified portrait of large industrial firms painted by many environmentalist and consumer advocacy organizations, and it reinforces regulatory ideas such as the polluter-pays principle. In other words, the obligation to promote social and environmental responsibility is most appropriately assigned to producers because their irresponsible actions create the problems in the first place.

For these reasons, political debate has not traditionally considered material consumption; instead we have devoted ourselves to fostering technological innovations aimed at incremental environmental improvements—or at least preventing further deterioration in the face of ever-expanding economic growth. The preparatory meetings to the Rio conference, however, showed the contradictions of this approach. Negotiations during the prior decade to forge a global response to ozone depletion, and the emergence of climate change as a fiercely contested arena, brought into bold relief the wealthy nations' culpability (Cohen, 2001). Following these proceedings, most industrialized countries continued to sidestep the problem. However, a handful of national governments and secondary policy-making bodies began to devote attention to the untoward consequences of consumer practices. In particular, the Nordic countries convened a series of symposia on the environmental implications of consumption, and the Organization for Economic Cooperation and Development (OECD), the United Nations Commission on Sustainable Development (UNCSD), and the United Nations Environment Program (UNEP) launched work programs around this theme. This joining up of activities created a platform for sustainable consumption and contributed to the issue's relatively high visibility at Johannesburg.

The next section of this introduction reviews the emergence of sustainable consumption as a definable area of international environmental politics and the role of these various institutions. We then engage in a comparative study of how sustainable consumption has conceptually evolved in three national settings: the Netherlands, France, and the United States. This investigation points to the absence of a uniform strategy. Because of impinging political prerogatives, historical predeterminants, and cultural orientations, sustainable consumption is being differently framed in each of these nations. The current debate over the efficacy of managing consumer decisionmaking provides an opportunity to assess the program's conceptual status and to consider the intersection between cultural and environmental politics in these three settings.

Agenda 21 and Sustainable Consumption

Although some of the discussion at the 1972 United Nations Conference on the Human Environment in Stockholm—most notably by Indira Gandhi—showcased material consumption in affluent countries, the issue failed to galvanize robust international attention. Such a politically volatile agenda was deemed impolite and, more to the point, threatened an emerging consensus about the need for a largely technical ensemble of environmental management strategies. Critical scrutiny of the global North's resource-intensive lifestyles was effectively prohibited until the preparatory meetings convened to work out the details of Agenda 21 and Rio's other centerpiece documents.

Two major drivers were responsible for reintroducing consumption during these organizational activities. The first, the 1987 Montreal Protocol, gave new prominence to global environmental problems. Forerunner countries and non-governmental organizations (NGOs) sought to use the momentum generated by the ozone accord to press an ambitious future vision. A second factor was the palpable suspicion among developing nations about the underlying intentions of global environmentalism. Concerns about how widening production controls would affect their economic prospects caused poorer countries to charge that wealthier countries needed to make painful economic adjustments. These initiatives encountered their stiffest resistance in the fourth chapter of Agenda 21, which considers the relationship between material consumption and sustainable development.

A broad coalition of affluent countries, led by the United States, was loath to include any substantive treatment of the environmental implications of consumption. However, developing countries insisted on broadening the list of factors that contributed to global ecological deterioration beyond the obligatory reference to population growth. Proponents of this perspective drew attention to developed nations' outsized greenhouse gas emissions and rates of natural resource appropriation. Using ecological footprint analysis, developing countries demonstrated that their contribution to climate change and other large-scale ecological problems was, on a per capita basis, trifling by comparison to the voracious appetites of their prosperous counterparts.

For three decades, the conventional view had indisputably ascribed environmental decline to poverty and unbridled population growth in the global South. Affluent nations interpreted this assault by China, India, and others as disparaging affluence, and they aggressively resisted this reassignment of responsibility. Under these circumstances, negotiators preparing for the Earth Summit had profound difficulty completing their work and, in the end, left unresolved the thorniest questions. Nonetheless, Chapter 4 of Agenda 21 does advance the view that "the major cause of the continued deterioration of the global environment is the unsustainable pattern of consumption and production, particularly in industrialized countries, which is a matter of grave concern, aggravating poverty and imbalances." Sustainable consumption was also given prominent attention in the Rio Declaration on Environment and Development, where Principle 8 encourages the signatories to "reduce and eliminate unsustainable patterns of production and consumption."

To be sure, the controversies that burst into the open during the lead-up to Rio had been fomented elsewhere. For instance, the Brundtland Commission chided the industrialized countries for the "short-sighted way in which we have often pursued prosperity" and envisaged that "major changes in policies will be needed to cope with the industrial world's high levels of consumption" (WCED, 1987). The European Commission, during this same timeframe, was formulating its Fifth Environmental Action Programme and similar contentions animated its deliberations. Several novel initiatives by national governments—most significantly the Netherlands' National Environmental Policy Plan—sought to shift some environmental policymaking attention to consumers (van der Straaten, 1992; Bennett, 1991). As a result, by the time the heads of state assembled in Rio, sustainable consumption had already made substantial headway in its steady climb onto the global policy agenda.

Sustainable Consumption During the Post-Rio Period

In the immediate aftermath of the contentious battles over Agenda 21, the Nordic Council of Ministers and the Norwegian Ministry of the Environment organized a series of workshops to assuage international tensions. The intent of these conferences was to gather together representatives of the affluent nations as part of a process of forging a shared definition of sustainable consumption and to formulate a common strategy for addressing the issue. Because of the difficulties of devising a politically satisfactory approach regarding the implications of consumers' decisionmaking, consumption was initially subsumed by the broader, more anodyne rubric of "sustainable production and consumption." This tactical move made it possible to give a passing glance to consumers, while conveniently maintaining allegiance to more familiar strategies that emphasized producers. The result was that eco-efficiency, clean production, and other managerial approaches designed to harmonize economic and environmental objectives received heavy attention during the early 1990s, and sustainable consumption temporarily disappeared from view. In the minds of most policymakers, sustainable consumption—to the extent that it was not simply a subset of sustainable production—would be advanced using product labeling schemes along the lines of the Nordic countries' Blue Swan and Germany's Blue Angel.

The OECD is responsible for rescuing consumption from a production-dominated policy approach (see, for example, OECD, 1998). Following the Earth Summit, the Environment Directorate of the Paris-based organization launched, in close collaboration with the World Business Council for Sustainable Development (WBCSD), a work program on sustainable production and consumption. By the mid-1990s, particularly within northern Europe, a menu of production-dominated approaches to enhance the transparency of firms' environmental performance—for example, ISO 14001—had begun to gain popular acceptance. The OECD's challenge was to develop intellectual space for consumption considerations that was separable and distinct from conventional environmental policy categories.

Numerous sources supported this effort. For instance, a joint committee of the Royal Society of London and the United States National Academy of Sciences (1997) issued an unprecedented report on the environmental implications of consumerism. Departing from customary dispassionate technical prescriptions, this document noted that "consumption patterns of the richer countries may have to change; and for global patterns of consumption to be sustainable, they must change." At the same time, a handful of European governments, riding a wave of public environmental concern during the mid- and late-1990s, issued a flurry of consultation reports that gave consumption surprisingly high prominence. For example, in 1998 the United Kingdom released *Sustainable Development: Opportunities for Change*, stating "to promote . . . more sustainable production and consumption we need to stimulate and support those influences which encourage producers to provide better goods and services while using resources more efficiently." This swelling appreciation for the interactions between consumption and the environment included efforts by national and regional scientific research councils. On the international level, the World Bank devoted the 1998 issue of its *Human Development Report* to sustainable consumption.

Sustainable consumption has also become an area of increasing NGO activity, and the object of several global forums. Groups such as the International Institute for Environment and Development, the Northern Alliance for Sustainability, Consumers International, the European Network for Socially Responsible Consumption, and the NGO Caucus for Sustainable Production and Consumption have contributed a great deal of the intellectual content to these proceedings.

Sustainable Consumption and the United Nations Environment Program

Sustainable consumption, in many respects, is the most obdurate challenge of the sustainable development agenda, and the OECD has provided an important context for working through the numerous conceptual and political dilemmas (Lafferty & Meadowcroft, 2000). However, UNEP's current interest in sustainable consumption may be much more consequential over the long term. Launched in 1998, UNEP's sustainable consumption efforts are housed within the Division of Technology, Industry, and Economics (DTIE), and officials seek to engage a range of stakeholders—businesses, governments, and NGOs—in developing strategies to promote environmentally responsible consumption. While UNEP's activities to date have primarily concentrated on the dissemination of information and the creation of a global network, the organization's multidimensional plan of action is becoming more proactive (Marras, 2003).

First, UNEP has sought to engage the advertising and communication industries in pursuing sustainable consumption practices. This initiative is attempting to draw marketing professionals into a dialogue and to highlight green consumerism for future expansion. UNEP is currently working with the European Association of Communication Agencies, the World Federation of Advertisers, and the World Association of Opinion and Marketing Research Professionals. Prominent firms—for example McCann Erickson—have even collaborated with UNEP on specific projects.

Second, in partnership with the Society for Environmental Toxicology and Chemistry (SETAC), UNEP has launched a program promoting life-cycle analysis to evaluate products' environmental impacts over the full span of their lives—conventionally viewed as design, construction, use, and disposal. This initiative rose out of the 2000 Malmö Declaration, and it received added impetus two years later during the proceedings at Johannesburg. It is also building upon European legislation to force product designers to focus on integrated product policies (Rubik, 2001; Rubik & Scholl, 2002; see also Reinhard, 2003).

Third, a related UNEP work program seeks to move the field of environmental management in a more holistic direction and to inspire innovative modes of policymaking that are not simply oriented around pollution remediation. Environmental policies have customarily concentrated on specific product or process attributes, instead of the system features in which these activities take place. A key motivation behind emergent fields such as ecological design and industrial ecology is the need to construct new consumption (and production) systems that emphasize services instead of material throughput—for example, personal mobility instead of widespread private vehicle ownership (Allenby, 1999).

Fourth, UNEP has recognized the primacy of youth consumption and has been working to engage people between the ages of fifteen and twenty-four in public discussions regarding the environmental impacts of their lifestyles. Conducted in collaboration with the United Nations Educational, Scientific, and Cultural Organization (UNESCO), the youthXchange program rejects the prior generation of environmentalist thinking that maligned consumers for their anti-ecological sensibilities. Instead, the point of departure is an awareness that "youth behavior is a mix of cynicism and idealism, of hedonism and the desire to do the right thing. Any communication effort that intends to promote sustainable consumption among youth has to start from these contradictions" (UNEP, 2004). Accordingly, the project recognizes the important role that global brands and peer pressure play in the lives of young consumers, and attempts to use product loyalty to encourage commitments to sustainable development and human rights.

Finally, UNEP is working with professional procurement societies to foster information exchange about the environmental dimensions of institutional procurement and to develop an international system of consistent standards. This activity is actually supporting a quiet revolution in the organizational acquisition of goods and services. Started initially to encourage governmental entities and publicly visible corporations to buy paper with recycled content and fuel-efficient fleet vehicles, so-called "sustainable procurement" now uses the purchasing expertise and budgets of large institutions to encourage more environmentally attentive consumption (Mastny, 2003).

Sustainable Consumption at Johannesburg and Beyond

The 2002 World Summit on Sustainable Development (WSSD) in Johannesburg was destined from the start to be a sobering affair. Commitment to the grand ideals of sustainable development prominent in Rio ten years earlier had dissipated, and conference organizers had only a few shop-worn successes to profile. Moreover, the strategic decision to assign lead responsibility for sustainable development to national governments had come under a hail of criticism. During the Earth Summit's aftermath, only a handful of forerunner countries had bothered to formulate national sustainability plans (Lafferty & Meadowcroft, 2000). It has been far more common for political leaders to express token support for sustainable development, but then to step back when difficult decisions challenged prevailing priorities.

Because of this diffident record, sustainable development proponents were under tremendous pressure to demonstrate unambiguous resolve for Agenda 21, originally agreed to at Rio. As part of its effort to reenergize global support for sustainable development, the WSSD Plan of Implementation advanced three "overarching" objectives: eradicating poverty, changing unsustainable production and consumption patterns, and protecting and managing natural resources. With respect to sustainable consumption, the document asserts that

> Fundamental changes in the way societies produce and consume are indispensable for achieving global sustainable development. All countries should promote sustainable consumption and production patterns, with the developed countries taking the lead and with all

> countries benefiting from the process . . . Governments, relevant international organizations, the private sector, and all major groups should play an active role in changing unsustainable consumption and production patterns.

The plan proceeds to delineate, in an ambitious level of detail, the need to promote technological development, to encourage transparency, to eliminate market distortions, and so forth. To advance this program, WSSD conferees charged UNEP (and UNCSD) with developing a ten-year framework for action on sustainable consumption. This charge will inevitably raise not only the issue's international visibility, but the stakes for global environmental institutions.

Sustainable Consumption in National Context

Despite sustainable consumption's growing profile within international environmental politics, the concept does not engender uniform understanding across different national settings. This is perhaps unsurprising. After all, political culture is a key variable of state intervention, and countries approach policy issues with characteristic styles. The foundational research for this observation was conducted during the 1950s and 1960s, and scholars interested in comparative environmental policy have regularly drawn on these insights (see, for example, Enloe, 1975; Lundqvist, 1980; Richardson, 1982; Vogel, 1986).

During the past decade, due largely to the European Union's expanding role, this work has taken on a new relevance (Wallace, 1995; Christiansen, 1996; Skou Andersen & Liefferink, 1997; Jänicke & Weidner, 1997; Hanf & Jansen, 1998; Binder, Jänicke, & Petschow, 2001). In particular, Martin Jänicke's studies of institutional capacity has shaped the overall research trajectory, but other important perspectives have also developed out of investigations into the cultural foundations of environmental policy-making systems (Jasanoff, 1986; Wynne, 1987; Jamison & Baark, 1999; Smith & Phillips, 2000). Also significant has been research in the related area of comparative technology policy that has sought to assess the varying ways that countries approach innovation (for an overview see Nelson, 1993). The most recent wave of work within this tradition has sought to contrast the policy styles shaping efforts to encourage sustainable development, to catalyze processes of ecological modernization, to formulate green plans, and to adjust to a future shaped by climate change (see, for example, O'Riordan & Jäger, 1996; Baker *et al*, 1997; Lafferty & Eckerberg, 1998; Sonnenfeld & Mol, 2000; Dalal-Clayton, 1996).

The studies that comprise this premier issue of *Sustainability: Science, Practice, & Policy* build on this tradition by examining how a cross section of affluent countries is currently responding to the challenges posed by sustainable consumption. While most discourse on the need to modulate consumerism has been framed at the international level, national governments, at least for the foreseeable future, will be responsible for implementing policy programs.

This collection examines the pursuit of sustainable consumption as a policy issue in three countries: the Netherlands, France, and the United States. The contributors examine, from a comparative standpoint, the rhetorical debates surrounding sustainable consumption, as well as the actual policy tools and techniques being formulated to achieve its objectives. While these studies focus primarily on the institutional and administrative features of sustainable consumption in specific national contexts, the collection also highlights more generally the national policy styles of the respective countries.

There has to date been very little investigation of how sustainable consumption is being assimilated as a policy concept. The prevailing tendency has instead been to examine, from an apolitical perspective, a handful of technical devices, such as ecological taxation and eco-labeling, and to assess the potential of these approaches for "greening" consumer behavior. These economic and informational campaigns certainly have a role in any serious effort to transform contemporary consumerism. However, the seemingly intractable qualities of the "consumption problem" create a need to approach the issue more creatively and to link up with other political objectives. The following studies seek to shed light on these efforts to widen the audience for discussions of sustainable consumption.

The first study examines the Netherlands, which, by most assessments, occupies a leadership position in international environmental affairs. Over the past two decades, the country has managed to leverage its relatively small size and its moral reputation to advance a progressive environmental agenda. One of the first countries to recognize the inadequacies of a rigid environmental policy framework, as early as the mid-1980s the Netherlands released a series of multi-year planning reports—or National Environmental Policy Plans—to move toward an adaptive system predicated upon formidable targets and integrated management. Ever since, the Dutch have arguably been at the forefront in developing substantive programs to manage the adverse environmental impacts of material consumption.

The article by Susan Martens and Gert Spaargaren describes the political dynamics underlying the Netherlands' leading role and documents its experience in fostering sustainable practices among Dutch consumers. This policy program shares many elements with a broader commitment to ecological modernization. Originally formulated in the context of production to enhance the environmental efficiency of certain manufacturing operations, the concept has also been applied to consumer decisionmaking. In the Dutch case, the need to cultivate new forms of consumption has not been the exclusive province of environmental officials. Rather, a much larger range of policy perspectives has been brought to bear on the tenacious dilemmas associated with environmentally significant consumption and nearly the entire array of ministerial portfolios in the Netherlands has contributed to this effort in some capacity. While sustainable consumption has achieved a high level of political legitimacy, its proponents continue to encounter significant resistance, and the various initiatives launched to date evince mixed success. Nonetheless, regarding the practical mechanics of shifting practices, the Netherlands has committed itself to a notable process of social learning, and Dutch policymakers have begun to accumulate valuable experience.

The second contribution examines the status of sustainable consumption in France. While material provisioning occupies a storied historical position in the country's cultural politics, its environmental dimensions have not received prominent attention. Indeed, environmentalism as a political voice has struggled in France, and the government has been slow to respond to pressure for environmental reform. Measured against its European and international counterparts, France is regarded by most informed observers as an environmental laggard or, at best, a reluctant partaker.

Samy Sanches, however, demonstrates that if one adopts a broad interpretation, over the past decade a highly animated politics has developed in France around sustainable consumption. Motivated in large part by a desire to preserve cultural autonomy in the face of globalization, French political leaders have latched onto several themes entirely consistent with sustainable consumption. Furthermore, the French public has begun to join up their concerns about consumerism, working hours, domesticity, leisure, and so forth. The political debate spurring the 1998 decision to reduce the French workweek to 35 hours has fostered a civic consciousness about the virtue of more sustainable livelihoods.

The third, and final, study considers sustainable consumption in the United States. Given the very modest attention that American political leaders and policymakers have devoted to the notion of sustainability, inclusion of the country in a review of sustainable consumption may strike some readers as a bit curious. To be sure, uptake of the Rio commitments in the United States has been poor, and active consideration of consumerism's adverse environmental impacts does not garner much formal political interest. Nonetheless, many parts of the country have surprisingly vibrant grassroots activity aimed at resisting and reforming mainstream consumption practices. Sizable bands of anti-consumerism activists, anti-television protesters, advertising opponents, voluntary simplifiers, green consumers, and others have begun to coalesce around an agenda broadly consistent with sustainable consumption, although not organized under such a rubric.

The American political system, hamstrung by a complex division of power among different branches of government, a deep commitment to partisanship, and a sclerotic two-party setup, has rarely evinced proactive domestic policymaking. The historical pattern demonstrates that change at the national level only occurs as the outcome of a combination of untiring local agitation and demonstrable action by a critical mass of individual states. My article highlights how this process is again playing itself out in the case of sustainable consumption. Although it is too early to determine whether these inchoate activities will coalesce into a meaningful social and political movement, a growing number of Americans appear discontented with prevailing consumption.

Viewed in the round, these three studies point to an emerging disconnect between the highly rationalistic international notions of sustainable consumption and that developing in specific national contexts. At the global level, efforts to transform consumerist lifestyles are largely rooted in technical debates about the relative merits of economic and informational tools. In contrast, closer to the ground, sustainable consumption is becoming fused with other public concerns about the consequences of consumerism. Much of this activity is not joined up with the high politics of sustainable consumption, but rather is driven by diverse social objectives that can range from insulating children from the impacts of television to protecting cultural resources jeopardized by globalization. This appropriation process suggests that the pursuit of sustainable consumption will become a flexible endeavor, one that sympathetic policymakers and issue promoters will adapt to the opportunities and constraints of specific national contexts.

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ARTICLE

The politics of sustainable consumption: the case of the Netherlands

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The environmental pressure associated with contemporary modes of material provisioning in advanced countries suggests the need to foster more sustainable consumption. Despite growing interest in sustainability, the Netherlands currently has few effective and legitimate measures in place that focus on the role of citizen-consumers. Existing policy styles and instruments have not reduced significantly the environmental impacts of consumption. An explanation for this inadequacy resides in the technocratic origins of environmental policymaking and the pronounced tendency to rely on the presumed rationality of producers situated on the supply side of production-consumption chains. A central issue, therefore, becomes the organization of an overt politics of sustainable consumption. We explore here possible alternatives to facilitate sustainable consumption in the Netherlands and review the policy initiatives that non-governmental organizations and the Dutch government have to date undertaken. The analysis evaluates these efforts through a theoretical framework designed to chart the development of a democratic vision of sustainable consumption.

KEYWORDS: sustainable consumption, politics, developed countries, environmental impacts, public awareness, economic policy, government policy, non-governmental organizations

Introduction

As early as 1972, the Dutch government introduced the concept of "ecologically adjusted behavior." The country's environment minister at the time declared, "In a society as we know it, economic growth has to be controlled; it is not just about production, but also about critical consumption and responsible living." Since the first upsurge of ecological awareness in the early 1970s, environmental considerations have become a regular feature of everyday life and the consumption practices attached to it. Dutch consumers have become accustomed to paying ecological taxes on gasoline, to separating their organic wastes, and to subscribing to a wide array of "green electricity" schemes. From these observations, we might conclude that environmental considerations have gained a degree of independence from traditional aspects of consumer decisionmaking that are inspired by economic comparisons, comfort and convenience Nonetheless, the domestic environmental pressures attributable to consumption remain high.

Consumption politics in the Netherlands during the 1970s and 1980s were organized around information campaigns to educate people about topical environmental problems and their personal responsibilities in helping to ameliorate them. Often, the government delegated these tasks to environmental education centers and non-governmental organizations (NGOs) that issued—usually with public financial support—moral appeals for critical and "correct" consumption behavior. During this period, discussion focused on limiting overall consumption as the solution to environmental problems, with substantially less attention to alternatives that could lessen harmful household practices. Policymakers devoted considerable rhetorical energy to sustainable consumption during these years, but they often failed to produce tangible programs.

The first Netherlands Environmental Policy Plan (NEPP), published in 1989, marks the beginning of more comprehensive consumption policymaking. The NEPP identified households as one of its environmental policy target groups, particularly with respect to their vital position in production-consumption chains. The 1989 document treated consumers as independent and potentially critical actors, with power to influence production. Moreover, the NEPP acknowledged that consumers were "not [an] easily accessible target group." While environmental policymakers in the Netherlands have come to accept that consumption requires special attention, and that they should tailor initiatives to consumer requirements, the issue remains highly problematic. By the time the Dutch government released its third version of the NEPP a decade later, consumers were no longer treated as one of the target groups; instead, more sustainable consumption is to be achieved on the basis of ongoing product innovations (*VROM* et al., 1998). These circumstances suggest that politicians and policymakers cannot decide whether to approach sustainable consumption from a consumer- or a producer-led perspective (Vermeulen, 2000).

Contentions that the future success of Dutch environmental policy depends on how these initiatives ultimately address the everyday practices of citizen-consumers are (once more) gaining ground (Beckers et al., 2000). If consumption is indeed a social phenomenon, then we need to take a fresh look at how to accomplish social transformation and what the major consequences will be. In other words, how will the Dutch style of environmental policymaking be affected by an emphasis on sustainable consumption? How will an invigorated politics of sustainable consumption influence the routines of everyday life, the levels of personal comfort, and the features of contemporary life that citizen-consumers in the Netherlands regard as indispensable?

By analyzing past and present initiatives, we hope to arrive at a set of insights that might guide the country's future efforts in this area. In seeking to understand the current political status of sustainable consumption in the Dutch context, we draw on the theory of ecological modernization, which appears at present to be informing the activities of many of the relevant actors (see, for example, van Driel et al., 1993; Mol and Spaargaren, 1993; Duyvendak et al., 1999). The recommendations we present for the development of a politics of sustainable consumption are also embedded in this view.

We argue that policymakers should not confront the issue of consumption from a one-sided perspective informed exclusively by environmental scientists and commitments to limit aggregate consumption. In this sense, we do not endorse efforts to "tame the treadmill of consumption" as a narrow objective (see also Princen et al., 2002). Policy programs that aim to lessen the environmental consequences of consumption by reducing (or radically restructuring) consumption will likely lead to questionable social and economic outcomes. These so-called de-modernization strategies tend to underestimate the potential to improve the environmental consequences of contemporary consumption by promoting more ecologically rational practices. Without taking a strong position on the desirability of limiting consumption in the absolute sense, we maintain the need to embed consumption in policy objectives developed by democratic environmental reform processes over the last several decades.

In addition, the involvement of citizen-consumers is indispensable in formulating environmental criteria that will steer the transformation of consumption practices. This participation is essential with respect to policies that emphasize the role of *consumers* (for instance, when considering the use of eco-labels), as well as in terms of the politics and policies that highlight the role of *citizens* (for instance, when reconfiguring the local or national water system or when formulating Agenda 21 activities). Both situations require a strong emphasis on active citizen-consumer contributions, and imply a need for strategies that privilege actors and institutions within civil society. Such a perspective suggests that a shift in governance—motivated by the development of new sustainable consumption policies—is the main driver behind several political changes presently underway in the Netherlands.

The next section discusses the factors that have prompted Dutch policymakers to take a special interest in sustainable consumption and the conventional approaches that they have applied. We then assess the current state of environmental politics in the country and explain how developments in this sphere have contributed to the conceptualization of new strategies to green consumer behavior. We then appraise several policy experiments carried out by NGOs and relevant government ministries to facilitate more sustainable consumption. The conclusion reflects on those initiatives that we deem to be most promising, describing how these pilot programs can serve as useful building blocks for a future policy program, as they combine a democratic environmental perspective with an equally strong focus on the everyday life of citizen-consumers.

Greening Consumption: The Dutch State of Affairs

Before describing some of the more striking features of Dutch consumption patterns and their related environmental effects, it is important to explain our conception of consumption practices. We refer to consumption not as isolated purchasing behaviors, but instead as a broad concept that encompasses the "buying, using and disposal of products and services within the contexts of social practices, or consumption domains." We use the terms "consumption domain" and "social practice" interchangeably when discussing the specific setting in which consumption occurs. There is, of course, a distinction between the two concepts. The notion of a social practice refers to clusters of everyday routines that are bound in space and time and are common among citizen-consumers—for example, dwelling or personal care. Social practices also include many types of activities that cannot be considered "consumption" in the conventional sense. The term "consumption domain," in its strictest usage, refers to a certain segment of consumer expenditure and excludes activities such as house cleaning. We consider it analytically preferable to refer to social practices when discussing the state of ecological modernization, since this includes a broader range of activities. However, consumption domain is currently the more widely used concept among the Netherlands policymakers.

Per capita consumer expenditures in the Netherlands have approximately tripled during the second half of the twentieth century. While there have been, during this period, some significant changes in provisioning patterns, the dematerialization anticipated by scholars and policymakers has not occurred (*RIVM*, 2003). The adverse environmental impacts of consumption—the generation of toxic air emissions, the production of solid wastes, and the depletion of natural resources and energy—continue to increase. The third version of the NEPP estimated that consumption in the Netherlands was responsible for 10% of the country's greenhouse gas emissions, 4% of its releases associated with acidification, 19% of its discharges contributing to eutrophication, and 14% of overall solid wastes (see Table 1).

Table 1 Various Consumption-Related Emissions in the Netherlands Relative to Total Emissions.

Emission Category	Percent
Greenhouse Gas Emissions	10
Acidification Emissions	4
Eutrophication Emissions	19
All Wastes	14

Source: *VROM* (1998)

Recent debates also have emphasized the spatial dimensions of consumption, an outcome that is not especially surprising given the Netherlands' high population density. Within this context, the Dutch ecological footprint—particularly the landmass necessary for carbon dioxide sequestration—has been a frequent point of discussion. Of course, actual estimates vary depending on the method of calculation, but some local NGOs contend that citizen-consumers in the Netherlands occupy two to three times their "fair share" of the Earth's surface. The National Strategy for Sustainable Development, released in 2002, assessed the country's ecological footprint in terms of average global productivity: the appropriated landmass was about 11 million hectares (approximately 0.2% of the global total), while the Dutch population comprises 16 million people (0.26% of the world total), and the country's land area is 33,943 square kilometers (0.026% of the global total) (*VROM*, 2002a, 2002b; see also Postma, 2000 and Ros, 2001). Although commentators seem to agree that the Netherlands' ecological footprint needs to be reduced, few concrete policies have resulted.

Most technical studies that map the environmental effects of consumption focus on the so-called "direct" and "indirect" uses of energy. In this regard, the general trend among Dutch citizen-consumers is one of continued growth. The percentage increase in per capita energy use (from 35 GJ in 1946 to 120 GJ in 1995) exceeded even that of consumption in monetary terms. The largest expansion in energy use occurred between 1960 and 1980, largely due to the introduction of central heating and the expansion of personal automobile ownership. Efficiency improvements in the supply sectors somewhat offset this growth in energy consumption; in the absence of these advances, per capita energy use would have increased by a further 40 GJ by 1995 (Vringer et al., 2001; *SCP*, 2001).

Direct and indirect energy use among Dutch citizen-consumers is primarily attributable to a limited number of consumption domains (see Table 2).[1] The largest share of energy consumption in 1995 was assigned to three domains: home, food, and housing (with leisure rapidly increasing).

[1] Refer to Vringer et al. (2001) for a complete description of these consumption domains.

The relative importance of these consumption domains is likely to change over time. For example, researchers suggest that by 2030 the amount of energy consumed for holidays will exceed that used for housing. Food and home energy consumption will also decrease, while that used for at-home and away-from-home leisure will rise sharply. On an aggregate level, the energy use is expected to grow. Notwithstanding the slow rate of dematerialization and efficiency improvements in the supply sectors, energy use among Dutch citizen-consumers is projected to increase between 56 and 74% by 2030 (1995 baseline), making it difficult to meet both national and international targets. In terms of sustainable development, it becomes clear that consumer behavior is an essential area for environmental politics and policymaking.

Table 2 Energy Consumption of the Major Consumption Domains in the Netherlands as Shares of National Total.

Consumption Domain	Energy Consumption (Percent)	Definition of Domain
Home	29	Maintenance, improvement, and heating
Food	23	Obtaining, storing, preparing, and eating
Dwelling	8	Cleaning, gardening, and decorating
Indoor Leisure	7	Reading, watching television, talking on the telephone, and so forth
Outdoor Leisure	6	Sports, cultural activities, and so forth

Source: Vringer *et al* (2001)

Sustainable Consumption Initiatives: From Alternative Consumer Culture to the Creation of Green-Niche Markets

As outlined earlier, environmental considerations have gained a certain degree of independence from the other factors that motivate Dutch citizen-consumers. On a more abstract level, the issue of sustainable consumption has become embedded in different initiatives involving individuals, social groups, and industries. Over the last several decades, public discussions regarding the environmental implications of provisioning have developed in various directions. These deliberations have been framed in terms of the need to forge new styles and qualities of consumption, to interrogate the characteristics of consumption practices, and to involve different actors in the development of alternative practices.[2]

An interesting—though decidedly peripheral—manifestation of interest around sustainable consumption in the Netherlands is the so-called "Platform True Prosperity." This project is a joint initiative coordinated by more than two-dozen organizations (NGOs, consumer groups, charities, religious organizations, and trade unions). Proponents are seeking to foster a more balanced society and to link up with personal motivations to demonstrate

[2] By the 1970s and 1980s, certain segments of Dutch society had already begun to turn their attention to the need for "new lifestyles." Initiatives consistent with this perspective were pursued primarily within the context of the ecumenical social movement that dedicated several newsletters and seminars to the topic.

that non-material values (such as silence and personal networks) can enhance quality of life. Organizations and individuals connect to the Platform by sharing ideas or by establishing small innovation projects—for example, regional non-monetary exchange economies and local community-garden projects. In some respects, the motivations that animate the True Prosperity discourse (an emphasis on the non-material qualities of life and a critical perspective on the culture of consumption) resemble those that informed the de-modernization strategies common in the Netherlands during the 1970s and 1980s.

Another campaign is the National Initiative for Sustainable Development (NIDO) that brings together industries, governments, civil-society groups, and scientists to develop and implement thematic programs promoting sustainable development. In contrast to True Prosperity, NIDO does not seek to bring about general changes in (consumption) culture, but the organization's adherents develop competencies in those social sectors that can promote sustainable-system innovations and transitions. One NIDO program specifically designed to create market opportunities for sustainable products is the "green products" initiative, which works to transform current sustainable consumer products and services niches into mainstream markets. To realize this goal, various associations of producers and consumers, research institutes, and governments are working collaboratively on marketing strategies for green consumption alternatives.

In addition to these relatively large-scale initiatives, numerous smaller, independent activities in the Netherlands aim to develop tangible options for greening specific consumption aspects. Sponsored primarily by private companies, these projects are introducing green products and services. Prominent examples of environmentally sound products are solvent-free paints, biodegradable detergents, green-electricity schemes, and a number of product groups categorized under other environmental labels. Less apparent examples of product innovations are the "green savings" and "green investment" programs that the financial services industry and the national government have introduced since the mid-1990s (de Wit, 2002).[3]

Uneven development

Current social debates regarding sustainable consumption in the Netherlands are less intense and morally focused than they were during the 1970s. Both governmental and non-governmental actors today are more pragmatic, emphasizing practicable ways to organize emerging green markets and to promote sustainable consumption. These efforts have enlarged the number of sustainable alternatives and improved the overall quality of green products and services. However, the amount of innovation—or the extent of ecological modernization—differs greatly across consumption domains. Winsemius' (1986) policy life-cycle model provides an instructive approach for highlighting some of this variability, as well as the unequal rate of innovation in the different consumption domains (see Figure 1).

Figure 1 depicts the present position of several relevant consumption domains and illustrates their considerable differences in degree of ecological modernization to date. The availability of green products and services in tourism and leisure, for example, is still rather limited. The process of greening—as measured by the number of environmentally sound alternatives that are available, and the extent to which they have been incorporated into everyday routines—is substantially more advanced in housing and feeding.[4]

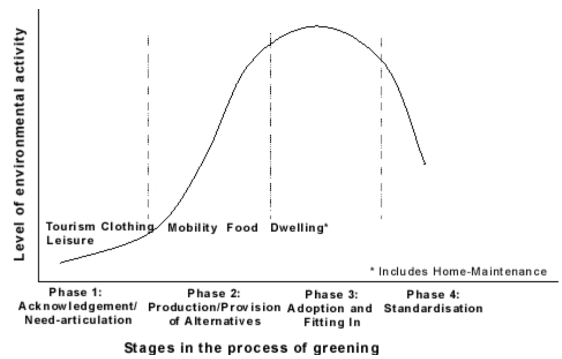

Figure 1. Stage of Ecological Modernization for Consumption Domains in the Netherlands

Regarding tourism, recent research has noted that efforts to facilitate more sustainable consumer choices are still in the initial stage. Initiatives to enable environmentally-sound travel alternatives are confined to eco-accommodations in the Netherlands and abroad, programs to facilitate sustainable tourism in the Alps, and an airline-ticketing scheme called Trees for Travel that allows consumers to purchase tree-planting certificates to compensate for airplane-generated carbon dioxide emissions. The slow pace at which tourism has been subjected to ecological modernization suggests that this consumption domain may be resistant to sustainability-enhancing changes (CEA, 1999). Holiday practices tend to be habitual, and are subject to change only as a result of new financial circumstances. Environmental considerations do not appear to play a significant role in consumers' holiday-planning decisions. The evidence suggests that, for at least the near- to medium-term, there is likely to be very little (articulated) consumer demand in the Netherlands for sustainable holiday alternatives.

If we now investigate a domain such as food that is purportedly more environmentally advanced, the initial impression is that, at least in the Netherlands, a rather modest level of ecological modernization has been achieved. This impression is premised on the relatively

[3] There is an interesting distinction between "dark" and "light" green financial products in the Netherlands. The first generation of dark green investment funds was initiated in the 1970s and many of the rules governing these vehicles actively prohibit investments in heavily polluting industries. The financial products dating from the early 1990s are based on more flexible policies.

[4] The relative positions of the consumption domains are predicated upon our own qualitative assessment, because well-defined sets of indicators and related quantitative analyses would require data that are not yet available. Most consumption figures in the Netherlands are expressed in terms of individual household expenditures on products and services in different domains. These data do not include, for example, the availability and accessibility of green alternatives or their overall quality in comparison to conventional substitutes.

small proportion—approximately 1% in 1998—of Dutch food consumption that consists of organic products (Van der Grijp and De Hond, 1999). However, in assessing the potential for change here, a number of other indicators are important. The variety of retail outlets selling organic food products has increased significantly in recent years.[5] The number of supermarkets displaying over fifteen organic items has expanded from 70 in 1995 to over 4,000 in 1999.[6] Likewise, specialized organic groceries have become more prevalent, and their numbers throughout the country grew during this period from 280 to over 400. Moreover, a survey of Dutch consumers demonstrated that environmental concerns are an important motivation in the purchase of organic food products—51% of organic food consumers identified "the environment" as their most important reason (*Platform Biologica*, 2001).

We can consider the choice of organic foods to be a "dark green" expression of sustainable food-consumption practices. There are also several "lighter green" possibilities, such as substituting meat with novel protein foods or purchasing seasonal products.[7] Major producers and retailers on the supply side of the food chain have become quite cognizant of these consumption changes. Growing consumer interest in organic produce is one of the key catalysts for a successful sustainability transition, because it prompts stakeholders to liberate more environmentally benign forms of food production from a countercultural typecast.[8]

The policy life-cycle model focuses attention on the undeniable fact that, over the past decade, producers and civil-society actors in the Netherlands have developed a significant number of innovations to facilitate sustainable consumption. However, not all of the alternatives have been unqualified market successes. For instance, the premature launch of the compact fluorescent light bulb led consumers to view energy-efficient lighting as inferior. Some researchers also draw attention to so-called rebound effects, especially with regard to energy use (Rood et al., 2001; Hofkes et al., 1998). Nonetheless, citizen-consumers have adopted numerous green products, and these items have become common features of everyday life. On balance, then, the situation concerning the ecological modernization of consumption is one in which several frontrunner domains have reached a "take-off phase," while others, because they are more resistant to environmental reform, are currently lagging behind.

Green Politics in the Netherlands: Negotiation and Consultation

We focus in this section on Dutch environmental politics in general, and consumption politics in particular, as part of sketching the political background for the greening of consumer behavior. During the most recent elections in the Netherlands (May 2002 and January 2003), environmental concerns received only very modest attention, with little substantive discussion about the environment. The absence of timely and controversial issues may simply mean that the environment is not—at least for the time being—critical to the electoral fortunes of political parties. However, according to some analysts, the environment's relatively low salience is attributable to the non-adversarial positions that the main political parties take on these issues (Koopmans, 1995; Duyvendak, 1997). With the exception of the unequivocally green parties, it is in actual practice very difficult to distinguish Dutch political parties as either proponents or opponents of overtly green policies. If the entire political spectrum conveys a mildly green image and speaks to some extent a language of ecological modernization, the environment becomes less attractive as an arena for electoral contestation and more difficult to invoke for political benefit.

This political tendency to downplay environmental issues is further compounded by a strong systemic emphasis on communication and consensus. Many analysts attribute Dutch prosperity, social harmony, and political stability to the so-called "polder model," where unions of employers and employees seek to reach common agreement. During the second half of the 1990s, some commentators began to invoke the notion of a "green polder model" to suggest that the country could only resolve conflicts over environmental policy if political parties, trade unions, environmental organizations, and other stakeholder groups cooperated (Duyvendak et al, 1999).

A commitment to communication and a consensual style of politics is not only emblematic of political debate in the Netherlands, but is particularly evident in the horizontal policy arrangements that characterize the environmental field. For example, "policy networks" are regularly used to address circumscribed problems at the regional or local level and, as discussed above, the target-group approach has been in ascendancy. The target-group approach is a strategy, normally used at the national level, to bring together civil society actors and government representatives to address specific environmental problems or policy areas. The relevant participants then enter into several rounds of negotiation on an ad hoc basis, with the aim of reaching voluntary accords for environmental performance standards and for instrument usage (Driessen & Glasbergen, 2000).

Although many Dutch politicians and government officials, as well as some members of the country's environmental movement, point to the benefits and accomplishments of the green polder model, less enthusiastic voices are also discernible. Critics maintain that the consensus model has the potential to create situations in which the negotiation table becomes the central stage, and political parties conveniently leave

5 This transformation includes alternative channels, such as farmers markets and memberships in organic vegetable distribution networks, that make regular deliveries to individual subscribers' homes.

6 One of the largest supermarket chains in the Netherlands—with more than 700 stores—routinely displays 250 organic products depending on the season (www.albertheijn.nl).

7 By 2002, meat alternatives captured a growing share (1%) of Dutch consumers (Aurelia, 2002).

8 If we focus on the production (instead of the consumption) of food in the Netherlands, 1.7% of all farmland in the country was used for organic agriculture in 2002. Official Dutch policy seeks to shift 10% of all farmland to organic production by 2010. Present indications are that it will be quite difficult for the government—in collaboration with farmers and consumers—to achieve this goal (*LNV*, 2000b).

delicate environmental issues to other entities without much democratic legitimacy.[9] For opponents of the green polder model, corporatism and the surgical removal of the environment from the political agenda is a notable shortcoming.

Nevertheless, most analysts view the open and facilitative disposition that characterizes Dutch political parties as beneficial to environmental reform. Public debate does not typically frame environmental issues in oppositional, zero-sum terms, but rather as common problems for which everyone is responsible. However, this idea of collective obligation, especially concerning sustainable consumption, must be understood in its proper political context. Consumption demands delicate treatment because it is so closely intertwined with popular notions of individual freedom (Basset et al., 1994). Even in the Netherlands it is extremely difficult for policymakers to modify household consumption behavior, even in circumstances when it is generally considered propitious to do so.

With time, it has become apparent that citizen-consumers are often beyond the reach of conventional environmental-policy interventions. There are several reasons for this inaccessibility. First, it is not feasible for the government to negotiate covenants with citizen-consumers, as it has with members of several prominent industrial sectors. Second, citizen-consumers comprise a heterogeneous target group that does not usually participate—collectively or through its individual members—in the neo-corporatist consultation circuits common in Dutch political life since the 1980s. Finally, consumers are not typically fluent in the highly specialized jargon that environmental professionals normally use to set objectives, to define approaches, and to formulate instruments for change. In other words, conventional environmental policy frameworks are not compatible with a consumption-oriented approach (Spaargaren, 2003).

Modernizing Consumption-Oriented Policies: The Need for Political Innovation

The policy problems regarding sustainable consumption generate several questions. If the initiatives of the early 1990s did little to improve the environmental dimensions of consumer behavior, how should the Dutch government approach consumers? What kinds of political innovations are prerequisites for a more effective consumption-oriented approach to environmental policy? What are the drawbacks associated with such an approach?

We begin with a discussion of the possible weaknesses inherent in more consumption-oriented environmental policies, and consider the "individualization" of politics and political responsibilities as developed by Bauman (1993) and Princen et al. (2002). Many environmental problems are ultimately rooted in the conduct of institutional actors, such as companies and governments. Under these circumstances, there is little merit imposing obligations on citizen-consumers, who not only lack the power to influence the organization of production and consumption, but also cannot—and arguably should not—be held responsible for issues that arise out of the "treadmill of production and consumption" (Schnaiberg, 1980). It is likely to be unproductive, and above all illegitimate, to burden citizen-consumers with remedying such problems. If policy initiatives only advance individual solutions—and ignore institutional actors—socially regressive and environmentally ineffectual outcomes will be the result.

At the same time, it is equally important to avoid simply discharging citizen-consumers from responsibility for the impacts of their consumption practices. This is not intended as a moral statement; our point, rather, is that we cannot properly comprehend modern consumer societies by examining producers alone. As Rifkin (2002) terms it, we live in an "age of access," and this implies—among many other things—that the secret to understanding the dynamics of production-consumption cycles resides in the practices of citizen-consumers, who participate as knowledgeable and capable agents in reproducing the basic institutions that facilitate their livelihoods. An appreciation of this feature of contemporary social life is essential for arriving at effective consumption-oriented policies that mediate between isolated individualism and one-sided structuralism (Giddens, 1991, 1998).

The Netherlands seems to need a "new politics of consumption." However, the Dutch experience thus far suggests that there are no easy solutions for such a project. The government has customarily addressed the environmental dimensions of consumer decisionmaking using social-psychological models that focus on individual attitudes. This approach has tended to exacerbate the risk of individualizing (or privatizing) environmental problems; it must be supplanted with perspectives sensitive to the contextual, structural characteristics of provisioning practices in modern societies. Table 3 tentatively compares the "old" and the "new" policy paradigms with respect to consumption.

While consumption politics in the Netherlands have conventionally been situated outside the mainstream of environmental politics, we can anticipate that this situation will change. The increasing relevance of policy initiatives aimed at citizen-consumers is rooted in features of modern societies that include shifting attention within production-consumption cycles to the "modes of access."

The following section moves beyond these general observations to describe several contemporary initiatives in sustainable consumption. Though some of these efforts are part of the pre-existing paradigm, others illustrate—at least on an experimental basis—the new mode of thinking about citizen-consumers.

Policy Initiatives to Facilitate Sustainable Consumption

This section provides an overview of the policy instruments that the Netherlands has developed to promote sustainable consumption. In addition to the Ministry of Housing, Spatial Planning, and the Environment, several

9 Because of concerns about cooptation, over-institutionalization, and loss of public legitimacy, participation in horizontal policy arrangements has caused considerable internal debate within the Dutch environmental movement. Some NGOs have refused to engage in the proceedings—for example in the contested case concerning the expansion of Schiphol Airport.

Table 3 Principles of Consumption-Oriented Environmental Policymaking Old (or Classical) and New Policy Perspectives.

Principle	Old (or Classical) Policy Perspective	New Policy Perspective
Characterization of Citizen-Consumers	Citizen-consumers viewed as atomized actors performing isolated sequences of activities.	Citizen-consumers viewed as actors who participate in social practices that are shared with others and reproduced in time-space. Consumption involves the use of clusters of related goods and services.
Degree of Citizen-Consumer Differentiation	Citizen-consumers treated as a homogeneous group with subgroups differentiated only with respect to levels of environmental awareness.	Citizen-consumers treated in terms of environmentally relevant social practices with focus on actual behaviors.
Procedures to Promote Greening	Greening of consumption analyzed in terms of individual attitudes that guide conscious individual choices. Social structures are exogenous variables.	Greening of social practices analyzed in terms of the duality of structure in interaction. Rationalization of behavior investigated with respect to embedded social practices and connected to lifestyle choices in the context of life politics.
Relationship between Citizen-Consumer and Life-World	Strong separation between consumer and producer rationality.	Emphasis on the interplay between consumer and producer rationality in different stages of the production-consumption cycle.
Perceived Potential for Improving the Environmental Performance of Everyday Consumption Practices.	Generally pessimistic.	High technical and social potential.
Conception of Sustainable Consumption	Reduced consumption in both quantitative and qualitative terms.	Potential to achieve comparable or even greater comfort, convenience, and safety.

other arms of the Dutch government are highly involved in environmental policymaking and concern themselves, to varying degrees, with consumption's side-effects. Moreover, a focus on citizen-consumers necessarily blurs the boundaries separating the various ministries, because the environmental consequences of provisioning transcend the limits of conventional policy domains.[10] Before describing the strategies of the different ministries, we highlight the role of Dutch NGOs in sustainable consumption.

Dutch NGOs: Taking on a Consumer Perspective?

Dutch environmentalism has developed and diversified over the past three decades. In particular, large segments of the country's environmental movement have adopted ecological modernization as a central ideological tenet. As a result, the environmental agenda has shifted away from moral appeals of soberness and counter-cultural experimentation toward ecological rationality, emphasizing the search for strategies that improve the environmental performance of modern production and consumption (Spaargaren and Mol, 1992; Hajer, 1995). In general, Dutch environmentalism has come to perceive the establishment of environmentally sound consumption practices as the joint-responsibility of multiple stakeholders—government, industry and citizen-consumers (Duyvendak, 1997; *Alliantie voor Duurzame Ontwikkeling*, 1992).

Dutch NGOs—often as part of collaborative efforts—have achieved some notable successes, fostering more sustainable production and consumption. For instance, by appealing to public opinion and negotiating with the government and the business sector, they secured a ban on chlorofluorocarbons (CFCs) in spray cans. Other successes include stricter regulations governing the use of pesticides and chemical additives in food production, and the use of eco-labels. It is clear that many achievements of NGOs in the Netherlands regarding sustainable consumption are attributable to government lobbying and activities directed at industries. By approaching supply-side actors, these organizations have campaigned for the greening of policy and production processes (*Alliantie voor Duurzame Ontwikkeling*, 1992).

Initially, NGO activities were not aimed specifically towards greening *consumption* practices, or towards expanding the scope of sustainable consumption by actively involving citizen-consumers. However, for more sustainable consumption practices to become viable from a consumer standpoint, they will need to compete without sacrificing comfort, convenience, and overall product quality (Van Vliet, 2002; Shove, 2003). The environmental movement in the Netherlands is becoming increasingly cognizant of this fact as they search for novel ways to link up with the everyday lives of citizen-consumers, and to facilitate more environmentally sound forms of consumption that correspond to extant expectations.

[10] There have been appeals within Dutch political circles to create a new Ministry of Consumer Affairs. This debate is inspired, on one hand, by the success of such a ministry in Germany and, on the other hand, by uncertainty concerning the future of the current Ministry of Agriculture, Nature, and Fisheries. The importance of fisheries and agriculture as policy fields is declining, and nature conservation could be readily handled by the Ministry of Housing, Spatial Planning, and the Environment. At the same time, the issue of food safety has become more important. Combined with other issues of public concern, it seems practicable to transform the current scheme for managing agricultural activities into a Ministry of Consumer Affairs.

With these aims in mind, several Dutch NGOs have developed strategies to provide sustainable and high-quality consumption alternatives. For example, a "green" automobile manual offers information on how to save energy—for instance, by regularly checking tire pressure—without stigmatizing the actual ownership and use of an automobile. Another example is providing practical environmental advice for people moving to a new house through a CD-ROM that covers issues ranging from emptying the old premises and using a moving van to decorating a new home. NGOs in the Netherlands have also taken up the challenge of redefining and strengthening their relationship with citizen-consumers by forging new partnerships with public and private producers that facilitate more sustainable consumption.

The Ministry of Economic Affairs: Consumption Politics within Free-Market Conditions

The Ministry of Economic Affairs (*Ministerie van Economische Zaken*, or *EZ*) defines consumer policy as a separate policy domain, and is primarily concerned with developing initiatives that enable consumers to pursue their personal needs and norms without interference (subject to certain governmental prerogatives) (*EZ*, 2000). The *EZ*'s outlook is based on the notion that consumers are sovereign market participants and it is the role of government to support them in their demand-side position. Specific policies are geared toward improving market access, promoting transparency of product information, and strengthening the legal position of consumers in disputes with producers. More broadly defined social concerns regarding consumption—such as sustainability—appear only when reliable information about a product's environmental dimensions is an issue. However, the degree to which the Ministry focuses on sustainability as a broader aspect of consumer policy is rather limited.

Nonetheless, the environmental aspects of consumption are central elements of other policy fields within the *EZ*'s ambit, especially in terms of energy. Since the early 1970s, the Ministry has focused on citizen-consumers as users of domestic energy for home heating and hot water production. The approaches utilized in this context have been rather commonplace: establishing levies, imposing energy taxes, formulating subsidies for energy efficient products, and organizing information campaigns (often in cooperation with energy and installation companies). In its most recent campaigns, the *EZ* encouraged citizen-consumers to monitor their actual energy consumption, to become knowledgeable about their personal use and its environmental impacts. Additionally, the Ministry actively promotes the purchase of "green energy" generated from renewable sources (*Energie Ned*, 2000).

The *EZ*, in collaboration with the Ministry of Spatial Planning, Housing, and the Environment, is also responsible for developing and implementing integrated product policies (IPP). The primary aim of these initiatives is to stimulate all market parties—producers, consumers, and retailers—to strive for reductions in the level of environmental pollution per product unit. Although IPPs are clearly connected to consumer practices, a goal of these programs has been to avoid direct regulation of consumption. This is because, as SER (1994) explains, "implementing policies to decrease the environmental pressure per product might prevent a situation in which the government is forced to influence the volume of consumption and/or the lifestyles of citizen-consumers."

The *EZ*'s overall policy style for handling issues at the interface between consumption and sustainability is best characterized as "environmental policy within strict market relations." The Ministry is normally reluctant to abandon a market approach for addressing the environmental side effects of material consumption. A guiding philosophy that the market is the most efficient way to distribute goods has remained largely unchallenged, and the *EZ* confines its interventions to the occasional imposition of ecological taxes to limit pollution. As such, the Ministry seeks to coordinate its activities with European-level regulations.

The Ministry of Agriculture, Nature Management, and Fisheries: A Citizen-Consumer Orientation in the Making

The Ministry of Agriculture, Nature Management, and Fisheries (*Ministerie van Landbouw, Natuurbeheer en Visserij*, or *LNV*) is a very broad and multifunctional arm of the Dutch government. The areas of its operations that impinge most closely upon material consumption and the environment are agriculture and nature management. The Ministry's responsibilities for agriculture are particularly interesting for current purposes, given recent developments regarding food production and safety. Citizen-consumers in the Netherlands have become highly critical of both conventional methods of producing food and of food quality. In recent years, considerable scrutiny has been devoted to the side effects of agro-industrial production—for example, the acidification of the landscape, the poor living conditions of livestock, and the use of chemical pesticides and hormones. *LNV* acknowledges these issues and refers to them as a turning point in the public discourse on agriculture. Ministerial officials have emphasized the need to increase organic production and to become more responsive to demand-driven approaches that consider the concerns of citizen-consumers in production decisions (*LNV*, 2000a). Such sentiments would seem to provide fertile ground for the development of agricultural policies that combine a strong commitment to both consumers and sustainability. However, recent statements have not actively articulated a demand-side approach to sustainable consumption.[11]

Within the area of nature conservation, a new orientation on consumption seems to be emerging in the Netherlands. A focus on citizen-consumers as vital actors is evident, for instance, in two recent series of policy reports entitled "People for Nature, Nature for People" and "Nature as a Living Environment." The latter series aims to map the possibilities for linking nature policies with the needs and

[11] The only concrete outcome that has emerged in this regard is a communication plan to attract and retain a new group of organic food consumers. According to official documentation, "by informing the citizen about sustainable production, animal welfare, and biodiversity, this same citizen will, in his or her capacity as a consumer, understand the real value of the organic product and therefore show more willingness to pay a higher price" (*LNV*, 2000c).

demands of Dutch society (Langers en Spinnenwijn, 1999). The Ministry, in particular, continues to search for new approaches that will increase its capacity for involving citizen-consumers (Kuindersma & Selnes, 1999). In official formulations, then, nature conservation is experiencing a shift from top-down, centralized steering toward self-regulation by decentralized actors, most notably the local and provincial governments. At the same time, it is still unclear how the new discourse will influence actual decision-making, since the policy reports to date have served only exploratory purposes.

Ministry of Transportation, Public Works, and Water Management: Limited Social and Political Margins for Policies Regarding Sustainable Mobility

From a sustainable consumption perspective, the most interesting initiatives of the Ministry of Transportation, Public Works, and Water Management (*Ministerie van Verkeer en Waterstaat*, or *V&W*) are in terms of mobility. Because of the density of the Dutch transport system, the movement of goods and people has a large impact on the environment and the general quality of life. Dutch policymakers have begun, in recent years, to devote increasing attention to personal mobility, partly because the largest growth has occurred with respect to so-called "recreational" movements.

The general stance of the Ministry is that mobility is a central feature of modern society and it is a government responsibility to accommodate it, while at the same time ameliorating its negative side effects. The Ministry's National Traffic and Transportation Plan, 2001-2020, sketches its intended policy approach to achieve this combined goal: "[t]he needs of citizens are put centrally and will be respected, but as end-users they will have to pay for their choices" (*V&W*, 2000). Consistent with this approach, the Ministry imposes regulatory taxes on automotive fuel, as well as hefty parking fees. Moreover, *V&W* has experimented over the last few years with systems of differentiated, electronic road pricing, but for the time being has postponed more widespread implementation because of political resistance. Transforming private automobile use, from a system that has never been subject to scarcity pricing into one that requires users to pay for their claims on available capacity, has been difficult in the Netherlands. A recent campaign statement by Wouter Bos, the leader of the Social Democratic Party (PvdA), highlights the lack of political enthusiasm for taking on the sensitive issue of excessive automobile use. Bos stressed that the days in which the party's policy in the field of mobility was premised on "car pestering" were definitely over.

In addition to developing economic instruments, the Ministry aims to educate people about energy-efficient automobile use. Furthermore, automatic vehicle guidance (a generic term that refers to various technological means to support—and in some cases assume over the long term—the driver's tasks) is seen as an innovation that could improve automotive energy efficiency, and the Ministry has supported some pilot studies in this area. However, these initiatives have become mired in political wrangling over the appropriate role of government intervention in the lives of citizen-consumers and whether cars are part of the private realm.

The Ministry of Housing, Spatial Planning, and the Environment: Exploring New Sustainable Consumption Policies

The Ministry of Housing, Spatial Planning, and the Environment (*Ministerie van Volkshuisvesting, Ruimtelijke Ordening en Milieubeheer*, or *VROM*) is the core authority with respect to sustainable consumption policies in the Netherlands. In comparison to the other arms of the Dutch government, *VROM* focuses a great deal of effort on sustainability and the environmental dimensions of consumption. Moreover, since the mid-1990s, the ministry has actively considered the roles and responsibilities of citizen-consumers in fostering sustainable practices and has sought to involve them in developing sustainable consumption policies. Accordingly, the Ministry has launched several initiatives to analyze, evaluate, and stimulate more sustainable consumption practices. *VROM* has designed a number of pilot studies to catalyze internal discussions and to advance a consumption-oriented policy perspective that could become the basis for official guidance in a future iteration of the national environmental policy planning process. This section discusses some of these policy experiments and describes how *VROM* has begun to identify some building blocks for crafting a new policy style with which to address consumption as a central tenet of environmental policymaking.[12]

The Future Perspective Project: A Little Greener Every Day

VROM launched the Future Perspective Project to explore the potential for facilitating more energy-efficient lifestyles in the Netherlands. The scheme sought to generate insights regarding the roles of citizen-consumers as meaningful participants in Dutch climate policy and in the ability of the Netherlands to meet its greenhouse gas emission targets. The project's objective was to determine whether a small group of households could reduce their indirect energy consumption by 30% and sustain this new level on a long-term basis.[13]

During a two-year study period, the participating households were encouraged to alter their lifestyles in ways that enabled them to achieve appreciable improvements in energy consumption. Since household incomes in the Netherlands were expected to rise during this timeframe, participants received a 20% supplement to their household budgets to see if they could successfully delink their increasing income from their energy use. For the length of the project, a "sustainability coach" helped all of the households to monitor energy use and provided advice on energy-saving alternatives (CEA, 1999).

By the end of the study, most of the households had managed to reduce their energy consumption—on average

[12] This section draws on Beckers, et al. (2000).

[13] The focus was especially on households' indirect use of energy. In the Netherlands, this amounts to about 60% of total domestic usage.

by 31%. One of the most interesting conclusions of the project is that energy-efficiency gains were not equal in all consumption domains. An area that proved very resistant to improvement was long-distance transport, particularly in terms of summer-holiday travel. This sobering outcome is attributable to the limited number of energy-efficient travel modes, as well as to an unwillingness on the part of citizen-consumers to revise their vacation routines.

This policy experiment also offers valuable lessons about the longer-term implications of more energy-efficient lifestyle choices. Eighteen months after the formal conclusion of this project, researchers again measured the energy use of the study households. In most cases, direct energy consumption had increased, while indirect energy use was quite stable (especially with respect to food and leisure). The critical factors that limited the households' ability to sustain their improvements were the loss of the supplemental income and the lack of feedback that the sustainability coaches had previously provided. The high price and limited availability of energy-efficient products were related constraints. In contrast, some households managed over time to routinize their new energy-efficient practices by coming to view their new lifestyles as healthier, more relaxing, and more economical.

The Future Perspective project, because of its focus on citizen-consumers' actual daily behavior, provides a useful starting point for exploring the prospects of more sustainable consumption. The study's insights regarding the practicability of energy improvements in different consumption domains, and the constraints imposed by the dearth of energy-efficient alternatives, are valuable. At the same time, the project did not consider the specific ways in which producers offer sustainable products and services. It also restricted consumption behavior to "green shopping," without looking into the social relations that accompany the purchase and use of items deemed environmentally preferable (Spaargaren, 2003).

The Domain Explorations Project: Pinpointing Environmental Hot Spots

In 1995, *VROM* launched the Domain Explorations Project, which aimed to identify opportunities for reducing the environmental side effects of consumer behavior within five specific areas of everyday life relevant for consumption-oriented policymaking: feeding, clothing, housing, recreation, and personal care (Schuttelaar & Partners, 2000; *CREM*, 2000; *TNO-STB*, 1999).

Within each of these domains, researchers assessed the environmental implications of various consumption practices, using life-cycle analysis (LCA) and other technical methods of evaluation. This quantitative mapping provided an overview of forms of consumption that required the most urgent attention, in other words, the areas of consumption that constitute environmental hotspots. The investigators then developed measures to address these major burdens, and to identify the best potential links in production-consumption chains. The project's next step calls for organizing so-called "chain consultations" that will engage stakeholders from specific domains in discussions about strategies for achieving the proposed improvements.

This scheme reflects the pragmatic attitude prevalent in the Netherlands with respect to sustainable consumption, and serves as an important step toward creating the foundation for more consumption-oriented environmental policies. Rather than starting from a set of prefigured objectives, the conceptualization of carefully defined consumption domains serves as the point of departure for subsequent analysis and intervention. By mapping the areas that hold the greatest potential for improvement, it becomes possible to compare the resultant changes within (and among) the various consumption domains. These evaluations bolster the legitimacy of consumption-oriented environmental policies—at least in their technical form. However, this particular emphasis can also prove problematic. Citizen-consumers' experiences are tightly interwoven with their consumption choices, and these social aspects of provisioning do not lend themselves to the quantitative analysis inherent in LCA. Under such circumstances, it becomes difficult to assess the extent to which citizen-consumers have internalized the themes and terminology of specific policy interventions—for instance, reducing greenhouse gas emissions or protecting biodiversity.

The Citizen and the Environment Project: A Green "Consultation Model"

The *VROM* designed the Citizen and the Environment Project to foster meaningful relationships with citizen-consumers by abandoning the classical emphasis on technical system rationality. The scheme aimed to find potential linkages between government steering and the everyday life concerns of citizen-consumers. This initiative did not focus narrowly on provisioning practices, but also considered various relationships between citizen-consumers and the environment—for example, the ways in which environmental problems are defined and transportation choices are reconciled. The project was highly explorative and qualitative as it sought to provide input for a comprehensive reconsideration of environmental policymaking.

The researchers organized a series of small, independent projects to examine the impacts that a stronger consumption orientation would have on agenda setting, policymaking, and the division of roles and responsibilities in environmental decision-making. The project employed a diverse array of methods and techniques, including workshops, expert sessions, panel meetings, interviews, and focus groups, to study the environmental motives and concerns of citizen-consumers in different everyday life settings. For example, some respondents were interviewed while visiting an entertainment area or a day-care center to identify how they encountered and experienced environmental issues in these places. They were also queried about their thoughts regarding how environmental policymakers should address these issues (*B&A Groep*, 1997, 2000).

The researchers drew several conclusions regarding consumption-oriented environmental policymaking. This initiative suggested that *VROM*'s current approach does not enable citizen-consumers to make connections between environmental goals and everyday life and that the Ministry needed to "socialize" the environment (Spaargaren, 2003). In other words, to improve public uptake policymakers should develop—as part of a dialogue with citizen consumers—broader problem definitions that extend beyond the ecological context that is commonly used, and should formulate symbolic representations of environmental problems that accord more closely with lived experiences. This study also made clear that the division between citizen-consumers and the government requires clearer delineation. Some environmental problems are the responsibility of individual citizen-consumers, while others require explicit governmental leadership.

The Warm Gulf Stream Project: A Communication Approach

The Warm Gulf Stream Project is a relatively new approach initiated under the aegis of *VROM* that starts from the idea that communication should be customized for different social groupings according to lifestyle characteristics and environmental perceptions. This strategy is predicated upon a categorization of Dutch citizens into eight ideal types: rational ecologists, passionate ecologists, conscious progressives, conservatives, techno-actives, contented citizens, materialists, and indifferent citizens (Motivaction, 1999). For each of these classifications, *VROM* and other relevant government ministries sought to employ a specific style of environmental communication. For instance, the Dutch government has utilized the Warm Gulf Stream approach to convey information about climate policy. Dutch citizen-consumers were asked to choose those measures for reducing greenhouse gas emissions that conformed with their individual lifestyles—joining an ecoteam, purchasing green electricity, opting for public transportation, or buying "trees for travel."

This particular strategy is a specialized form of target-group segmentation. The search for targeted, tailor-made communications—instead of employing a universal approach—is a positive development that, to our minds, deserves encouragement. Nonetheless, we have concerns about the project's theoretical and methodological foundations. The particular clusters that this project employed are based on general patterns currently visible in Dutch society, and these values do not necessarily reflect actual consumption behavior. We also have reservations about how suitable these categories are for predictive purposes, as lifestyle segmentations should be grounded in actual consumption practices (Ester, 1999). The Social Practices Model we have formulated separately provides a more sociologically informed approach for developing this strategy (Beckers et al., 2000; Spaargaren et al., 2002).

Sustainable Dwelling: A Transitional Policy Field

The recently initiated Dutch policy field of "sustainable dwelling, or home maintenance" is, in many respects, the consumption-oriented offspring of sustainable-building policies created three decades ago. Until the mid-1990s, sustainable building in the Netherlands was a technocratic endeavor that sought to close production loops, to promote the use of eco-efficient materials, and to increase energy efficiency. From 1995 onward, VROM has acknowledged the decidedly singular focus on the supply side of the housing market and sought to devote more attention to homebuilders and citizen-consumers. To achieve this objective, the policy focus was broadened from merely sustainable building to the more expansive concept of sustainable home maintenance (*VROM*, 1997). As a result, the Ministry developed several policy initiatives to encourage environmentally friendly occupation and maintenance of buildings (Martens & Spaargaren, 2002).

One example of this approach is the Sustainable Do-It-Yourself (DIY) Project, jointly executed by four project partners: *VROM*, the Association of DIY Stores, the Consumer and Safety Foundation, and the Dutch Company for Energy and the Environment. Beginning in 1998 and lasting for two years, the aim of this scheme was to stimulate "greener" DIY practices. This project was unique because it simultaneously paid attention to both the demand and supply sides of sustainable DIY. A training program to increase the knowledge of store personnel about the environmental dimensions of different products is one example of a supply-side improvement. The primary strategy for greening the demand side was a mass media campaign to inform and educate consumers about possibilities for sustainable DIY. By employing an aggressive marketing approach—one that emphasized consumer rationality instead of a specific policy objective—this effort differed from traditional government information programs.[14]

Policymaking in support of sustainable housing highlights the policy-style changes that *VROM* has made for addressing sustainable consumption. The Ministry has evolved away from its previously very limited emphasis on citizen-consumers toward a view that recognizes consumers as knowledgeable and capable actors. One of *VROM*'s current goals—though it sill remains to be seem how it will work out in practice—is to make citizen-consumers full-fledged policymaking partners in sustainable housing (*VROM*, 1999a, 1999b).

Conclusion

During the mid-1990s, Dutch NGOs and government ministries began to acknowledge the importance of citizen-consumers in fostering more sustainable consumption. During the past decade, the orientation of policymakers has broadened from a rather narrow focus on meeting challenging targets, based on technical definitions of environmental problems, to a stronger commitment on consumer rationality. This shift is, to some extent, evident among all NGOs and relevant ministries. However, a wide variability exists regarding the actual application of these new policy discourses. By

[14] The design of the information campaign involved drafting a profile of the prototypical Dutch DIY enthusiast based on personal characteristics, preferences, and "DIY logic." A typical home renovator in the Netherlands is a male homeowner who is between 25 and 59 years of age. He is married (or is living with a domestic companion), is the salaried member of the household, and has more than average interest in interior design. When choosing products and services the archetypal Dutch DIY aficionado considers quality to be a foremost criterion; subsequent considerations are safety and health, followed by price, environmental characteristics, and convenience. Before undertaking a particular renovation task, he will solicit information from store personnel, as well as from brochures, product labels, and promotional materials.

focusing on the different consumption domains (instead of on specific policy fields), this study makes it apparent that the process of change differs both qualitatively and quantitatively. Our analysis of the various participants involved in facilitating more sustainable consumption in the Netherlands prompts us to proffer a series of recommendations for improving the effectiveness of current interventions.

First, consumption-oriented environmental policymaking should be directed at "policy units" that are both environmentally significant and connected to the everyday-life rationality of citizen-consumers. The domain explorations project provides an effective foundation for defining the targets of specific policy initiatives. It is now necessary to elaborate upon and prioritize these domains. To prevent this process from devolving into a technocratic exercise that hides the social context of consumption, it is essential to create an active dialogue with citizen-consumers, as the Citizen and the Environment Project did.

Second, the selected policy-units –or consumption domains– need to be analysed for prospective environmental hot spots that pose major environmental burdens (and concomitantly hold the potential for large-scale improvements). Government ministries should complete these investigations in cooperation with groups of citizen-consumers to develop appropriate environmental heuristics. Environmental heuristics are relatively simple and practicable principles that connect the predominantly technical rationale of environmentalism with the social rationale of the everyday life-world (Spaargaren et al., 2002). These rules of thumb should enable citizen-consumers to identify environmentally preferable alternatives, within a certain social context, that lead to improvements in the overall performance of the specific domains.

Third, an important issue related to developing environmental heuristics entails visualizing and framing environmental effects as objects of sustainable consumption policy. To date, policymakers in the Netherlands have not developed many schemes that allow citizen-consumers to assess the environmental impacts of their consumption practices, either at an individual level or as they are embedded within a specific social setting or consumption domain. Researchers are now working—especially with respect to energy—to construct monitoring formats that are geared to consumer rationality and that employ the terminology and images of everyday life.

Fourth, we argue that environmental innovation progresses unevenly across the different consumption domains. Policymakers need to consider the potential for reform in terms of creative public responses, as well as the available range of sustainable alternatives. In the past, policy objectives with respect to sustainable consumption were often overly ambitious, or did not mesh with improvements already achievable in everyday life. By first assessing capacity for additional ecological modernization in each consumption domain, policymakers can better tune their interventions to the actual phase of the transition process.

Finally, consumption-oriented environmental policies suggest a need for the participation of citizen-consumers themselves. Active public involvement in shaping such initiatives demands novel approaches—focus groups, panel discussions, and discussion forums. In addition, the description and analysis of different lifestyle groups deserves attention. Motivaction's (1999) differentiation of citizen-consumers into ideal types represents a good start, but this approach should be adapted in accordance with *actual* environmental dispositions and consumption practices. Lifestyle groups emerge from—and should be identified according to—the social practices that comprise everyday life.

Some of the building blocks described above are already available, while others still need to be developed. Reflecting upon the current state of knowledge and policy practice, we conclude that the success of efforts to encourage more sustainable consumption hinges on the extent to which they accord with consumer rationality. The social practices model we have described elsewhere strives to integrate several of these building blocks (Spaargaren, 2001; see also Giddens, 1984, 1991). This approach entails a primary focus on specific social practices within everyday life. Domains such as food, housing, leisure, and clothing can usefully serve as new units of analysis for environmental policymaking and thus supplant the earlier emphasis on environmental consciousness or individual environmental attitudes. The model combines an emphasis on the everyday life-world with a strong emphasis on the social context in which behavioral routines are situated.

In recent years, we have tested the social practices model in several research and policy settings. On one hand, the model has been employed as an analytical tool to study the potential for sustainable transitions in certain segments of everyday life and to map the factors that could stimulate or impede progress. On the other hand, we have used it as a framework for reflecting upon and for evaluating existing policy initiatives with respect to sustainable consumption. As such, the social practices model has proven valuable in the search for more effective consumption-oriented environmental policies.

Most analysts contend that, since the late 1980s, the development of new horizontal policy arrangements in the Netherlands, as well as the turn towards market-based strategies and civil society actors, represents a major political renewal. The question, though, remains whether we can expect another equally embracing modernization of the environmental policy field in the near future, one characterized and inspired by an even stronger focus on citizen-consumers. We believe that such an approach is essential to prevent a loss of influence and legitimacy. At present, *VROM* and other relevant policymaking institutions in the Netherlands are pursuing a number of initiatives that influence the everyday life-world of citizen-consumers, but the scale of these efforts remains too limited and their scope overly fragmented. A more vigorous political debate regarding sustainable consumption and the role of citizen-consumers in environmental policymaking is required. An important step in promoting this public discussion entails expanding the pilot projects that various governmental ministries, private companies, NGOs, and lifestyle groups have begun to pursue.

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ARTICLE

Sustainable consumption *à la française*? Conventional, innovative, and alternative approaches to sustainability and consumption in France

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Consumption has again become the object of critical political attention in France over the last few years. Despite obvious links with the global project to promote "sustainable consumption," this renewal of interest has had little connection with Agenda 21. Among the factors responsible for this situation, the poor integration of environmental issues in French political culture seems to be of primary importance. While the country has made some recent progress, historical analyses highlight the fragmented style of environmental management in France. These circumstances, in turn, have contributed to the slow uptake of "sustainable development" and have been a major impediment in the implementation of successful eco-consumption policies. However, if the ultimate goal of "sustainable consumption" is to transcend contemporary ways of acquiring goods and to move toward a reassessment of the values underlying them, then several developments in France become directly relevant. Indeed, if the country does not qualify as a leader in conventional eco-consumption policies, it has begun to evince self-reflexivity regarding some basic consumption practices. This article considers three especially notable developments: (1) the implementation of innovative employment policies such as the 35 hour work week; (2) the revival of the country's anti-consumerism movement; and (3) the adoption of confrontational positions on culture and agriculture during international trade negotiations. Taken in the round, these trends suggest the emergence of a nationwide exercise in "discriminating consumerism" and a move away from an unquestioned materialism.

KEYWORDS: sustainable consumption, politics, economic policy, environmental aspects, green revolution, cultural values, international agreements, socio-political aspects, environmental management

Introduction

Not since 1968 has France witnessed such fierce debate about the role of consumption as it has in recent years. As was the case nearly four decades ago, current concerns indicate a range of palpable anxieties regarding the rapid transformation of vast swaths of the cultural and socio-political map that shape environmental debates. However, in contrast to the 1960s, the themes have shifted from a traditional emphasis on right-versus-left politics to a focus on issues more readily associated with routine practices. It is this new, essentially cultural, *problématique* that policymakers have tentatively articulated through the elusive notion of "quality of life." In its broadest sense, this concept accommodates issues as diverse as health, physical environment, and economic status, as well as the ontological security conferred by one's own cultural milieu.

Nonetheless, this unease is most visible in the political arena. Recently in France, as in other affluent countries, a significant segment of the public has passively supported, or even actively adopted, anti-establishment positions and begun to use a range of discursive channels previously confined to the most radical elements of anti-capitalism. For example, it is now common to see the mainstream media linking food-safety issues—such as those surrounding genetically-modified foods and mad-cow disease—with wider denunciations of the structure and ethics of the global free-market system that is itself portrayed as a playground for transnational corporations (e.g., Goodman & Watts, 1997). Unambiguously identified as the ultimate recipient of power, multinational firms frequently stand accused of using their dominance to safeguard their interests in complicity with the most powerful governments, and with scant regard to environmental threats (climate change), geo-political crises (debt crisis in developing countries), or social issues (loss of cultural identity). There is little doubt that this discursive assemblage constitutes a de facto questioning of some of the central features of contemporary production and consumption (Crace, 2000).

What distinguishes France is the manner in which this protest movement has been assimilated into the country's political culture. In addition to the spectacular rise in the popularity of personalities such as José Bové, and the growing support for anti-globalization groups (at a time when more traditional forms of political activity are being increasingly discarded), the French have voiced their dissent en masse via opinion polls, demonstrations, and electoral processes.[1] The first round of the 2002 presidential election crystallized some of these underlying trends by confirming record support for candidates opposed to global economic liberalism.[2] This radicalization is perhaps all the more significant in the French context where, by European standards, mainstream politicians of all stripes already tend to condemn the basic tenets of what they pejoratively refer to as "Anglo-Saxon ultra-liberalism."[3]

However, if the denunciation of the current economic order has found solid backing in contemporary French politics at both institutional and grassroots levels, the environment has surely not been the "ideological engine" of this renewed mobilization. International policy documents such as Agenda 21 have had seemingly few repercussions on the national political debate, despite their obvious links with the issues at stake. Even the "sustainability themes" directly challenging the most blatantly harmful socio-economic mechanisms have not found significant resonance. The fourth chapter of Agenda 21, which stresses the destructiveness of current Western consumption patterns, is a case in point. If, alongside subsequent international policy statements, this document has formally made "sustainable consumption" a legitimate and integrative policy domain (and triggered the creation of several notable research and policy programs), few French policymakers seem currently responsive to these developments.

In itself, this apparent lack of interest in such radical ideas—somewhat paradoxical from a nation often considered to be the *avant-garde* of political protest and the champion of interventionism—calls for an analysis of the causes of this relative neglect, as well as the conditions required for this new set of policy tools to receive a more heartfelt endorsement at the national level. The objective here is to investigate these questions using a theoretical framework in line with current research on sustainable consumption and political culture. This discussion contends that, to assess the political culture's readiness to accommodate the principles underpinning "sustainable consumption," one has to look beyond the realm of national green policies and politics and to encompass the socio-cultural determinants of consumption habits. In other words, the analytic context must include contributions from all potential actors interested in revising the values behind, and the level of, current consumption patterns (Westra & Werhane, 1998; Cohen & Murphy, 2001). As a result, this treatment employs a definition of "sustainable consumption policy" that includes, in addition to the four main conventional policy tools (green procurement, eco-taxation, eco-labelling and eco-campaigning), the whole array of social developments (i.e. national and local policies, ideas, research programs, discourses, and initiatives) that relate directly to the definition of new consumption practices. These routines may entail bone fide changes in the actual structure of consumption, as well as renewed self-reflexivity towards consumerist habits.

The discussion that follows has a three-step format. After a preliminary overview of the key characteristics of the French polity in relation to the environment and sustainable development, the country's most recent achievements in conventional "green consumerism" policies are reviewed and assessed. The next section investigates a sample of three socio-political phenomena that relate directly to the (re)shaping of present-day French consumerism. First, it examines the consequences of the new work-sharing policy (the 35 hour week) on national. Second, it describes the relationship of the recent revival of anti-consumerism in French politics to the project of sustainable consumption. Finally, this section explores the relevance of a quintessential expression of the national political culture with regard to consumption—namely, the tendency of French policymakers to use a well-articulated range of discursive resources about "culture" and "national identity" to challenge the hegemonic position of certain actors, mechanisms, or commodities that comprise the global market. The conclusion assesses the

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[1] José Bové is the leader of an organization of small farmers, *Confédération Paysanne*. He has been at the forefront of international anti-globalization protests and has been a prominent figure in domestic French politics since 1999.

[2] The candidates proposing such a radical proposition received in total more than 30% of the votes. Far right parties had 19% and Trotskyite candidates received in excess of 10%. Part of this success is attributable to allegations that the Communist candidate—who received just over 3%—was perceived as too willing to compromise with economic liberalism. In addition, other small mainstream candidates claiming a hard line on globalization collected another 10% of the votes, a result that suggests misgivings about further integration into the global capitalist system on the part of virtually all French political parties. Moreover, this outcome accounted for almost half of the votes cast during a period of record economic prosperity and decreasing unemployment (*Le Monde*, 2002a).

[3] Anchored in a strong tradition of state interventionism, the French aversion to ultra-liberalism is illustrated by the fact that only one minor political party (*Démocratie Libérale* that typically receives less than 2% of the vote) openly employs the rhetoric common to Conservatives in Britain and Republicans in the United States. Significantly, during the 1980s, when these parties were in power abroad, France chose the opposite direction and elected a socialist-communist coalition that implemented an active nationalization policy. To some extent, this antagonism may explain why particular political dispositions—as displayed, for example, during mass demonstrations in support of public services—are often associated with an only partially concealed anti-Anglo-Saxon rhetoric.

capacity of French political culture to accommodate the principles of sustainable consumption.

French Political Culture and the Environment: An Overview

Understanding the intricate combination of characteristics usually associated with French political culture is no simple matter. Coming to terms with how the "cultural filter" has shaped the environmental question in French society seems even more difficult, and the sheer size of the task limits one to broad generalizations and caricatured statements. With this in mind, this first section clarifies how, as Almond (1956) terms it, "the patterns of orientation to political action" have been fashioned and expressed in France with regard to environmental issues over the past thirty years or so.

Environment and the "National Character"

A first logical step in the search for a national disposition toward the environment is, perhaps, to determine what has been emblematic of the French environmental attitude. However, a cursory browse through the literature sweeps away any hope of identifying a consistent trend. As studies have repeatedly shown, no clear behavioral pattern emerges at a national level vis-à-vis the environment, or rather, there seems to be nothing quite distinctive about the French disposition. If observers have noted a slow rise in concern over the past two decades, this growing support has varied widely according to economic circumstances or ecological incident, as it has for most similar nations (Alphandéry et al., 1991; Dobré, 1995). The electoral fortunes of *Les Verts* and the other green parties have oscillated roughly between 3 to 15% over the last fifteen years, depending on the type and time of elections. Moreover, no clear pattern seems to invalidate the hypothesis that their recent participation in the government was merely the result of a change in political strategy (Villalba, 1996; Abélès, 1997). From a more analytical perspective, it is possible to identify two basic reasons for what Szarka (2002) calls the "lumpiness and diffusion" of the French public's concern for the environment. The first is geographic. France is still a territory with a comparatively low population density, composed principally of small villages and towns dispersed over more than a 500,000 square kilometers of biodiversity-rich land.[4] In such a context, French sensibilities have scarcely been captured by the (essentially urban) conservationist rhetoric of an endangered nature to be preserved at all cost. Instead, it is the rising "desertification" of the countryside—and therefore the notions of *ruralité* and *aménagement* (rural life and planning)—that have caught the attention of a public renowned for its tenacious rural view of self.[5]

The second major factor accounting for the aforementioned "lumpiness" is culture. Divided as it originally was between Saxon, Latin, and Celtic spheres of influence (to name only the main ones), France has often defied the categorizations commonly used in comparative studies of environmental attitudes and public policies based on national explanatory frameworks (e.g., Sbragia, 1996; Andersen & Liefferink, 1997). In the "leader-laggard" or "push-pull" types of explanations (where southern European countries are more often than not following their northern counterparts on the path towards ecological modernization), France has been consistently rated "neutral" or "average." These evaluations make ambiguous the country's politico-cultural membership on environmental issues (Sbragia, 1996; Szarka, 2002).

Taken too literally, all this could indicate the absence of a distinguishable French national "orientation" towards the environment. Indeed, as Cohen (2000) explains in his study of attitudes toward ecological modernization in the Netherlands, "there are credible reasons to suspect that the concept of national character is more robust for small, relatively homogeneous countries." In France, this is clearly not the case. However, if a French specificity seems difficult to establish from a sociological perspective, there is no doubt that the environment has infiltrated the country's political history and administrative arrangements through explicit channels. The discussion now turns to an overview of the latter's influence on the national responsiveness to environmental issues.

Governance and the Environment

In France, the government's influence on public matters is all the more important if one considers the omnipotence of the state. Established under Louis XIV's prime minister, Colbert, the notoriously strong forms of centralism and interventionism that emerged in France in the 17th century were subsequently toughened. This centralization was intensified during the revolutionary wars that secured the survival of a republic that had been threatened by an alliance of hostile monarchies from the very moment it was born. These seminal events, in turn, were exacerbated by the strong faith in science, the hubristic attitude toward nature, and the passionately secular outlook that was prevalent among the Revolution's philosophers (Merchant, 1992).[6] The eventual result was a national political culture—namely French republicanism—characterized by dependence on a powerful and centralized

[4] France still has more than 36,000 *communes* (municipalities), a number that is greater than all other European countries combined. In addition, while France represents about 12% of overall European territory, it sustains more than 40% of the continent's flora species (IFEN, 1994).

[5] The countryside is maintained in the French collective imagination as the fragile holder of many traditional values and *savoir-faire*. This construction is captured in French by the term *terroir*, a notion that encompasses both the cultural and natural dimensions of a place, and this expression is used extensively to describe the production processes and products of particular rural localities. More generally, the tendency to amalgamate national values, countryside, and *ruralité* has been the basis for the strong public support traditionally extended to farmers and the favorable treatment that they have consistently received from successive governments.

[6] This Enlightenment inheritance still exists today in a clear tendency among French thinkers to prioritize the "society-culture" perspective over the more Germanic "nature-community" tradition (e.g., Larrère, 1997; Blühdorn, 1997). Influenced by classical philosophers such as Descartes, Rousseau, Pascal, and Montesquieu, the French school of social science illustrates this inclination through the works of figures such as Durkheim, Comte, Bourdieu, Baudrillard, Sartre, De Beauvoir, Foucault, Derrida, Deleuze, and Tourraine. The nature-community perspective has, in turn, received less attention, and even the works of Illich, Gortz, Morin, Serres, and Guattari do not constitute a school of French environmental philosophy.

state that controls a series of technical bodies reliant upon "scientific" methods for the administration of public affairs.

In addition to influencing the role of science and the status of the environment throughout France's history, these developments had a huge impact on the political landscape. Commenting on the influence of the revolutionary struggles, Prendiville (1994) writes that the defense of the republic "gave rise to the first national educational system designed to raise patriotic citizens ready to defend the Nation and its Universal Declaration of Human Rights…[which] had the most important effect in totally identifying the individual with the newly-born State." Moreover, "this intimate, and at times ambiguous, relationship of the citizen to the State, is at the heart of French political culture and has shaped social and political action ever since."

Along similar lines, many analysts have shown that the profound amalgam in French polity between "nation" and "state"—and the exclusive power of the latter on anything public (*l'intérêt general*)—has strongly molded the structure of the civil society and the relational patterns of its members (e.g., Gaffney, 1991; Prendiville, 1994; Szarka, 1999). Of all the consequences that have been suggested, two are of particular interest here. First, a particularly close state-citizen link emerged, and subsequently developed into a political mode in which citizens make direct—and often violent—demands on the state that circumvent intermediary bodies, such as trade unions or non-governmental organizations (NGOs) (Prendiville 1994; Rucht 1989). Second, the state apparatus has used its status of "exclusive representative of the public interest" to multiply its influence, especially in terms of vigorous social interventionism. An outcome of this process is that a cumbersome and somewhat corporatist administration has developed horizontally, vertically, and territorially to maintain coherent and effective public services—for example, the array of nationalized companies that includes Électricité de France (*EDF)* (energy), Societe Nationale des Chemins de Fer Francais (*SNCF*) (railways), or *La Poste* (post office).

Such a setting established the environment as a new "public" issue shortly after 1968, and subsequently grafted it onto arguably the most complex administrative system in Europe. Although the new "environmentalism" articulated by the 1968 revolution called primarily for a holistic "political-ecology" approach (including a questioning of productionism and consumerism—Illich 1971; Gorz 1978), the environment was administered throughout the 1970s and 1980s as an extremely segmented field of technical intervention. The different elements (ie., air, water, and soil) were the objects of distinct command-and-control policies implemented by numerous usually understaffed administrative agencies under the partial control of a remarkably weak environmental ministry.[7] Furthermore, no environmental NGOs established a durable influence within the high spheres of French politics, a situation that has remained changed little. After losing the anti-nuclear battle, and failing to reunite around a common cause in a context where severe economic crises reduced environmental sympathy, most of these "associations" experienced stagnant membership and credibility, and the lobbying "ring" was left to other, more powerful interests.[8] Apart from the occasional post-election reorganization, there were no major changes in policy style until the 1990s, when the rapid evolution of European legislation and the advent of sustainable development exposed the system's obsolescence and prompted the first steps towards its renovation.

Europe and Rio: The Beginning of an Integrated Approach?

The first exogenous influence on French environmental governance, the development of European law, has been influential primarily in terms of policy style. Indeed, European directives have been instrumental in upgrading national standards, and this growing body of regulation has also meant more political credibility for the Environment Ministry and the overhaul of its communication style and procedures (eg., Larrue and Prud'homme, 1993). However, while this outside pressure facilitated the implementation of the first integrative environmental reforms in the beginning of the 1990s, the aftermath of the 1992 Earth Summit did not, curiously enough, boost by the emergence of sustainable development policy.

For many years, the only tangible French response to this new global challenge was nothing more than the creation of yet another assemblage of inter-institutional consultative bodies, a situation Szarka (2002) refers to as the "not-invented here syndrome." This phrasing essentially means that, while the concept was gaining momentum in other parts of the world, in France it was going through a lengthy process of semantic clarification and content explanation (see also *CFDD*, 1996).[9] Once this process had run its course, the first major laws concerning *le développement durable* were passed, first through the 1995 *Loi Barnier* (establishing the integrative/transversal principle of sustainable development) and later with Environment Minister Dominique Voynet's "LOADDT" that applied these principles to regional planning policies in 1999. Despite these efforts, most analysts contend that the integration of sustainability in the main policy sectors remains very

[7] This weakness was exposed right from the beginning, when the first minister for the environment, Poujade, resigned after three years in office and crudely stated that his ministry was "the ministry of the impossible" (Poujade, 1975).

[8] Membership figures in 1995 for the country's major environmental NGOs are informative: Friends of the Earth counted 5,000 French members against 220,000 in Germany, World Wildlife Federation (WWF)-France had 170,500 members against 690,000 Dutch counterparts, and Greenpeace had only 35,000 French activists against more than 500,000 in Germany and the Netherlands (van der Heijden, 1997).

[9] The national fate of Agenda 21 illustrates the poor ability of French political culture to accommodate the new integrative concept of sustainability. In addition to a patent lack of political and financial support, Agenda 21 has suffered from a competing national program (*Chartes de l'Environnement*) that has contributed to the relative backwardness of France in this field. Based on data from the International Council for Local Environmental Initiatives (ICLEI), Szarka (2002) notes that by 1997 only fifteen French local authorities had drawn up (or were in the process of formulating) Agenda 21 plans, in comparison to 415 in Norway, 285 in Britain, and 30 in Germany. It was not until the beginning of the 2000s that the program (renamed *Action 21*) was integrated into a national sustainable development strategy.

partial, a view confirmed by the extreme weakness of the *CFDD*, the main organization charged with devising proactive strategies in this domain (Larrue & Chabason, 1998).

Conventional Policies: the Greening of Consumption in France

Given that the national political culture has not embraced sustainability's integrative orientation, it should come as no surprise that the concept of sustainable consumption has not yet taken root in French environmental policy. Despite the tentative uptake of elements of sustainable development, at present no clearly identifiable approach is geared toward environmentally sound consumption. Worse still, this emergent policy domain has yet to be defined as such in France, either in official documents or by the main governmental agencies in charge of formulating strategies. Research initiatives in this field have been scattered among wider, or differently defined, bodies of research.[10] Typically, too, national progress reports for the international audience have tended to use a "re-labeling" tactic based simply on renaming existing (production-oriented) policies to fit into the field defined by the fourth chapter of Agenda 21.[11]

However, if French endeavors do not compare favorably with the comprehensive approaches developed by the European Commission and the pioneering programs of forerunner nations such as Sweden and the Netherlands, the country has not been totally inactive in this area. The following section reviews the main "sustainable consumption" policy tools that have been developed in France.

Showing the Way: Green Public Procurement

The French government, which is directly responsible for 20%t of the country's gross national product, was relatively quick to integrate environmental concerns into the administration's daily routines. Nonetheless, the country's first comprehensive greening scheme, launched in 1995, was barely implemented due to a lack of resources and political resolve (OECD, 2000). In 1999, the greening of the administration (*le verdissement des administrations*) received new impetus from the red-green government, and the top-down approach established in 1995 was supplemented with a series of measures allowing local authorities to include the environment as a (non-discriminatory) criterion for making local procurement decisions. This initiative received the support of the *Eco-Maires*, an association of more than 600 mayors that coordinates a number of voluntary initiatives to encourage environmentally responsible purchasing at the local level.

More recently, the Environment Ministry specifically addressed the question of green procurement by central administrations *(les achats verts des administrations*) and announced the creation of a specially trained corps of civil servants that is to be exclusively responsible for this task using tools such as eco-labels and life-cycle analysis (*MEDD*, 2001). The administration should soon have a comprehensive tool for implementing the systematic greening of its procurement decisions. The extent to which this is actually the case will, of course, depend on the commitment of future governments and the powers granted to the new green purchasing officials.

Internalizing Environmental Costs: Ecological Taxation

The idea of reducing the consumption of polluting products through taxation is not new in France. As early as 1974, the Gruson Report made explicit reference to the possibility of using such mechanisms—in conjunction with other even more innovative measures—to reduce what the French call *le gaspillage*, a notion inelegantly translated as "wasteful" consumption."[12] Although few of the document's recommendations were implemented, it was instrumental in triggering what became the national approach to "environmental consumption" during the 1970s and 1980s, namely an emphasis on waste and energy management policies driven by a set of producer-oriented fiscal incentives and disincentives (e.g., 1975 and 1992 Waste Acts).

It was not until the late-1990s that the government seriously examined this approach and modified the taxation system toward an integrated method more consistent with conventional notions of eco-taxation. Carefully prepared by Environment Minister Voynet immediately after her appointment in 1997, the *Taxe générale sur les activités polluantes (TGAP)* was approved in 1999 after long and difficult negotiations.[13] In brief, the main innovation in this plan was the creation of an integrated and easily extendable framework regrouping the previously ad hoc set of ecologically related taxes. In addition, this overarching structure—explicitly designed to accommodate a future EU-wide carbon tax—introduced the principle of proportionality between pollution and taxation and established a double-dividend system, in which the revenues of the tax are directly re-invested in anti-pollution programs.

This new framework has not met all of its original objectives, and a series of political and technical problems have prevented the tax from applying to specific activities or products (e.g., electricity, water). Moreover,

[10] The Inter-Institutional Research Program in Environmental Economics (*PIREE*) is an example.

[11] A case in point is the country profile that France submitted in 1998 to UNCED for information-sharing purposes—and only partially improved in 2001 (see IFEN, 1998).

[12] An Environment Ministry desperate to strengthen its legitimacy commissioned this report when a severe economic crisis was threatening its very existence. The document recommended dramatically reducing all sorts of consumption activities through innovative measures. Commenting on the report, Szarka (2002) notes that "[i]n stressing clean production and highlighting the problems of intensive agriculture, it anticipated some of the theses of ecological modernisation. Proposals such as increased flexi-time and distance working were ahead of their times, but recommendations for reduction in energy use (by improved building insulation and better public transport) were speedily implemented."

[13] The bill became a lightening rod for hostile protests by truck drivers who objected to a tax increase on diesel fuel. Additionally, after being ruled unconstitutional by the *Conseil d'Etat*, the proposed legislation was modified by thousands of amendments in Parliament and redrafted at the end of 2000.

the *TGAP* seems to lack a consumer-oriented approach. Unlike the "eco-VAT" scheme in Belgium, or the so-called "pay-as-you-throw" (PAYT) programs used in the United States, few of the *TGAP* outcomes have directly raised awareness among consumers who, for political reasons, were not directly targeted by the proposal. As a result, despite the gradual implementation of a proportional ecological tax, it is still difficult to speak of a comprehensive eco-taxation system in France.[14] More generally, the internalization of environmental costs in market prices still fits uneasily with the French interventionist and neo-corporatist tradition. In addition to the problems created by well-established lobbies—for example, the automobile industry—"brown" subsidies remain in agriculture and water management. Similarly, despite commendable achievements in public transport (eg., national railways and urban tramways), road tolls are still uncommon, as are such practices as car-sharing and recycling.[15]

Providing Information: Eco-labeling

At first glance, the French situation regarding eco-labeling appears quite paradoxical. On one hand, while none of the independent eco-labels has managed to achieve the level of national recognition enjoyed by, for example, the German Blue Angel or the Nordic Swan, France is currently the European leader in the use of the EU's flower eco-label.[16] On the other hand, the country lags behind its European counterparts in terms of International Standards Organization (ISO) and Eco-Management and Audit Scheme (EMAS) certified producers (IFEN, 2001a). At the same time, France offers more established certification schemes than any other European country in terms of non-environment-related labels and seals. it can be argued that this apparent contradiction is mainly the result of two countervailing tendencies. First, it is a long-acknowledged tenet that the French have traditionally been unreceptive to green consumerism, and this disposition helps to explain the absence of a major independent eco-label, as well as the limited interest in EMAS and ISO certification.[17] Second, the long tradition of food-labeling initiated by the famous *Appelations d'Origine Controlée*[18] *(AOC)* has endowed the country with considerable certification expertise and greatly contributed to the creation of entrenched accreditation bodies such as the powerful *Association Française de Normalisation (AFNOR). AFNOR* sponsored the first national eco-label—the *NF Environnement*—in 1992 and is charged with developing the EU environmental label in France. This helps to explain why the "flower" has been comparatively successful, especially in the absence of a major national competitor.

If the above arguments offer some insight into the seemingly contradictory situation of eco-labeling in France, they do not account for the weakness of green consumerism and eco-labels in the first place. In this regard, the most plausible hypothesis is once again the existence of a vicious circle sustained by both the lack of intermediary bodies and the apparent apathy of the public regarding environmental issues. In the relative absence of active and powerful environmental NGOs (normally the key policy coordinators of green consumerism), it is difficult to imagine how French consumers could have developed a particular sensitivity in this regard. While official bodies, such as *AFNOR,* are pleased to provide eco-certification to companies applying for it, they do not see raising market awareness as their primary responsibility. As a result, their meager communication strategies have not filled the gap created by the lack of committed environmental NGOs. When producers have tried to enter this unmediated zone, they have more often than not ended up in pseudo-scientific battles, an outcome that leads to all parties being discredited and consumers being left increasingly skeptical. Major retailers have been discouraged from entering onto such slippery ground, with the result that few have developed a clear green strategy for their own brands. In addition, particular market conditions have hindered the development of eco-labels for specific products, with food again providing a case in point. Since the Agriculture Biologique *AB* (the French national organic label) was launched in the 1980s, it has had to compete with other well-established quality labels, such as the aforementioned 85 year old *AOC*s and the 40 year old *Label Rouge* designed for meat products. The reputations of the *AOC*s and *Label Rouge* among the French public—who readily associate them with attributes both material (small-scale, quality, *savoir-faire*) and imaginary (*bon-vivant*, traditional values)—has reduced the ability of the organic message to transcend its scientific ("no chemicals/pesticides") content. Consequently, organic designations have suffered from a negative subtext—the absence of pollution—while more positive values have come to be associated with *les produits du terroir* (rural/regional products) that, by comparison, seem to belong to an epoch or milieu in which nature and culture have not been divorced.

Of course, all these representations are changing rapidly, and the recent rise in popularity of organic products shows that symbolic associations are under constant collective re-evaluation, especially when they benefit from favorable structural factors such as government subsidies. However, this case underlines how the discourse touted by eco-labels (i.e., environmentally friendly) is confronted all along its development with a pre-existing set of values and representations—for example, about the nature of sustainability, countryside, and health—that strongly determines its relative significance, and thus

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[14] In its study of eco-taxation, the OECD (2001) rated France fifteen out of twenty-eight countries for revenues per capita raised in this manner. More recently, France was ranked last in Europe for the proportion of environmentally related taxes as a proportion of total revenues (European Environment Agency, 2002).

[15] France's solid waste-recycling rate is still comparatively low, since few people make regular use of separate containers (IFEN, 2001b).

[16] At the end of 2001, France had twenty certified products, while, by comparison, the Netherlands and the United Kingdom had two and one respectively (Flower News, 2001).

[17] The worldwide boycott of Shell, organized by Greenpeace at the end of the 1990s, is a case in point. While the campaign was successful in many northern European countries, it was a total failure in France. Reflecting on the difficulty of using green consumerism as an operational approach in France, Szarka (2002) notes "Whilst in the UK Friends of the Earth built its reputation on 'green consumer' issues…the French branch was unable to touch the public imagination in the same way."

[18] *AOC*s legally protect the production processes of many wines, cheeses and olive oils.

its final success, within a given cultural setting. In France, the prevalent rural perception of self has resulted in the failure of many ecologically focused messages to capture the Romantically inclinations of consumers who, especially when it comes to food, tend to relate sustainability primarily to its cultural dimension. Often, they interpret sustainability in a way that goes beyond (or sometimes, perhaps, nowhere near) the message normally contained by the eco-labels themselves.[19]

More generally, the slow uptake of eco-labeling in France demonstrates how the absence of credible information from environmental NGOs has hindered the development of a "green consumerism reflex," making it difficult for any significant eco-label to emerge. From this perspective, it seems likely that as long as prevalent public perceptions are not seriously challenged by new political developments—for example, environmental crises or powerful activist groups—eco-labels in France will remain scarce. In other words, French consumers will continue to view eco-labels rather suspiciously so that they will contribute little to sustainable consumption.

Raising Awareness: Education Campaigns

To some extent, environmental-information campaigns have suffered from many of the structural shortcomings observed in the case of eco-taxation and eco-labeling. Here, again, the weakness of NGOs, the segmented nature of environmental policies, and the widespread individualism (and sometimes cynicism) found among the population, have contributed to a general apathy toward the environment. The absence of a single national, multifaceted environmental campaign targeted directly at consumers (such as the British *Going for Green* initiative) illustrates the limited way that French authorities have used social-marketing techniques. In addition, those public programs that have been launched have generally been aimed at the least emblematic types of material provisioning, such as energy or water consumption. The *Agence de l'Environment et de la Maîtrise de l'Energie (ADEME)*, for instance, has a long history of disseminating information on how to reduce domestic energy utilization.[20] In a typically French neo-corporatist arrangement, *ADEME* has linked up with *EDF* (the national electricity producer) to distribute countless tips to assess and to reduce electricity consumption through leaflets, brochures, and the Internet (*ADEME*, 2002; see also Szarka, 2000). Along these lines, in 2001, a national network of *points-info energie* (energy-information points) was launched for individual consumers and small- and medium-sized businesses, offering direct guidance about the various ways they could cut energy consumption. Yet, if these campaigns were useful for channeling information on the impact of daily energy consumption, their fragmented and practical content betrayed their origins in technical bodies and precluded the opening of an ethical debate about more symptomatic forms of consumption.

In this regard, the "lifestyle" message contained in the operation *En ville sans ma voiture* (Car-Free Day in Town—to date the most prominent government program) is potentially significant. Adopted by more than seventy cities throughout the country, this campaign has prompted a noticeable renewal of interest in alternative local transport solutions, and more generally in the environmental aspects of urban life. In many cities, this new impetus has been followed by operations such as the *nuits piétonnes* (pedestrian nights) or the *soirée roller* (roller-skating only evenings) now common throughout the country. In addition, it has also encouraged more adventurous local experiments, such as the *vélo à la carte* (bike-sharing) scheme in Rennes. While this project is not yet a roaring success, its existence testifies, nonetheless, to a recent change in attitude among many municipalities.[21] In spite of these encouraging efforts, though, France's backwardness in the information domain is clearly apparent when one considers, for instance, the dearth of comprehensive French websites on sustainable consumption.[22]

This brief overview of conventional policy tools highlights two essential points. On the one hand, encouraging trends have been recently observed (e.g., *TGAP*, EU-Flower), and other developments—including the emergence of eco-design techniques and "ethical" financial products—augur a better visibility for the environmental impacts of consumption. On the other hand, the relevant mechanisms are scattered and undeveloped, and the concept of sustainable consumption has not found a proper semantic space in French policymaking terminology.[23] Moreover, major obstacles remain, given the way the debate is being framed and mediated nationally. In particular, the environment-consumption interface still is largely organized around an "ecological modernization of production" perspective that has conveniently allowed national policymakers to avoid reminding consumers of their unique responsibilities, and to subtly bypass the key issue of the limits to consumption. Along these lines, the notion of *consomma(c)teur* (citizen-consumer) proposed by some authors does not yet seem applicable in a country still lacking powerful actors capable of pushing such policies to the political forefront (Leroy, 2001; Mariaccia, 2002).

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[19] It could be argued that the same phenomenon is at work when one considers the relatively small number of vegetarians in France, as well as the generally weak support for animal rights—this in a country where the most revered dish, *foie gras*, is produced using the rather cruel, ancestral tradition of *gavage des oies* (goose cramming). Far from being seen as brutal by the majority, this practice has actually come to symbolize what the southwestern traditions and values stand for in the French imagination (e.g. frankness, courage, simplicity). Hunting—though to a much lesser extent—is protected by the same tendency to put *les traditions rurales* (the countryside traditions) beyond ecological and "sustainable" scrutiny.

[20] *Agence de l'Environment et de la Maîtrise de l'Energie* is the official body in charge of supervising national energy consumption.

[21] Two hundred bicycles have been available free of charge at twenty-five stations in the city since 1998 (see Rennes, 2002).

[22] With the exception of the burgeoning *action-consommation* network (see *Action Consommation*, 2003), almost all French-language Internet sources specifically dedicated to these issues have emanated from Canada, Switzerland, or Belgium. A good example is the *Eco-conso* network, a Belgian initiative that maintains a website exclusively focused on sustainable consumption and provides both practical and theoretical information on many aspects of green consumerism (see *Eco-conso*, 2002).

[23] Although occasionally employed, the most logical translation (*Consommation durable*) is somewhat awkward since *durable* in a consumption context usually connotes "expensive"—as in the expression *consommation de biens durables* (consumption of durable goods). In turn, the two remaining solutions (*eco-consommation*—the favored choice of Belgians—or *consommation soutenable*—the preferred choice of French-speaking Canadians—are either conceptually restrictive or disconnected from the term sustainable development (*développement durable*).

However, if the lack of alternative proposals is evident from an environmental standpoint, the debates about social justice, the (re)distribution of resources, and the protection of cultural diversity are more conducive for questioning both current consumption practices and the socio-economic mechanisms that sustain them. The following section investigates some of these developments.

Reshaping the Framework of Consumption: Social Changes, Sustainability, and Consumption in France

If green consumerism and the ecological modernization of consumption have hardly challenged the paradigmatic commitment of French policymakers to economic growth, other critical forces have nevertheless actively influenced in the national debate about alternative lifestyles and/or societal (re)organization. This section discusses three different instances of this growing social self-reflexivity towards consumption and the quality of everyday life. The first part describes recent institutional efforts to encourage a better distribution of wealth and work within the population (the 35-hour week), paying particular attention to the consequences of this new set of policies in terms of consumption patterns, lifestyles, and values. The second part identifies the main actors, networks, and ideas that have expressed the recent revival of anti-consumerism in France, assessing in the process the extent to which this emerging discursive coalition has taken root within the national political landscape. The final part clarifies the circumstances in which the entire spectrum of French political forces (i.e., both official and non-institutional spheres) have joined forces to trigger a sort of national "discriminating consumerism" during international negotiations on issues implicitly connected with environment and consumption.

Sharing Work through Social Reform: The 35 Hour Week

The latest manifestation of the French inclination for social interventionism, the 35 Hour Week Act (*réduction du temps de travail*, or *RTT*), was the cornerstone of the political program proposed by the socialist/communist/green coalition in power between 1997 and 2002.[24] In contrast with previous reforms, however, this scheme was not so much about "reducing" work as "communalizing" it. The main challenge was to tackle unemployment through a better repartition of work, a goal pursued under the double constraint of neither reducing salaries nor weakening national productivity. To make this possible, the scheme offered everyone something in exchange for his or her purported sacrifice. Employees gained an average of four additional hours of free time per week without salary reduction; in return, they were to moderate future salary demands and to renegotiate their work contracts to allow more flexibility over the year (*annualisation*).[25] Employers had their national insurance contributions reduced for newly hired staff, in addition to enhanced flexibility (and therefore better productivity). Overtime work was discouraged by imposing heavy taxation, and the diminution in employers' national insurance contributions was financed by the state with the money it saved by cutting the number of unemployment benefit claims.

Although repeatedly ridiculed by neo-classical economists throughout the world (e.g., Graham, 1998; *The Economist*, 2000), as well as at home by right-wing parties and employer associations, the law was passed in June, 1998. It took effect in 2000 for large businesses and in 2002 for small- and medium-sized firms. Although it is still early to draw definitive conclusions, with perhaps the exception that unemployment figures have changed little, most analysts have thus far deemed the program to be a success (eg., Hutton, 2001).[26]

Impacts of the 35 Hour Week on Consumption

Large-scale, scientifically monitored studies of the 35-hour week's macro-economic effects on household consumption will not be available until the end of 2004 (Viard, 2002). However, commentators have been surprised by preliminary data suggesting that many basic social behaviors have undergone a marked evolution in a relatively short period.

First, it is instructive to start by considering how the *RTT* has been interpreted in terms of altered work patterns. Since negotiations concerning increased flexibility took place primarily at the level of each individual company, employees appear to be reallocating their four additional free hours per week in different ways. Table 1 displays the main tendencies in 2001. The most striking feature is the remarkable diversity in the types of arrangements—in other words, the numerous ways in which the reduction in working hours has translated concretely into new daily routines. The most readily visible effect of the reform has been a considerable "smoothing" effect on the structure of social times, with traditional peak hours in transport, leisure, and shopping now increasingly spread over a broader span (Viard, 2002).

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24 In terms of working time, three main historical phases are generally distinguished. The first phase (from 1848 to 1936) is a period when the first limitations appeared in legislation regarding maximum working time, minimum working age, and so forth. These measures are justified almost exclusively in terms of health and safety. The second phase extends from 1936 (the year at which the 40 hour week, plus two weeks per year of paid holiday, was implemented) until the mid-1970s, when the reduction of working time was justified in terms of a balancing act between monetary income and living conditions. The abundance of work during this period created an "over-time" culture that prompted regulation. The third phase—from the mid-1970s until the present—has been marked by rising unemployment and this situation has created a political rationale to shift toward the concept of "work-sharing." If the 39 hour week (plus five weeks per year of paid holiday) enacted in 1981 is still essentially explainable as a political gesture from the left-wing government that came to power after more than thirty years in opposition, the 35 hour week created in 2003 is itself an authentic illustration of the "work-sharing" doctrine.

25 This element of flexibility was instrumental in getting the (moderate) support of rural communities where the organization of annual work (*annualisation*) proved adaptable to the highly seasonal patterns of agrarian economies.

26 Although France experienced a sharp decline in unemployment during the period 1997-2002 (roughly from 13% to 8.6%), the portion attributable to the *RTT* appears to account for less than one point of this decrease (between 250,000 and 500,000 jobs directly created by *RTT* in 2002—the objectives were for about 700,000). However, productivity does not seem to have been adversely affected and, from a social standpoint, the reform has been a resounding success (e.g., *The Guardian*, 2002; *Le Monde*, 2001a; *News Weekly* 2001).

Table 1 The Implementation of the 35-Hour Week: The Multiple Arrangements.

Arrangement	Percent
Reduction from 7.75 to 7-hour working day	13
Extra days off per month	21
Extra half-day off per week	13
Extra day off every other week	7
Extra time "on account"	4
7.5-hour working day plus extra weeks of holiday per year	7
Other (including a mix of the above)	35

Source: Adapted from Touriscopie (2001) and Viard (2002)

For instance, the trend toward longer weekends—typically three to four days—has contributed to a shift of the congestion peaks from the traditional pattern of Mondays and Fridays to Tuesday mornings and Thursday afternoons. This "smoothing" effect also represents a time gain, because it limits the delays caused by concentration of activity. Most markedly, the *RTT* has reduced queuing time in shops, public transport, roads, and highways during the usual rush hours (7-9 am and 5-7 pm), as well as during national holidays and summer-travel periods.

In more qualitative terms, the reform's main impact on everyday life to date seems to be its clear effect on the status of non-commercially related activities. These trends were already apparent in surveys investigating what people intended to do with their additional free time before the implementation of the *RTT* (see, for instance, Mazzoli, 1999; Ipsos-Bates, 1999). More recent studies of actual behavior have begun to confirm these initial findings (e.g., *CFDT*, 2001; Viard, 2002). For example, Table 2 shows the results of a survey carried out for ministerial services in 2001. In terms of consumption, these results indicate that the main effects of the *RTT* are much more qualitative (consuming differently) than quantitative (consuming more or less). In addition to friend- and family-related activities—which appear to be the "big winners" of the reform—the main beneficiaries include a range of personal leisure and domestic-production activities, such as walking, reading, gardening, cooking, and watching television, that are drawn together under the survey's first and second headings (Viard, 2002). Even the tourism sector (predicted to boom under the new arrangement) seems destined to remain approximately at its prior level, because most of the increasingly prevalent "short breaks" away from home are taken primarily within an enlarged "domestic" framework (i.e., a second home, at friends' and families' homes; see Touriscopie, 2001).

Shopping habits have also undergone significant transformations, with most basic provisioning—for example, food shopping—spread over the week, as opposed to concentrated on Saturdays. This day of the week, traditionally France's shopping day because of the very small number of shops open on Sundays, is now increasingly dedicated either to "personal leisure" as mentioned above, or to more indulgent acts of consumption that require meticulous selection (e.g., reading books or listening to audio recordings).[27] Overall, these preliminary results clearly show that new consumption strategies are emerging, and that the time gained from work reduction saves extra time normally expended in such situations as constrained shopping or traffic jams. This displacement has, in turn, freed up blocks of time in which people favor essentially less commoditized activities—for example, personal development and family—or where previously tedious routine activities, such as supermarket shopping, transport, and cooking, have been turned back into pleasurable activities (e.g., shopping in town markets, cycling, creative cooking; see *Le Monde*, 2001a).

Table 2 What Does the 35-Hour Week Allow You to Do?

Activity	Percent
Spend more time with children/family	52
Rest more	35
Participate in more sporting activities	34
Go out for "cultural purposes" (e.g., museums, cinema, theatre, concert)	18
Get involved in associations and NGOs	11
Participate in training and learning activities	6
Travel more	3
Consume/purchase more	2
Does not change anything	6

Source: Adapted from *Ministère de l'Emploi et de la Solidarité* (MES, 2001)

In addition, the domestic-gender partition has changed, although it is not yet clear whether this trend will eventually translate into a less biased chore distribution (Viard, 2002). While cooking and shopping arrangements seem more equitable, it is not yet evident whether this represents a more general phenomenon or a simple widening of traditional divisions, as holds for "do-it-yourself" home improvements or ironing, where each partner appears to shoulder more of their conventionally proscribed tasks.

Lastly, the reform seems to have triggered potentially far-reaching changes in perceptions and beliefs. Some studies have identified a correlation between the *RTT*'s implementation and the respective emphasis given to various "life-defining values," with a marked tendency to devote greater importance to non-materialist needs at the expense of materialist desires (see, for instance, *MES*, 2001; *CFDT*, 2001; *L'Express*, 2002). Of course, such results need to be qualified in several respects. First, this trend has been consistently observed in France since the economic crisis of the 1980s (Volatier, 1995). Moreover, in a context of rapid socio-economic changes (at the time of the *RTT* surveys, 2000-2002, France was witnessing a steady decrease in unemployment figures) it is hard to distinguish reform-induced changes from other factors.

Notwithstanding these difficulties, most commentators agree that the new work arrangements have—at least to a certain degree—accelerated a re-evaluation of non-materialist aspirations (e.g., Viard, 2002; *Le Monde*, 2001b; *L'Express*, 2001). For example, in the post-implementation study discussed above, the *RTT* questionnaire ended by asking: "What would you prefer in the future?" Interestingly, a majority of respondents (54%) chose "earning less money" over "earning more and having less free time" (41%) (*MES*, 2001). A more recent national poll, carried out for a reputable periodical, reported similar results: a record eight out of ten respondents asserted that

[27] French regulations still consider Sundays to be *jours de repos* (resting days). The premium for hours worked on Sundays (typically about double-time) is comparable to the rate that applies for work at night or on national holidays.

private life (ie., personal activities, family life) was their first source of "accomplishment" (*L'Express*, 2002). In the same survey, fewer than two out of three respondents deemed success in professional life "essential." Moreover, among individuals who viewed their professional life in such terms, the measure of success was primarily defined as personal interest in the job.

These findings tend to support the hypothesis that, in addition to changing the structural conditions of consumption (more time, same wages), the 35 hour reform actually supports, and perhaps even accelerates, a cultural shift away from a number of materialist values. Some observers have even described the reform's socio-cultural impacts as "revolutionary" (e.g., *Guardian*, 2002). In any case, the *RTT* has undoubtedly stimulated a degree of self-reflexivity among French consumers and encouraged a collective reassessment of a range of needs, desires, and values directly related to questions concerning the appropriate form and level of consumption—for example, how much is enough?

A More Sustainable Consumption?

Notwithstanding the underlying cultural changes induced by the reform, it presently seems premature to say whether this new framework will entail a purely quantitative decrease in national consumption. A smaller proportion of unemployed consumers, after all, could quite conceivably lead to the opposite outcome. In this sense, it may be the case that the *RTT*'s net effect on aggregate material provisioning, at least in the short term, will actually be positive.[28] Even so, the realignment of working hours in France could nevertheless be instrumental in ensuring a more equitable distribution of labor and free time that would contribute to social cohesion, arguably an essential feature of social sustainability. Similarly, it is possible to assume that many forms of conspicuous consumption could be, if not completely halted, at least significantly restrained by a program that creates de facto limits on personal income by, for example, imposing high taxes on overtime work. Such a measure would dampen consumers' actual purchasing power, as well as their material aspirations. In this respect, the 35-hour reform can be envisioned as directly connected with sustainable consumption.

Although France is not the first to implement this type of policy, the country's size--58 million people—sets it apart. Moreover, the policy is being pursued in a relatively short timeframe and with the strong support of a population typically removed from the kind of "overtime culture" that is still common elsewhere (Carvel, 2002).

As remarkable as these developments might be, one should be careful when interpreting them through the lens of sustainable consumption. Indeed, while the *RTT* seems to be having a restraining effect on individual consumption and encourages lifestyle re-evaluation, we should keep in mind that only the rampant unemployment that has plagued France for more than two decades made it politically acceptable.[29] This makes it easy to understand why proponents' arguments have remained focused on economic growth—and thus increased levels of consumption—and also why government officials have otherwise adopted a resolutely business-friendly attitude in other sectors, such as advertising. From this perspective, the *RTT* (and the structural changes it entails) should not be interpreted as a conscious, paradigmatic shift towards sustainable consumption. To find political support for such a change in France, one has to look instead at the rather nebulous wave of anti-consumerism that has been alive in the country since 1968, and which has recently seemed to take on a new momentum.

Institutions Challenged: The Revival of French Anti-consumerism

With broad ideological support from elite national publications, such as *Le Monde Diplomatique* and *Le Canard Enchaîné*, as well as from newer periodicals, such as *Silence*, the activist segment of the French anti-consumerist movement is roughly divided into two main groups. First, a number of organizations have gathered around the denunciation of broadly defined "consumerism," with a clear tendency to choose the world of advertising (and especially "hegemonic" brands) as their primary target. Examples include *RAP* (*Résistance à l'Aggression Publicitaire*), an association that has been active since 1992 and that seeks

> [T]o identify the advertising processes aiming at conditioning the consumer and the citizen; to promote (possibly through individual or collective resistance acts) the vote of laws protecting the liberties threatened by these processes; to lobby elected politicians…and to encourage the creation of non-alienating forms of communication (*RAP*, 2002).

Many of the association's campaigns have used a discursive mix of anti-consumerism and environmentalism and, quite significantly, its activism has encroached on various cultural issues. For example, *RAP* organizes "action-cinéma," consisting of demonstrations at movie theaters to protest the replacement of traditional art forms (pre-screening short films) with commercial advertisements. Of course, *RAP* is only one example among a global network of similarly attuned organizations that disseminate alternative ideas at a national level and that encourage acts of resistance, such as "Buy Nothing Day" (*La journée sans achat*) and "No Television Week" (*La semaine sans télé*). Other forms of protest against commercial exploitation of events, such as Christmas or the recently imported celebration of Halloween, have taken place. This network of anti-consumerists includes, for instance, the Lyons-based *Casseur de pub* (inspired by its Canadian counterpart the Adbusters Media Foundation), *Le*

28 This occurs because at a similar level of income, an unemployed person spends one quarter of the sum expended by an employed person (Viard, 2002).

29 It should be noted that the *RTT* does not encompass many affluent, independent professionals such as attorneys, physicians, or senior executives. Moreover, the current right-wing government (in place since May 2002) has introduced measures to limit the reform's impact, notably by reducing the taxes that apply to overtime work (*The Guardian*, 2002).

Publiphobe, the association *Chiche* (the youth branch of the Green Party) or *Resistance Verte* (a Geneva-based association specifically focusing on the environment-consumption interface). In addition, this network has developed close links with a number of influential authors and journalists who, like Naomi Klein (1999) in the English-speaking world, have exposed what they call the "totalitarianism of advertisement."[30]

Notwithstanding the growing influence of these radical groups, the second set of dissident voices has attracted the largest amount of support so far. By means of highly structured positions on international issues such as Third World debt and international trade disputes, this faction has been led by the association Action for a Tobin Tax to Assist the Citizen (*ATTAC)*, a rapidly expanding NGO with more than 30,000 active members in France (80,000 members worldwide) in 2002, which had achieved international recognition in less than five years. Originally set up to lobby for the Tobin Tax, this association has embraced a wider agenda, including a well-articulated anti-consumerist stance (*ATTAC*, 2002a, 2002b). While it is still too early to assess its national impact, many observers claim (and many signs show) that—in conjunction with a number of other closely aligned organizations— *ATTAC* has garnered notice at the highest levels of French politics. The organization has contributed to spectacular changes in policymakers' attitudes on issues such as the role of the World Trade Organization, the use of tax havens, the application of the precautionary principle, and the status of genetically modified foods.[31]

In addition to *ATTAC*'s watchdog role, in which it publicly denounces proponents of "destructive and unsustainable desires," the association has supported proactive policies, most notably the use of boycotts and the endorsement of fair-trade products (Pouradier, 2001). Some observers claim that it has also contributed to the renovation of French activism as a whole, notably by clearly dissociating itself from all political parties and focusing primary attention on social issues. By recruiting from all sections of society (including academia), *ATTAC* has also developed an ability to engage both in technical debates and direct action. Moreover, it has been a highly visible component of the anti-globalization movement that formed during the battles of Seattle, Genoa, and Nice, where activists established strategic links with the "anti-advertising alliance." It is this burgeoning coalition—promptly joined by other movements, such as the small-farmers union (*Confédération Paysanne*) of José Bové—that gradually came to form the French "delegation" at numerous international demonstrations during the late 1990s.

Among its many distinctive features, this national assemblage of anti-consumerist organizations has perpetuated a French tradition of stiff cultural resistance against a number of emblematic commodities and prompted several international trade disputes between France and its allies. It is to this essential element of the relationship between French political culture and consumption that the discussion now turns.

From Political Culture to Cultural Politics: French "Discriminating Consumerism" and the Defense of National "Values" in the WTO Battles

On the few occasions where the old French republican-unity reflex—the alliance of institutional forces and civil society for a particular cause—has been triggered of late, cultural themes have been at the core of the argument. In other words, "culture" has provided the main discursive channel for the nation's capacity to reflect on consumption and new forms of interventionism. This particular response was prominent during a couple of recent trade negotiations that successively dealt with two of the most revered elements of French culture: cinema and food.

The first of these disputes took place in 1993 during the Uruguay Round of the General Agreement on Tariffs and Trade (GATT). France rejected an American demand to further liberalize the market for cultural goods, a measure that would have meant an end to the domestic quotas and subsidies that sustain the creation and distribution of French films, books, television programs, and music. Supported strongly by the Canadians, this refusal came to be known as *l'exception culturelle* (the cultural exception), a notion that has since been erected as a principle in French politics and is now widely regarded as non-negotiable across the national political spectrum (Trautmann, 1999). If economic arguments were obviously influential in shaping this position—France, the birthplace of cinema, is the world's third largest film producer behind the United States and India—the lively domestic debate that took place during the negotiations showed that, above all else, the nation's cultural identity and lifestyle were perceived to be at stake (Burin des Roziers, 1998).

The argument was that certain goods were "special," in that they embodied the "fields of collective reflexivity" and mediated the symbolic expressions of the community's character. Films—as well as music, books, and theatrical performances—were thus seen as structuring the community's ethics. In other words, these cultural creations represented a series of nodal points in the transmission of language and values within—and beyond—the national culture. A consensus then emerged regarding the fact that such products should not to be relegated to the global free-market, where their relative vulnerability could have meant their disappearance (Warnier, 1999).

While this debate clearly triggered nationwide self-reflexivity about the role of cultural consumption, it was soon followed by another famous episode which put analogous constructions to similar ends. The United States-European Union dispute over hormone-treated beef once again exposed the key function of consumption in constructing national identity. Disregarding the precautionary principle, the World Trade Organization (WTO) ruled in 1998 that in the absence of scientific evidence, the European ban over American hormone-treated beef was not justified. As a result, the WTO permitted the United States to retaliate, and taxes on a

[30] In France, these authors include Koechlin de Bizemont and Grapas (1975), or more recently Frédéric Beigbeder (the author of the 2000 best seller *99FF* that sold more than 300,000 copies), and Florence Amadou (a *Le Monde* journalist and author of the acclaimed *Le livre noir de la pub*) (Amadou, 2001).

[31] In 2000, *ATTAC*'s influence on the French political scene was demonstrated by Prime Minister Lionel Jospin's decision to support the Tobin Tax—a first for a G7 leader.

number of European goods were increased by 100%. The American response, in particular, targeted traditional French products such as *Dijon* mustard, *Roquefort* cheese, and *Foie Gras*.[32] The decision caused an upheaval in Europe, and French farmers—headed by sheep-breeder José Bové and backed by thousands of anti-globalization activists—attacked symbols of what they considered to be American corporate imperialism, calling for an "*agri-*cultural" exception *(exception agriculturelle)* while dismantling a McDonald's outlet under construction in the small town of Millau.[33] As a result, Bové became a hero of the cultural resistance and later a national martyr when imprisoned for three months.

Although quite trivial by themselves, these events actually had an extremely significant effect on French public opinion. Once again, emblematic objects of consumption—hormone-treated beef, *Roquefort* cheese, McDonald's hamburgers—occupied center stage in the clash between two sets of values (themselves symbolizing different forms of social development), and immediately reinforced the binary moot associations that had surfaced during the battle over *l'exception culturelle*. On the one hand, a link was made between entities such as small-scale farming, the precautionary principle, "independent" cinema, and active resistance against big corporations. On the other hand, a connection was established between the United States, Hollywood, hormone-treated beef, the WTO, and global food distribution chains such as McDonald's. It is clear, of course, which of these assemblages came to be associated with "sustainability" in the French mind. This dichotomous vision has obviously been strongly reinforced by more recent international developments, including the war in Iraq.[34]

Two aspects concerning these events seem particularly significant. First, in both cases the discursive channel of "culture" (coupled in the second case with "nature") has come to repudiate certain forms of consumption (i.e., Hollywood films, hormone-treated beef) that many in France perceive as detrimental to the collective best interest. In brief, the global, culturally insensitive qualities of these products render them ill-adapted to the community's value system, especially in the face of their seemingly hegemonic predisposition. In other words, the propensity of these goods to obliterate competition through large economies of scale is often accompanied by an ostensible lowering of quality. Thus, French government officials support this resistance to protect cultural diversity and to keep the stock of social development options as open and varied as possible.

Second, in both cases, the products at stake were felt to transcend their status as mere commodities, to actually become value-laden, symbolic forms of consumption. In other words, art and food were true metaphorical expressions of the community's *savoir-vivre*. Unlike automobiles or refrigerators, the transformation of the creation-production processes by culturally blind and exclusively profit-driven interests would not only imply a modification in the products' style, but would be an extensive mutation of the meaning attached to their consumption. The entire value system on which they are based would be compromised. This explanation highlights why the discursive mix that justified the restrictions was very much inspired by the precautionary principle that is found, for instance, in the controversy over genetically-modified food. In this instance, however, the critique was harnessed to a cultural *problématique*.

How, then, is the French "discriminating consumerism" relevant from the perspective of sustainable consumption? Of course, the point here is neither to assert the intrinsically sustainable quality of French commodities nor to praise the virtues of protectionism per se.[35] However, the French response witnessed in the course of these events casts a light on two key political aspects of sustainable consumption.

First, it illustrates the significance of national culture in the transformation of consumption patterns. As the primary force determining, a priori, the relative desirability among various forms of consumption, culture indeed proves to be—for better or worse—the most powerful agent of change (or resistance to change) in consumption habits. From there, it is not difficult to see why the project of sustainable consumption may eventually have to go beyond the technical and economically-mediated assessment of ecological or socio-economic impacts—for example, eco- or fair-trade labels—to acknowledge the entire dialectics at issue and, in particular, the tight relationship linking consumption with various

32 Britain, for instance, was not subject to the sanctions, since the Blair government had made it clear that it wanted to end the EU-import ban.

33 Lynas (1999) captured the tone of the dispute when he wrote, "With a characteristic French flair for symbolism, the mayor of a small village, St-Pierre-de-Trivisy, retaliated by doubling the price of *Coca-Cola* sold at the town's amenity centres." The choice of McDonald's as a target for protesters' anger is also revealing because it illustrates the historical difficulty that France has had coming to terms with this particular form of consumption. Indeed, the country's fast-food outlets stand accused of all sorts of evil and, in the public's mind, epitomize the industrial grip on the food chain. It is not uncommon to see violent attacks being perpetrated against them, despite the company's efforts to redesign their menu to please the "difficult" French market. For instance, fast-food chains in France—McDonald's included—offer a large selection of salads, mineral waters, and so forth. Some restaurants have even started, at considerable cost, to incorporate local products (such as *AOC* cheeses) into their offerings.

34 The controversy surrounding the American-British led war in Iraq has clearly reinforced this antagonism. It is interesting to note that, once again in this case, "consumption" has been one of the main channels that have animated the dispute. On one hand, there has been a well-publicized backlash on French products in the United States following the refusal of France to back military intervention (including the infamous "freedom fries" episode). On the other hand, the American decision to go to war has reinforced and broadened the latent anti-Americanism found in some parts of French society. Two anecdotes help to illustrate these sentiments. In the months leading up to the conflict (November 2002), a French firm headed by a Tunisian-born entrepreneur decided to launch a rival to *Coke* called *Mecca-Cola* and to give 10% of the profits to a Palestinian children's charity. The initiative has been a tremendous success, and more than 2 million bottles were sold in France in the product's first two months (*The Guardian*, 2003). Also, at the end of the formal conflict in Iraq, the leading comedy show in France (*Les Guignols de l'Info*) depicted American troops landing in the country with bottles of Coke, McDonald's hamburgers, and Disney souvenirs with the subtitle, "Finally, weapons of mass destruction are to be found in Iraq."

35 Of course, many French artists and cultural goods provide an explicit space for self-reflexivity about (and challenge of) materialistic values—for instance, the works of a film-maker such as Godard, the 1997 blockbuster *Le Bonheur est dans le près*, or contemporary artists such as Souchon, Noir Désir or Manu Chao. However, this quality is not generally applicable, and is not restricted to, French or European cultural products. The same reasoning applies, of course, to agricultural practices and food products.

modes of cultural valuation. This point is well encapsulated by the Brundtland Report, when its authors insist that "[s]ustainable development requires the promotion of *values* that encourage consumption standards that are within the bounds of the ecologically possible" (WCED, 1987, my emphasis). From a major source of resistance, culture could indeed be turned into a vital partner in the implementation of more socially sensitive sustainable consumption policies, that is to say policies informed by an understanding of the whole architecture of societal consumption, including its relational properties. Moreover, as in the case of France, such initiatives would have to assess the desirability of various consumptions, not only on the basis of an ethical label attached a posteriori to the products, but rather on the basis of the values a priori engaged in their production and (non-) consumption, if they are to successfully transmit sustainable habits.[36]

The second consideration inspired by these episodes is that the French government has demonstrated that it is possible to go beyond the traditional framework of legitimacy to impose restrictions on certain forms of consumption. While public policies governing consumption are usually based on objective-material qualities—for example, those of drugs and weapons—the framing in this case encompasses the subjective-cultural qualities of certain forms of provisioning if they are ostensibly threatened by a dogmatic interpretation of laissez-faire. In this case, the French supported new forms of interventionism to counterbalance the pyramidal, capitalistic, and often manipulative way in which consumer desires are manufactured.

In other words, two issues are paramount. First, these disputes facilitated the opening of a national debate about the relative desirability of certain forms of consumption in the name of cultural diversity. Second, it allowed the development of new regulations to ensure that, despite a commitment to free-market principles, different value-laden products—and thus different value systems—can co-exist without imposing a "cultural diktat" on the other(s).

Of course, as with the *RTT*, one should be careful about interpreting these developments in the light of sustainable consumption. However, just as the work-sharing program could eventually alter the configuration of material desires, this form of discriminating consumerism could be a major step toward alternative provisioning patterns. More than merely illustrating the rather egocentric way that a particular culture intuitively constructs a notion such as sustainability to accommodate its own needs, this approach may actually set a precedent for more universal values underlying the relationship between consumption and quality of life. Indeed, if Cohen (2001) is right that sustainable consumption calls for a "[transformation of] the physical and mental architecture of (post)modernity," and if cultural diversity is ultimately the think tank that produces innovative "plans", then the extension of economic or legal protection to the "cultural spaces of self-reflexivity," as pioneered by the French, could well be the substance from which future "architects" will build "sustainable consumption." This is especially likely if they aim at challenging not only the conspicuous forms of modern consumption, but also the very ideas and perceptions that promote it.

Conclusion

The concepts of environment and sustainable development in France have not formed a basis for the reassessment of consumption practices. If, following some of its European counterparts, the French government has indeed developed a range of tools to integrate ecological dimensions into market mechanisms, the country's system of governance and political culture have, nevertheless, largely hindered a truly proactive response to the new agenda of sustainable development, particularly of sustainable consumption. However, a number of other discursive channels have successfully built contingent coalitions that directly address some of the most critical issues regarding sustainable consumption. Through a distributive framework, France has implemented the first national work-sharing program, and the cultural and environmental implications of this initiative are now becoming apparent. At the grassroots level, a diffuse but influential anti-consumerist network has managed—through journals, associations, unions, and opinion leaders—to rejuvenate a culture of resistance against some of the most blatant expressions of materialism in the country, thereby influencing the national debate on sustainable consumption. Concurrently, this "culture of resistance" was transformed into a "resistance on culture" when international trade negotiations prompted nationwide support for the idea that consumer issues may, in some instances, impinge on the very concept of national identity and the right to cultural diversity. As such, this mobilization epitomizes what could develop into the most significant contribution of French political culture to the long-term, global project of sustainable consumption—namely, the identification and the protection of cultural "nodal points" where consumption itself becomes synonymous with the expression of social identity, the (de)construction of needs and desires, and the manifestation of *le droit à la difference*.

Finally, from a more operational perspective, the French case highlights the need for better synergy between the institutional world of green policymaking and the more holistic approach defended by radical groups. If these two camps are often pursuing similar goals, in practice they tend to ignore each other and scarcely join forces to win political battles. The sustainable-consumption debate is a case in point. Here, as elsewhere in the environmental debate, progressive institutional forces (ecological modernizers) would gain from supplementing their typically "cold" technical style (eg., eco-labeling standards) with a more direct confrontation of the core ecological contradictions of the capitalist system. This, in turn, would undoubtedly appeal to the many radicals who are not content with a mere procrastinating rejection of modernity

[36] In the opposite case, sustainable consumption could indeed face the same limitations of, say, sustainable production through a culturally blind certification process. One can envision a film or a book that conveys an utterly destructive message of ecological nihilism being granted an eco-label for the exemplarily clean processes through which it is produced. For the same reason, a brilliant and influential piece of art extolling material simplicity could stand accused of being printed on non-recycled paper.

and the market. Through a focus on their common ground, the two camps could indeed constitute a powerful political force that is able to push realistic, but sweeping, policy proposals embracing the different time and space scales of the environmental crisis. Through such a holistic approach, one could finally see much-needed links made between diverse categories of environmental problems, such as "human ecology" issues (food consumption, pollution, nutrition), "environmental economics" issues (advertising and packaging regulation, taxation regimes), social and regional issues (employment conditions, local and regional urbanism schemes), and global environmental threats (climate change, transboundary pollution, world poverty). Without a doubt, such a "quality of life" outlook would also help this discursive coalition to reconcile a large portion of the public with the cause of sustainable consumption.

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ARTICLE

The new politics of consumption: promoting sustainability in the American marketplace

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While mainstream policymakers in the United States have to date evinced little interest in sustainable consumption, this does not mean that a political agenda designed to highlight the adverse impacts of consumerism has failed to take root in the country. In fact, a considerable number of activities are occurring that are broadly consistent with the aims of sustainable consumption. Inchoate though these efforts may be, there are indications that some proponents are beginning to link up and to forge a more readily definable social movement. The following discussion considers these multifarious expressions in accordance with a tripartite typology: social and political protest campaigns, lifestyle reinventions, and public policy initiatives. Of notable interest is that efforts to problematize consumerism do not stem from environmental concerns, but instead evolve out of public unease regarding such issues as working hours, leisure time, and family life. This situation raises questions about whether the common range of concepts associated with sustainable consumption accurately captures political initiatives in the United States to forge a link between declining well-being and mass consumption.

KEYWORDS: sustainable consumption, politics, economic policy, environmental impacts, public policy, social values, market research, policy making, social attitudes, public awareness

Introduction

More than a decade has passed since the Río Earth Summit put sustainable development on the international policy agenda. Individuals and organizations with an interest in the concept have used this milestone to measure the progress that has been achieved formulating and implementing plans broadly consistent with the aims of sustainability (see, for example, Lafferty & Meadowcroft, 2000; OECD, 2002). Viewing the situation solely from the vantage point of the affluent countries, it is apparent that several nations have embraced the challenges of sustainable development—foremost among them the Netherlands, Norway, and Sweden—while others have evinced much greater caution.

By virtually all accounts, the United States is an anomaly in terms of how its national government has sought to reconcile conventional policy objectives with the goals of sustainable development. The Clinton administration launched the President's Council on Sustainable Development (PCSD) in 1993 and its staff prepared a handful of laudable reports (see, for example, PCSD, 1999). However, these initiatives achieved little public visibility and, in terms of their political influence, have had no enduring effect. When George W. Bush assumed office in 2001, his decision to disband the PCSD occurred with hardly any notice. In a recent comprehensive review of the uptake of sustainable development as a policy concept in the United States, Gary Bryner (2000) explains that:

> [F]ew political leaders have been willing to take on the broader questions of American values of economic growth, consumption, technology, land use, transportation, and individual freedom. Most Americans seem determined to view economic growth as limitless, constrained only by unwise policy or business choices. They resist strongly the idea that limits should be placed on material consumption, and exhibit tremendous faith in technological solutions to whatever problems confront them. Their strong commitment to private property rights places major limits on political decisions which seek to promote environmental ends but which involve limitations on established patterns of property usage.

In their comparative assessment of sustainable development in several affluent countries, Lafferty and Meadowcroft (2000) caustically conclude that, "sustainable development had had virtually *no* significant impact on the operations of the US federal government. It is not just that the term itself has failed to catch on, but also that core values associated with the idea—particularly the global equity dimension—have failed to gain even formal political acceptance" (italics in original).

There is no reason to dispute these claims and, if anything, the status of sustainable development in the United States has eroded further since these authors prepared their evaluations. The Bush administration has embraced a domestic agenda that seeks to systematically dismantle many of the country's cornerstone pieces of environmental legislation (Cohen, 2004; see also Pope and Rauber, 2004; Alterman and Green, 2004). On the international front, hard-edged diplomacy and military intervention have supplanted humanitarian assistance and political empowerment as the preferred policy options.

Yet there are indications that the status of sustainable development in the United States is not as dire as this appraisal suggests. While it is true the concept currently is all but nonexistent at the level of the national government, there are signs that individual states are moving, albeit with noticeable hesitation and little unison, toward fragile acceptance of some of the core tenets of sustainability. Several states, for instance, have launched their own climate change mitigation programs and others are beginning to grapple with the difficulties of discouraging suburban sprawl (Pew Center on Global Climate Change, 2002). Consistent with these efforts, a consortium of ten northeastern states has begun to negotiate the guidelines for a regional market to trade greenhouse gas emissions credits (Johnson, 2003a). For students of American environmental policymaking, this pattern of state progressiveness in the face of federal intransigence is not surprising. The historical record shows that, from air pollution regulation to managing toxic chemicals, the states have trailblazed virtually every new environmental policy idea implemented in the United States. It has only been after the states have demonstrated effectiveness, and an unwieldy system of differing state-based standards has come into view, that the federal government has taken action (see, for example, Andrews, 1999). With this experience in mind, the lack of enthusiasm for sustainable development at the national level becomes more understandable.

The intent here is not to contend that the system of American federalism is stealthily powering a sustainability revolution. Rather the claim is that policy innovation in large, diverse nations such as the United States is often not as readily discernible as it might be in smaller, more homogenous countries. Moreover, the constitutionally designed weakness of the national government in the United States heavily constrains opportunities for dynamic transformation. As a result, protest and local organization have been the engines of political change throughout American history. For these reasons, the study of sustainable development in spheres some distance removed from Washington, DC may yield more encouraging results.

Lafferty and Meadowcroft (2000) usefully disaggregate the admittedly vague and elusive notion of sustainable development into five themes: the integration of economy and environment, the development of strategic plans and monitoring programs, the design of opportunities for participation and stakeholder involvement, the internationalization of environmental policy, and the movement toward sustainable production and consumption. Because of the challenge the reformulation of production and consumption practices poses to the core values of liberal democracy, these scholars characterize it as the most ambitious component of the sustainable development agenda. This distinction helps to frame further the bold aims of the following discussion, namely that there exists in the United States not only underappreciated resolve for sustainable development, but that some of the most notable activities are occurring within the most demanding thematic sphere.[1]

To give credence to this contention that a new politics of consumption is currently taking hold in the United States, this study casts a wide net. The following discussion organizes a diverse array of developments into three broad categories: social and political protest campaigns, lifestyle reinventions, and public policy initiatives.

First, it is axiomatic to observe that the United States has been at the forefront of the recent wave of globalization (see, for example, Green and Griffith, 2002; Bhagwati, 2002). Some commentators, such as Fabbrini (2002), contend that political resistance to globalization is most voluble in Europe and elsewhere, and is often tantamount to anti-Americanism. Lost in these discussions of international campaigns to confront American economic and cultural dominance is the fact that similar configurations have coalesced in the United States itself—indeed the first major anti-globalization confrontation occurred in Seattle. While American activists, like their counterparts in other countries, have focused their attacks on international financial institutions, it is noteworthy that salient symbols of consumer culture (eg. The Gap, Nike, and Starbucks) have also been prominent targets. This particular facet of the anti-globalization movement in the United States promotes sustainable consumption through three separate (though interdependent) forms of social and political protest: anti-consumerist, anti-television, and anti-advertising.

Second, other elements of this new politics of consumption embody a less impassioned approach and do not display the same kind of zealous and animated fervor. Predicated more on the reinvention of individual lifestyles than on overt social and political agitation, this set of

[1] It is also important not to underestimate the monumental obstacles to sustainable development in the United States. For instance, income among Americans is more unevenly distributed than it has been in half a century and the country has the greatest income inequality among economically advanced nations. Moreover, while European nations have made considerable strides modernizing their environmental policymaking institutions during the past decade, the United States remains strongly committed to an increasingly ineffectual administrative model.

initiatives to encourage sustainable consumption comprises several different strands. The following discussion focuses specifically on voluntary simplicity, ethical consumption, and slow food.

Finally, sub-national units of government in the United States have begun to implement a number of policy initiatives that have the implicit aim of promoting sustainable consumption. To be certain, government officials have not aggressively employed a language of sustainability to advance these programs. However, the correspondence between efforts to develop local greenhouse gas reduction schemes, to rebuild local economies, and to discourage the accumulation of consumer debt dovetail very closely with the aims of sustainable consumption.

Protest Politics and Sustainable Consumption

Consumption has been a pervasive element of social organization in the United States and, over the course of the last two centuries, this lifestyle form has inspired numerous political responses, ranging from the home economics movement of the nineteenth century to recent campaigns to foster consumer rights (Mayer, 1989; Furlough & Strikwerda, 1999). In some respects, the social agitation of the 1960s was fueled by a rebellion against mainstream consumer ideology. More recent protest politics have had a similar edge, as adherents have sought to expose what they construe as the falseness and the lack of authenticity inherent in mass consumerism. The following section focuses on three expressions of this anxiety: anti-consumerist protests, anti-television activism, and anti-advertising campaigns.

Anti-Consumerism

Among some youthful and vocal adherents, the disparagement of mass consumerism as a set of social practices, as well as attacks against some of its most emblematic symbols, has become a visible form of protest politics in the United States during the past decade. Activists have yet to construct many of the institutional features of a social movement, and instead rely on boisterous pranks designed to malign dominant expressions of contemporary consumer culture. Proponents are often disillusioned not only with material icons, but also evince a more general disenchantment with contemporary society (Zavestoski, 2002). While this disaffection derives from numerous sources, for analytic purposes it is instructive to group them into three broad categories—social, economic, and environmental.

First, anti-consumerism activists in the United States contend that consumption, or more specifically over-consumption, is harmful to both the individual and the wider society (DeGraaf et al., 2002; Schor, 1998). This cast of mind asserts that personal attachment to inanimate objects is psychologically stultifying and that consumers should more appropriately invest in education and other projects to foster societal improvement. Moreover, they maintain that rampant egoistic acquisition diminishes community solidarity and encourages artificial competition to accumulate. Proponents of this view fundamentally disagree with neo-classical economic principles, and assert in contrast that an undue emphasis on material acquisition constrains socioeconomic mobility and lowers the societal standard of living. In addition to these ills, activists stress that consumption drains away valuable time and money, ruins physical and mental health, threatens religious faith, and undermines civic institutions. The largest beneficiaries of consumption, this critique asserts, are its ubiquitous advocates. Anti-consumerism is also highly critical of the mainstream media for their defenselessness before powerful advertisers.

Second, American anti-consumerism activists assert that lifestyles founded on mass consumption oblige people to assemble a large arsenal of inexpensive products, many of which are produced under exploitive conditions (Bender & Greenwald, 2003; Broad, 2002). The relentless drive for cheaper goods leads to the loss of local employment and to the migration of production to offshore locations. Moreover, this form of uncritical consumerism erodes spiritual and cultural diversity. A retreat from a goods-oriented lifestyle will obstruct the march toward international homogenization and reduce the economic pressure on developing countries to abandon venerable traditions.

Finally, contemporary American anti-consumerism alleges that to create a sustainable and healthy world for future generations it is necessary to strive for the diffusion of more modest consumption practices (Myers & Kent, 2004; Princen et al., 2002).[2] One of the major drivers of this sensibility is a concern that the export of prevalent American lifestyles contributes to numerous ecological problems. Activists are especially mindful about dematerializing their consumption practices as a means of reducing their reliance on natural resources, disposable commodities, chlorine-based products, agricultural chemicals, virgin wood, meat, dairy products, processed foods, non-durable appliances, and consumables attributable to exploitive labor practices. A key precept of this philosophy is the encouragement of relatively modest lifestyles on a global level, as this will lead to a more environmentally sustainable economy and will resolve social ills stemming from an inequitable distribution of wealth.

These three currents of anti-consumerism presently flow like meandering rivulets of a stream. Despite their different emphases, activists view their goals as entirely practicable, because unchecked materialism is, by this view, a constructed social phenomenon rather than an indomitable feature of the human condition. By disabling the powerful engines driving prevailing consumption desires, people can assert themselves and steer away from the destructive and manipulative forces.

The tenor of anti-consumerism in the United States is at once low-key and loud. It is quiet in the sense that it does not have an organized mass following to communicate its message on a consistent basis. Activists are also relatively unobtrusive because they do not

[2] Anti-consumerism activists are actually reticent about employing the term "sustainable consumption" because of suspicions about the international organizations that are responsible for its popularization.

customarily advocate audacious acts of vigilantism and violent confrontation. Part of the reason for its current status is that anti-consumerism, aside from its sometimes creative tactics, has yet to articulate an incremental program for achieving its political objectives. Anti-consumerism is also simultaneously loud in the sense that its recommendations and social commentary are markedly radical. Some adherents have also begun to promote strategies that are more aggressive and, in some cases, have used violence against property as a means of political expression.[3]

Anti-consumerism in the United States is not presently endowed with many of the organizational features commonplace among more established social movements. Few national organizations have taken up the mantle of this campaign as their primary mission, and existing environmental, social justice, and consumer organizations have been, at best, reluctant partners. Nonetheless, one prominent group working on this front is the Adbusters Media Foundation (AMF), a small, plucky group that has made strides to problematize consumerism and to give concrete form to an emergent social movement (Rumbo, 2002; Bordwell, 2002).

Based in Vancouver, AMF was founded by Danish-born activist Kalle Lasn in 1989. The organization currently publishes a quarterly magazine, entitled *Adbusters*, that reaches approximately 85,000 readers and has the appearance of an elite design magazine.[4] The publication's content is highly premised on irony and parody and is savagely critical of mainstream advertising, consumer products, and consumerism as a lifestyle. In place of paid advertisements, *Adbusters* publishes its own satirical versions of real print promotions, with the intent of using humor to expose the negative social, psychological, and environmental impacts of the products they depict. The magazine's funding comes from subscriptions, philanthropic contributions, and revenue derived producing promotional segments for Greenpeace.

Adbusters refers to its specific style of political expression as "culture jamming," a term coined in 1985 by a San Francisco-based music group called Negativland (Lasn, 1999). More specifically, the approach involves a kind of cultural jujitsu that seeks to turn the language of advertising and promotion against itself. Culture jammers also use civil disobedience and other provocative means to reclaim certain "strategic spaces" that have been appropriated for commercial purposes.[5] The specific spaces to which culture-jamming techniques are applied can be physical places, such as parks, promenades, and highways, as well as more subtlety psychological and cultural spheres. The so-called "un-commercials" that appear in *Adbusters* are creative caricatures of familiar advertisements and, as such, are paradigmatic examples of culture jamming. This mode of resistance has begun to transcend the clever lampooning of cultural symbols to include vandalizing billboards and defacing other promotional media.[6]

In addition to publication of its magazine, AMF occasionally organizes boycotts, store sit-ins, mass sing-ins, and local demonstrations to challenge mainstream lifestyles and to raise public consciousness. AMF's largest event, and the activity through which the organization is most widely known, is its annual Buy Nothing Day (BND). BND is held in November of each year and is scheduled for the Friday following the American holiday of Thanksgiving, generally regarded as one of the most vigorous shopping days on the calendar. Promoted as "a third millennium holiday–a celebration of simplicity and frugality," BND has become an international event, and the number of countries participating in it grows each year. An emphasis on leading more modest lifestyles is central to AMF's mission, and the group maintains that less commercialism is essential for peace and global sustainability.

AMF exemplifies the contradictory temperament of anti-consumerism. The organization is, on one hand, quiet and cerebral and, on the other hand, loud and confrontational. Supporters advocate non-violence, yet endorse the goal of undermining existing centers of power and forging new ways to think about prevailing norms. AMF's protest methods may be generally peaceful, but its stated objective is irrefutably radical.

Anti-Television Activism

After a slow start caused by the onset of World War II, television in the United States diffused at a rapid rate (von Schilling, 2003; Barnouw, 1990). By 1950, 3.1 million households were watching, and just five years later this number had grown to 32 million. Today, 99% of American households have at least one television, and more than 50% of children in the United States have a set in their bedroom. The viewing equipment has been subject to a regular stream of technological improvements—color, cable, video compatible, DVD compatible, pay-to-view, high definition, and so forth. Television watchers can now even subscribe to services that allow one to delete commercials and to record one program while viewing another. An enthusiastic audience has eagerly embraced these upgrades and made substantial investments to acquire them.

Advertising has been a continual presence on American television since the earliest days of the medium, and the magnitude of commercial promotionalism that occurs today is remarkable by any measure. Thirty percent of network news programming is devoted to commercials, and the average American views 20,000 broadcast advertisements each year. Despite consistent corporate

3 For instance, individuals associated with the Earth Liberation Front (ELF) have destroyed new suburban homes under construction and, perhaps most famously, burned down a $12 million ski lodge in Colorado (Brown, 2003).

4 Although *Adbusters* is based in Canada, American consumers constitute the its primary focal point and most of the magazine's subscribers are based in the United States (Lindsay, 2002).

5 The group Project Billboard employs similar strategies to communicate anti-war and other messages of political protest. The organization was recently involved in a dispute with Clear Channel Communications over a provocative billboard that would be visible to participants at the Republican National Convention in New York City (Preston, 2004).

6 At this point, culture jamming begins to meld with other more familiar forms of political protest associated with certain radical environmental organizations in the United States.

claims that these images do not increase consumption, marketing managers spent $40 billion in 1999 to develop and air their product inducements (Samuel, 2001).

A common social critique in recent decades has been to disparage television for its stultifying effects on viewers who spend long hours in front of the screen (see, for example, Mander, 1978). However, more recent appraisals adopt the opposite perspective. In fact, contemporary American critics of the technology insist that rather than contributing to passivity, television is notable for its motivational potential. It is an indisputable marketing precept that the comely images featured on television stimulate previously non-existent consumption urges. The role of advertising experts is not to promote this obvious fact, but to formulate the most appealing images and to convince viewers that material goods can satisfy their ethereal needs.

According to anti-television activists in the United States, this continual ramping up of consumption is not trivial. Excessive television viewing exacerbates environmental dilemmas by drawing ever-larger volumes of raw materials into production. The medium is also alleged to be responsible for an assortment of social problems. For example, even a family that watches an ordinary amount of television exposes itself to a heavy dose of advertising. Parents often find themselves having to work long hours to generate the income necessary to purchase the kaleidoscopic menu of goods that their children demand. These circumstances detract from parents' ability to foster meaningful social relationships and, to assuage the situation, the family watches more television and consumes more goods (Molnar, 1996; Fox, 1996; Boyles, 1998).

It was in the context of this emerging appraisal that a group of activists established TV-Free America (TVFA) in 1994. Prior to the launch of this organization, misgivings about television tended to find expression as part of larger initiatives focused, for example, on banning advertisements for alcohol, on ensuring programming with adequate educational value, or on prohibiting violent and sexually explicit broadcast content. TVFA endorsed a more basic agenda, namely one that encouraged viewers to disconnect the set.

Over the past decade, TVFA has evolved into the TV Turnoff Network (TVTON), and has continued to advance the perspective that excessive television viewing is highly problematic. With financial support from donations and the sale of products, TVTON serves as the educational arm for a more diffuse array of anti-television activism. For instance, the organization distributes fact sheets and coordinates special events to encourage alternative family- and community-based activities to replace long hours of television viewing. TVTON, as stated on the organization's website (http://www.tvfa.org), seeks to "shift the debate from concerns about television's content toward an understanding that breaking free of TV is a fun, liberating, and enriching experience." In other words, TVTON is not concerned with censorship battles or changing the content of specific programming. Instead, the organization is engaging with what it sees as the core of the problem—the need to reduce the number of hours people spend in front of their televisions. Consistent with this objective, TVTON coordinates two annual public projects—a long-standing initiative known as TV Turnoff Week and a newer scheme called More Reading, Less TV.

TV Turnoff Week (TVTW) challenges adults, teenagers, and children to forsake television for one week each year. It is important to recognize that the guiding purpose of TVTW is not to create incentives for participants to demonstrate their ability to achieve this objective in the narrow sense, but rather to create space in which they can learn first-hand how satisfying life can be without (or at least with less) television. Volunteer coordinators distribute TVTW facilitation kits to community groups, schools, and religious organizations that include "screen free" activities, pledge cards, and instructional materials for arranging alternative activities. TVTW has expanded its reach every year since its establishment in 1995. According to its sponsors, 90% of the respondents to its annual survey report that they now watch less TV than they did prior to participating in TVTW, and two-thirds of the sample say that the changes they have made in their viewing habits may be permanent.

Anti-television activists contend that excessive television viewing is one of the leading reasons for poor school performance among young children. In response, TVTON has developed its More Reading, Less TV (MRLTV) campaign to confront head-on the link between television and literacy. MRLTV is a four-week campaign sponsored by the Educational Foundation of America that is relayed directly to students in their classrooms. Youngsters are encouraged figuratively and literally to "Bury the Television with Books." In practice this means that for every book a student reads he or she receives a colorful strip of paper to affix to the classroom television. The intent is that, by the end of the month-long initiative, the class will have accumulated enough strips to obscure the television in its entirety. According to its promoters, MRLTV serves as an especially good incentive for children who rarely pick up books, and TVTON reports that "poor readers" are more than twice as likely to seek out a book after participating in the program.

In addition to these two initiatives, TVTON actively campaigns for the elimination of *Channel One*, the in-school television network that is mandatory viewing in most classrooms across the country. The organization disapproves of *Channel One* because advertisements are spliced into the regular programming and students have a difficult time distinguishing the educational content from the promotional inducements. TVTON also contends that *Channel One* is entirely inappropriate in an educational setting. Schools, for the most part, are the only relatively advertisement-free places in the United States, and administrators and teachers who allow this medium into the classrooms compromise the integrity of their profession.

The advocacy agenda promoted by TVTON includes several professional medical associations and is grounded in a large body of social scientific research documenting the personal and social problems associated with excessive television viewing. The following discussion organizes this array of adverse impacts into four categories: youth problems, societal effects, negative outcomes for families and communities, and individual consequences.

First, children in the United States between two and seventeen years of age watch, on average, twenty hours of television each week—the majority of which is spent without a parent or adult present. Research suggests the existence of a causal link between the number of hours school-age children view television and academic performance (see, for example, Clarke & Kurtz-Costes, 1997). Based on this evidence, the American Academy of Pediatrics has called for reductions in the amount of television that children watch (Lowry et al., 2002, Hu et al., 2003). Aside from attentiveness in school, it is apparent that children who spend a great deal time in front of the television do not develop active lifestyles, and this has ramifications later in life (Crespo et al., 2001).

Second, anti-television activists are not blind to the positive social contributions that television in certain circumstances can make. For instance, the technology can break down the isolation of distance, deliver news and entertainment, and unify a large and diverse nation. However, they assert that television is responsible for bringing in its wake a host of intractable social problems. The situation is exacerbated in the United States because political culture discourages the kinds of public intervention—often in the form of restrictive regulation—that has been used in other countries. For instance, aside from broadcasters fears about transgressing viewers' sensibilities, there are few constraints on violence on television. By the time the average American adolescent reaches the age of eighteen, he or she will have seen in excess of 200,000 violent acts and 16,000 murders on television. This phenomenon is not limited to programming ostensibly designed for entertainment. Between 1993 and 1996, there was a 20% downturn in the nation's homicide rate, but a seven-fold increase in homicide coverage on network news. The American Medical Association (AMA) reports that many youngsters cannot clearly distinguish between real life and fantasy because they are conditioned by television violence from a very early age. In response, the AMA has begun to assert that public policymakers should treat violence on television in the same way as they promote seatbelts and bicycle helmets.[7]

Third, anti-television activists contend that evidence links excessive viewing with a variety of negative outcomes for families and communities. They argue that the ubiquity of television has undermined interpersonal relationships because the technology offers the opportunity for virtual relationships with fictional characters, and these interactions then become substitutes for displaced family and communal contacts (Schor, 1998). Though it is hard to determine the extent to which the observation might be tainted by nostalgic yearnings, proponents of reduced television viewing point out that in earlier eras dinnertime was an opportunity for busy families to catch up with one another. What is somewhat more reliable is social survey data indicating that today 40% of families watch television while eating their evening meal.

Fourth, heavy television viewing appears to be taking a heavy toll on viewers' physical health, and medical studies have correlated certain ailments with precursor conditions, especially obesity. Anti-television activists highlight one recent study finding that, as television viewing increases, exercise drops off and consumption of snack foods grows. These circumstances contribute to weight gain and an affinity for passive recreation. Individuals who watch television for more than three hours per day are twice as likely to be obese as those who viewed it for less than one hour per day (Coon et al., 1998).

Finally, anti-television activists have begun to problematize television in much wider social and political terms. Some groups assert that the technology has a perverse effect because the major networks receive de facto subsidies in excess of $70 billion from political candidates who use public funds and contributions to purchase campaign commercials. This arrangement creates a system in which only electoral contestants who can afford to pay for television airtime have any chance of success. As such, television has become one of the driving forces sustaining the political status quo.[8]

Anti-Advertising Campaigns

As noted above, advertising is an omnipresent and unavoidable fact in the United States, especially as communicated by television. However, television is surely not the only medium for marketing goods and services, and producers seek to reach consumers through a multitude of other channels, including radio, billboard, telephone, postal mail, electronic mail, and so forth. To penetrate the thicket of competing messages, advertisers have developed increasingly invasive approaches. Ironically, many consumers have come to accept advertising as a value-natural—and in some cases wholly agreeable—feature of contemporary life. In some communication forms, it is virtually impossible to distinguish the actual content from the sales promotions. Nevertheless, a growing number of anti-advertising campaigns has begun to make some novel (and seemingly conservative) assertions, namely that advertising infringes upon personal freedom, contributes to mental and physical harm, and impairs economic growth. The emergence of this discourse has generated some raucous forms of resistance and given birth to a loose alliance of organizations variously dedicated to stricter regulation (and in some cases outright abolition) of advertising.

Although it is unlikely that this confederation of anti-advertising organizations constitutes a social movement in the strict sociological sense, what is more interesting for current purposes is the high degree of issue differentiation that exists within this sphere. For instance,

[7] See the letter endorsed by the American Medical Association and other allied organizations in support of TV-Turnoff Week, available at http://www.tvturnoff.org/healthgroups%20pr% 2002.htm.

[8] In a related vein, critics denounce television for reducing political awareness because the medium encourages viewers to focus their attention on fictional characters rather than real events. TVFA contends that 59% of Americans can name all of the Three Stooges, while only 17% can identify three justices on the Supreme Court.

advocates have launched initiatives to oppose the commercialization of public education, to resist the use of paid promotions to sell tobacco, to work against the erection and continued use of billboards, and to stop the communication of advertisements by telephone, postal mail, and electronic mail.

Commercial Alert (CA), an advocacy organization founded by Ralph Nader in 1998, is the undisputed leader of the American anti-advertising movement. CA's stated mission is, "to keep the commercial culture within its proper sphere, and to prevent it from exploiting children and subverting the higher values of family, community, environmental integrity and democracy" (http://www.commercialalert.org). The organization's activities focus on lobbying for legislation to regulate advertising and on preventing the proliferation of commercial content in public venues. For example, CA urged the top fifty advertising agencies in the country to boycott CNN's *Student News* after the program dropped its commitment to be commercial-free. Other initiatives have sought to encourage the prohibition of advertising on public transport vehicles, to persuade publishers from printing sales pitches for junk food in children's books, to pressure major-league baseball teams to remove badges with product insignias from players' uniforms, and to discourage companies from patronizing *Channel One*, the controversial in-school television network (DeVaney, 1994).

A specific point of criticism against advertising that appears to have struck a chord in the American public mind over the past decade concerns the effects of commercial promotion on children. While it was not framed specifically as an anti-advertising campaign, efforts to discourage the tobacco company R.J. Reynolds' from running its so-called Joe Camel advertisements dampened the effectiveness of a marketing tool deliberately aimed at children (DiFranza, 1991).

Aside from CA, there is a diverse network of smaller and less visible organizations working along similar lines.[9] Three groups are emblematic of the activity in this sphere. First, Stop Commercial Exploitation of Children (www.commercialexploitation.com) is specifically concerned with the harmful effects of advertising on youngsters. Second, Dads and Daughters (www.dadsanddaughters.org) is an incipient group committed to fostering meaningful relationships between fathers and their female children, an agenda that seeks to dampen the deleterious effects of advertising on young women. Finally, the Center for Commercial-Free Public Education (CCFPE) works to resist the encroachment of advertising in schools. Established in Oakland in 1993 to campaign against *Channel One*, the organization is one of many grassroots groups that have coalesced to oppose the news service.[10] Because CCFPE is larger and more established than most of its counterparts, it supports other local activists with information and training. The group coordinates initiatives to raise student consciousness about advertising in contemporary life, to encourage schools to become commercial-free, and to support parents who challenge the invasion of corporate promotions in schools.[11]

Tobacco companies have been a specific target of anti-advertising campaigners in the United States. The battle over tobacco advertising has been raging for as long as public health advocates have recognized that cigarettes were hazardous. The Badvertising Institute (BI) is one organization that has been at the forefront of the effort to ban the advertising of tobacco products, and it played a major role in the demise of the aforementioned Joe Camel. BI models itself as an educational group, but it also pursues an active advocacy agenda. One of its notable activities is the production of mock renditions of actual tobacco advertisements. BI also prepares educational materials for schools, organizes exhibits, and presents slideshows and workshops to advance the case against tobacco advertising.[12]

Other anti-advertising campaigns have sought to expose the tendency of some companies to make unsubstantiated claims. As consumers have expressed a preference for corporations with reputable social and environmental records, it has become common for advertisers to appropriate these themes for promotional purposes. Perhaps not surprisingly, the firms responsible for many familiar brands have sought to embellish their accomplishments, practices that activists have termed "bluewashing" and "greenwashing." The former refers to a company's tendency to exaggerate its commitment to social responsibility, and the latter denotes unjustified amplification of its environmental performance. One organization that has taken up the challenge of exposing instances of bluewashing and greenwashing is the ethical watchdog CorpWatch.

Anti-advertising activists in the United States have also taken their efforts to the nation's highways. Since the 1950s, efforts to impose prohibitions on outdoor advertising have been part of wider efforts to encourage

[9] An especially prominent focus for activists seeking to limit advertising to children has been to block the penetration of promotional inducements in schools. In recent years, as school districts have struggled with the rising costs of education, a growing number of them have turned to advertising as a supplemental source of revenue. At many schools, it is customary for corporate marketing messages to appear on book covers, hallways, athletic facilities, and buses. Especially prominent are soda manufacturers that have negotiated exclusive "pouring" contracts to sell their products in vending machines and at school events. Sponsored educational materials are also regularly mailed free of charge to teachers and principles for use in the classroom.

[10] While CCFPE and many of the groups that are part of its alliance promote secular values, evangelical Christian organizations have also targeted *Channel One*. Obligation and the Eagle Forum are two groups that oppose the advertising, as well as the programming, on *Channel One* on religious grounds. These organizations coordinate boycotts of *Channel One*'s parent company and offer parents a "tool kit" for removing the news service from their children's schools. As a mark of its political sophistication, this activist network has reached beyond its traditional base to recruit into their fold many national education associations.

[11] A measure of the high level of concern that exists regarding the effects of advertising on children is that this campaign is not confined to groups of intrepid grassroots activists. For instance, the American Academy of Pediatrics took a stand on the issue in 1995 that called for more vigorous regulation of advertising aimed at children.

[12] Many other anti-smoking groups, such as the American Lung Association and the Coalition for Women Against Smoking, oppose tobacco advertisements, but they do not make it the main focus of their campaigns.

highway beautification. Early federal legislation banning the erection of billboards in specific areas took effect in 1965, and several states—notably Vermont, Hawaii, Maine, and Alaska—adopted more exacting measures. Proponents of these laws, including Lady Bird Johnson, the wife of the former president, generally framed their concerns not in antagonistic terms denouncing advertising, but as appeals to an aesthetic sensibility. The organization Scenic America has been at the forefront on this issue since its inception and continues to provide resources to numerous state and local groups, such as Citizens for a Scenic Florida, Citizens for a Scenic Spokane, and Citizens for a Scenic North Nevada, that work to ban outdoor advertising in specific jurisdictions. More recently, these groups have spearheaded campaigns against telecommunications towers and other facilities deemed to disfigure the landscape.

Most encounters with advertising are situational experiences into which consumers insert themselves. Exposure to billboards, television commercials, and magazine inserts arguably occurs when individuals take purposeful action that brings them within reach of these commercial appeals. Consumers who are interested in practicing an especially vigilant form of avoidance behavior can actively avoid (or at least lessen) their encounters with these promotional inducements. For this reason, various forms of unprompted advertising, some of them quite ingenious, have come to be widely despised. Telemarketing calls, junk mail, and so-called unsolicited commercial e-mails (UCM) circumvent conventional defenses and become major sources of irritation. Public intolerance of these unduly intrusive modes of advertising is growing and, according to some observers, is prompting the biggest consumer backlash in decades. This response has assumed many different expressions and led to the formation of a host of organizations.

First, telemarketing involves the use of targeted voice- and fax-based telephone calls. These promotional practices have always had a dark side and over the years have attracted no shortage of unscrupulous operators. Nevertheless, during the past decade, more efficient dialing and messaging technologies have reduced the cost of reaching large numbers of households and the field has grown severalfold. Telemarketing firms are even setting up large-scale operations in India and other English-speaking countries, where they take advantage of low international calling rates to the United States to canvass on behalf of American companies. To defend themselves, would-be recipients of telemarketing solicitations can purchase and install an impressive number of gadgets that offer the promise of deterring telephone solicitors. Most of the numerous organizations working to thwart telemarketing adopt a similar approach that consists of offering consumers information on how to insulate themselves and enforce their legal rights. The groups also issue blanket advice discouraging the purchase of goods and services from telemarketers.

Anti-telemarketing organizations are also typically equipped to offer information regarding the Telephone Consumer Protection Act of 1991 (TCPA). TCPA prohibits unsolicited faxes and pre-recorded telephone sales calls, as well as providing states with the authority to create "do-not-call" lists.[13] Once an individual places herself on such a list, it becomes illegal to direct most telemarketing calls to her. Virtually all the anti-telemarketing groups support TCPA, but advocate for more restrictive legislation to impede the heavy flow of activity that continues to occur.

Second, unsolicited mailings, or junk mail, are a ubiquitous feature of life in the United States. Public tolerance for the seemingly relentless flow of postal promotions is higher than it is for telemarketing, perhaps because it is easier to discard an unopened envelope than it is to hang up on a polite telephone caller. While there are a few organizations that address this problem, none does so as vigorously as the Center for a New American Dream (CNAD), a new, somewhat anomalous upstart group. CNAD has created an entire campaign around the issue of eliminating junk mail. This organization does not view these mailings in terms of customary anti-advertising themes, but as a particularly egregious and offensive form of environmental disregard.

Finally, so-called unsolicited commercial e-mail, more commonly known as "spam," has become a common feature of mass computer use in recent years. Spam is not only a nuisance to most recipients, but it creates congestion on the Internet and overtaxes computing resources. The only thing that has grown faster than the volume of spam is the public reaction against it. While computer experts endorse the use of specially designed anti-spam software, it appears that the purveyors of these solicitations are able to stay a step ahead on the technological curve. In the absence of a credible technological fix, anti-spam activists have launched numerous organizations and websites to stem the rising tide of these electronic promotions. One group, the Coalition Against Unsolicited Commercial E-mail (CAUCE), is an example of organized resistance to spam. Aside from maintaining a website to which spam victims can turn for guidance, CAUCE lobbies for stringent legislation barring the distribution of unsolicited e-mail.

Lifestyle Reinventions and Sustainable Consumption

Vocal protest represents only one facet of the contemporary effort to forge a new politics of consumption in the United States. While culture jammers, anti-consumerism activists, and anti-advertising campaigners have formulated strident modes with which to express their anxieties about contemporary consumption-laden lifestyles, other sympathizers have chosen a more inward-looking approach focused on transforming personal values and practices. Termed lifestyle reinventions, this branch of the nascent sustainable consumption movement comprises voluntary simplifiers, ethical consumers, and slow food aficionados.

[13] There now exists a federal do-not-call list designed to limit intrusive telemarketing appeals (Richtel, 2003).

Voluntary Simplicity

Voluntary simplicity has been a preoccupation of both ancient prophets and modern social critics (Shi, 1985). Although contemporary adherents are likely to be familiar with popular proponents, such as Henry David Thoreau and Mahatmas Gandhi, it is Duane Elgin's (1981) book that serves today as the inspirational bible. It is therefore appropriate to turn to this treatise for an operational definition.

> To live more voluntarily is to live more deliberately, intentionally, and purposefully—in short, it is to live more consciously. We cannot be deliberate when we are distracted from life. We cannot be intentional when we are not paying attention. We cannot be purposeful when we are not being present. Therefore, to act in a voluntary manner is to be aware of ourselves as we move through life. This requires that we not only pay attention to the actions we take in the outer world, but also that we pay attention to ourselves acting—our inner world. To the extent that we do not notice both inner and outer aspects of our passage through life, then our capacity for voluntary, deliberate, and purposeful action is commensurably diminished.

In other words, the decision to adopt a life of voluntary simplicity is a personal matter. Everyone is capable of determining where life is fraught with unnecessary complication. All have the capacity to recognize the clutter and pretense that weigh upon them and make the passage through this world more cumbersome and awkward. To live more simply is to become unburdened—to live more lightly, cleanly, and aerodynamically. It is to establish a more direct, humble, and unencumbered relationship with all aspects of life: the things that are consumed, the work that is done, the relationships that are maintained, and the connections that are created with nature and the cosmos. Simplicity of living means meeting life face-to-face. Voluntary simplicity, by extension, is about confronting life without unnecessary disruption and turmoil. It is about taking life as it is—straight and unadulterated.

Voluntary simplicity is not a lifestyle of deprivation, and this is often a critical point of misinterpretation by individuals who are unfamiliar with its aims. It is about discovering what is sufficient in life—based upon thoughtful analysis of one's values. Apropos for Elgin is Simone de Beauvoir's contention, "If all life does is maintain itself, then living is only not dying." If people look to non-material satisfactions, thus simplifying their lives, then they can establish a more meaningful existence and truly experience life. Voluntary simplicity is, then, about forging modest material needs to allow opportunities for people to surpass themselves and to find more satisfying, meaningful existences.

Early research on the extent to which people were actively pursuing voluntary simplicity in the United States suggested this mode of living had considerable appeal across a range of geographic regions (see, for example, Elgin & Mitchell, 1977; Leonard-Barton, 1981). There were indications that voluntary simplicity was distinct from other forms of lifestyle politics, popular during the 1970s, that stressed agrarian values and self-sufficiency. These studies also pointed to the fact that the vast majority of voluntary simplifiers were well educated and had grown up under relatively affluent circumstances. In keeping with Ronald Inglehart's (1990) notion of post-materialism, they had conditioned cravings for material goods.

More recently Amitai Etzioni (1998) has conceptualized three forms of voluntary simplicity—downshifters, strong simplifiers, and holistic simplifiers. First, downshifters, according to this typology, are the most moderate, least intense simplifiers. These individuals tend to be financially secure, but for one reason or another choose to forego certain consumer items. Etzioni describes this group as being comprised of people who "dress down" to work, or drive unfashionable cars. There is no doubt a certain renegade status associated with this lifestyle, and the irony is that while it may appear superficially simple, it is actually costly and engenders its own sort of commodification

Second, strong simplifiers are people who have actively rejected high paying jobs and lavish living in favor of less remunerative compensation and much more modest lifestyles. A widely read and cited *New York Times* report from the mid-1990s described this group as comprised of individuals who choose to buy and earn less, in exchange for more free time and less stress. This form of lifestyle politics involves a "quiet personal revolt against the dominant culture of getting and spending" (Goldberg, 1995).

Finally, Etzioni distinguishes a separate group of strong simplifiers that is comprised of individuals who embrace an ardent conception of "simple living," one that entails active abandonment of affluent lifestyles. However, this class of voluntary simplicity lacks the back-to-the-land ethos of the earlier era. With the explicit goal of leading simpler, less cosmopolitan lifestyles, strong simplifiers reside in various geographic locales, including older suburbs, gentrifying urban neighborhoods, smaller rural towns, and farmsteads. According to Etzioni, this group has a coherently articulated philosophy grounded in transcendentalism and is explicitly anti-consumerist.

Several recent studies have sought to expound upon Etzioni's analytic framework and to shed further light on the motivations behind a purported shift toward voluntary simplicity. A particularly notable investigation, by Margaret Craig-Lees & Constance Hill (2002), suggests that efforts to conceptualize voluntary simplicity solely in terms of behaviors deemed antagonistic to material possessions might be overly narrow. These authors contend that, although all three of the themes associated with materialists concern physical possessions, only one of the themes characterizing simplifiers has to do with material goods. Voluntary simplifiers may reduce their material consumption, but a life of poverty is not required and it is not necessary to sever all emotional ties to goods. Craig-Lees & Hill take issue with how we conventionally understand materialism. We typically think of materialists as people who derive their happiness and satisfaction from physical possessions. However, this study questions whether it is indeed the case that materialists use possessions to create significance, while non-materialists generate significance out of experiences. Craig-Lees & Hill found that voluntary simplifiers demonstrated greater attachment to their homes than non-voluntary simplifiers did. In a finding that departs from the conventional view, non-voluntary simplifiers were found to be more likely to view their homes in non-emotive terms as smart investments and good buys. In this sense, the voluntary simplifiers, because of the seemingly deep connection they developed with their possessions, appeared more materialistic than their non-simplifying counterparts.

In a more recent essay, Elgin (2003) contributes to this discussion on how to typologize voluntary simplicity, and generates a still more variegated schema that distinguishes among choiceful simplicity, commercial simplicity, compassionate simplicity, ecological simplicity, elegant simplicity, frugal simplicity, natural simplicity, political simplicity, soulful simplicity, and uncluttered simplicity, by no means meant to be mutually exclusive. Elgin emphasizes the artful tapestry in which individuals blend and combine elements of each expression of simple living. Attached to each of these ten modes of voluntary simplicity is a specific description, but for current purposes they can be aggregated into three main expressions: ecological awareness, frugal consumption, and personal growth.

First, voluntary simplicity, at least in its contemporary form, has strong intellectual roots in the environmental movement. In fact, Elgin issued his landmark book soon after publication of the infamous *Limits to Growth*, prepared under the aegis of the Club of Rome. However, the patchy evidence that does exist on the motivations behind the adoption of voluntary simplicity suggests that the connection between ecological awareness and voluntary simplicity is actually quite weak (see, for example, Maniates, 2002). For instance, in Craig-Lees & Hill's sample, only 10% of self-designated voluntary simplifiers were members of environmental organizations, and only 25% identified the environment as a primary reason for their lifestyle choice.

Second, some voluntary simplifiers are motivated by a personal commitment to frugality (Dacyczyn, 1998). This form of simple living seeks to resurrect the skills of thriftiness and to give them a new, more artful connotation. Mass consumerism and the quest for continual economic growth has denigrated the knowledge required to live without much regard for the value of money. Joe Dominguez & Vicki Robin's bestselling book *Your Money or Your Life* has been a particularly popular approach for reinvigorating enthusiasm for frugality. This volume provides readers with a nine-step program for achieving financial independence and establishing a sound relationship with money.

Finally, voluntary simplicity appears to be attracting attention because of a subtler and intangible promise for personal growth. In this sense, adherents seek to take on board certain lifestyle practices because they seem "right" and are suffused with greater authenticity. This quest for self-improvement also contains an element of spiritual enlightenment.

These three facets of voluntary simplicity have, over the past decade, generated a vast array of mass-market magazines, narrow-niche publications, product catalogues, websites, and other resources—a veritable industry of its own. These circumstances suggest that it is reasonable to raise the question whether this mode of sustainable consumption has, in the United States, passed the threshold of a social movement.[14] The very nature of voluntary simplicity makes it difficult to formulate a concise answer, mainly because there is a contradiction between the downscaling of lifestyles and the formation of a large-scale social movement with specific political intent (Maniates, 2002). Voluntary simplifiers embrace specific lifestyle choices, but the emphasis is on introspection and personal change rather than on creating a more ambitious political program. Another notable feature of voluntary simplicity in its current forms is the absence of vilification. In other words, social movements normally manifest a need to draw boundaries around their campaigns, and simplifiers are not seeking, at least presently, to articulate a social critique that assigns responsibility for the purported problems of consumerism.

Ethical Consumption

Adherents of ethical consumption maintain that consumers, by exercising care when making ordinary purchases, can recast the current system of social and political relations. More specifically, by steering clear of products manufactured under conditions that exploit vulnerable laborers or unduly degrade the environment, material consumption can become an engine for human and ecological betterment. The United Nations Platform for Action Committee (UNPAC) has developed a comprehensive guide to ethical consumption that includes recommendations to support local businesses, to assess the environmental costs of consumer purchases, to purchase second-hand goods, and to consider the transportation of products.

Although ethical consumption tends to enjoy greater public visibility in Europe, the Council on Economic Priorities (CEP) has spearheaded the movement in the United States (CEP, 1994). The CEP is a public interest research group funded by memberships, philanthropic grants, and donations. The organization edits a keystone publication in the field of ethical consumption, entitled *Shopping for a Better World*, and encourages consumers to use their purchasing power as a vote—in

[14] Consistent with the approach taken by this analysis is the tendency among self-described voluntary simplifiers to reject the contention that they are carriers of a broader political agenda. Adherents of simpler lifestyles are likely to equate social movements with superficial changes in "style of life" (as opposed to more penetrating changes in "way of life"). The extended comments of one of Elgin's respondents are illuminating: "This is a country of media hype, and [simple living] is good copy. The media is likely to pick up on it…and create a movement. I hope they won't. The changes we're talking about are fundamental and take a lot of time…If it is made into a movement, it could burn itself out. I hope it spreads slowly. This way the changes will be more pervasive. Voluntary Simplicity is the kind of thing that people need to discover for themselves."

other words as a way of conveying their preferences to otherwise inaccessible corporations. The group advocates that

> Your choice of what car, washing machine, computer, or even breakfast cereal to buy may make more difference than you think, especially if you let companies know that social and environmental records affect your choices. Companies wield tremendous power, but individuals can influence corporate practices and can actually help change the world. It's the simple, positive activism of casting your *economic vote* conscientiously" (CEP, 1994).

CEP's consumer guide rates several hundred companies on the basis of environment performance, charitable donations, community outreach programs, women's and minority advancement, support for family oriented employment policies, workplace issues, and information disclosure policies. The CEP Honor Roll recognizes firms that score especially well on these criteria, while the so-called X-rated list is reserved for the poorest performers. Consumers can use these assessments to guide their purchase decisions on virtually any product.

Social Accountability International (SIA), an affiliate of CEP, serves as the accreditation agency for these evaluations. Launched during the early 1990s in response to the weak and incompatible guidelines that individual firms were developing, SAI's mission is to create standards for workplace codes of conduct and labor conditions worldwide. The group's first standard was Social Accountability 8000 (SA 8000), which provides a uniform measure for assessing workplace conditions and for independently gauging the compliance of specific industrial facilities. SA 8000 seeks to define objectively the relative quality of the workplace, and then to translate this information to consumers so that they can respond accordingly.

Co-op America, an NGO established in 1982 with a current membership of 50,000 individuals and 2,000 businesses, seeks to educate and empower people and organizations to use the economic system to promote positive change. Within the constellation of American advocacy organizations, Co-op America is unique in that it does not campaign for equity and justice using conventional political or legal strategies; rather staff members strive to reorient economic relationships by promoting more conscientious consumer expenditures. The approach consists of two interlocking elements: Co-Op America, on one hand, helps consumers identify companies that are committed to socially and environmentally acceptable practices and, on the other hand, assists companies to operate under these stricter standards. The organization coordinates several initiatives, including a green business program, a consumer education program, a corporate responsibility program, and a sustainable living program.

Global Exchange is a California-based human rights organization committed to environmental, political, and social justice. The group's campaigns promote democratic ideals and political empowerment both in the United States and abroad, and seek to highlight the connections between corrupt political systems and human rights abuses. In recent years, countries in which Global Exchange has been active include Brazil, Cuba, Colombia, and Mexico. Though its operational strategies vary across countries, the organization does not aim simply to press employers to pay better wages. Rather, Global Exchange seeks to improve human rights by educating people about oppressive political and social organizations.

Closely connected to the campaign for ethical consumption is the effort to support so-called fair trade as an alternative means of exchange (Rice, 2001; Browne et al., 2000). This strategy seeks to sidestep complex issues embedded in the political economy of globalization by directly linking ethical consumers with socially and environmentally conscientious growers and manufactures. The intent is to simplify distribution to ensure that a larger portion of the sales price accrues to indigenous farmers and small-scale producers. By selling fair trade products at premium prices, sponsors offset higher transaction costs. TransFair USA, the leading fair trade organization in the country, works closely with the Fair Trade Federation (FTF). FTF a network of retailers, wholesalers, and producers that have agreed to comply with a code of conduct calling for schemes that offer employees opportunities for advancement, provide equal employment opportunities, and engage in environmentally sustainable practices.

For the past decade, coffee has had an especially prominent position on the fair trade agenda. Coffee is the second largest commodity import in the United States (after oil) and Americans annually consume 20 percent of the world's total production. At the same time, the tendency for coffee plantations to promote unsafe and unhealthy working conditions has been a long-standing point of discussion (Tucker, 2000). To ameliorate some of the problems associated with coffee production, fair trade proponents have sought to educate consumers about the benefits of purchasing their beans from cooperatives, of avoiding higher yield varieties that require greater sun intensity (to discourage deforestation and biodiversity loss), and of supporting growers that pay workers equitable wages.

Increasingly, consumers are demanding fair trade coffee, and major purveyors such as Starbucks have been encountering pressure from their customers to offer a fair trade alternative. At present, fair trade coffee comprises only 1% of the global market, with the majority of sales taking place through specialized fair trade retailers—many of them operating via the Internet. However, after considerable pressure from stakeholders, food industry giants such as Kraft and Proctor and Gamble have recently announced plans to launch fair trade coffee brands.

A related area of activism has sought to highlight the migration of garment manufacturing to low-wage havens in the developing world. Laborers working under substandard conditions throughout Asia and Latin America sew most of the clothing worn today by relatively affluent people in economically advanced countries. Developing countries often find themselves in the unfortunate position of bidding against one another to convince large corporations and their subcontractors to set up these facilities (Ross, 1997; see also Gonzalez, 2003).

In 1997, municipal officials in North Olmstead (Ohio) realized that nearly all of the garments their city purchased—from athletic equipment to police uniforms—came from overseas sweatshops. This recognition encouraged the city to pass the first law in the United States banning a government from purchasing products manufactured under sweatshop conditions. This initiative led to the notion of "sweat-free cities" and induced a number of major municipalities (including San Francisco, Cleveland, Philadelphia, and New York) to pass similar legislation.

The movement to protest the globalization of clothing manufacturing has moved from the chambers of municipal governments to college and university campuses. Indeed, the opposition to sweatshop labor has spurred one of the largest and most vocal forms of student activism in recent years. Directed by the group United Students Against Sweatshops, this wave of protest politics started when students began to examine their institutions' ties to companies such as Nike and Reebok. The organization currently campaigns against "campus sweat" and has assembled a network of over 200 colleges and universities.

Action on many campuses has involved the elimination of sweatshop clothing adorned with the insignias of some of the most esteemed colleges and universities in the United States. To counter these protests, the Collegiate Licensing Company, a consortium of major educational institutions that negotiates with the distributors of these products, published a code of conduct and encouraged participating firms to endorse it. Because student activists viewed this assurance as insufficient—it did not contain a clause requiring full public disclosure, a provision demanding a living wage, or a statement concerning women's rights—this defensive action only intensified campus demonstrations.

The effort to resist the importation of apparel manufactured under substandard conditions has also given rise to a more general campaign. Leading this struggle has been the group Sweatshop Watch, an eclectic coalition of trade unions, civil rights groups, and immigrant rights organizations committed to eliminating sweatshop production. Sweatshop Watch focuses on both the domestic (especially California) and international dimensions of this form of exploitation.

The Slow Food Movement

Originally launched in 1989 by Carlo Petrini in response to the establishment of the first McDonald's restaurant in Rome, the slow food movement has assumed international significance and now maintains offices in Italy, Switzerland, Germany, and the United States (Kummer, 2002; Petrini, 2001). The major aims of the movement are to celebrate the joy of wholesome and nutritious food and to protect the gastronomic traditions of the world's cultures in the face of the interlocking forces of modernization, standardization, and globalization. International membership in the slow food movement's 600 chapters, or *convivia,* has reached 70,000 food aficionados in 45 countries.

Slow food adherents argue for the importance of preserving the pleasures and qualities of everyday life from the relentless pursuit of speed and purported convenience by slowing down, and by celebrating traditional lifestyles. Though the movement does adopt some of the rhetoric of anti-globalization activists, particularly in terms of the threats posed by industrially produced food, the slow food movement does not embrace the rancorous political edge common among supporters of the wider campaign (Miele & Murdoch, 2002; Jones et al., 2003). In addition to apprehension about globalization, foodies (in slow food parlance) express concern over what they interpret to be a ceaseless barrage of food regulations from national and multinational authorities. Instituted to promote food safety, many of these provisions have jeopardized the traditional food preparation methods favored by specialty businesses and local food artisans.[15] The slow food movement has not been passive in the face of these regulatory directives, and the European wing of the international organization recently opened an office in Brussels to lobby against these measures. The effectiveness of slow food adherents has proved formidable, and foodies delivered a petition to the European Commission with half-a-million signatures demanding exemptions to many of the hygiene rules. In response to these efforts, Italy received special dispensations for thousands of its small food producers (Stille, 2001).

In addition to its commitment to the preservation of local culture, slow food also embraces a certain environmental sensibility. Adherents support "sustainability and biodiversity of the earth's bounty," as well as the consumption of seasonal and local foods (Nabhan, 2002). This particular brand of ecological consciousness shares many similarities with the sentiments expressed by hunting and birding enthusiasts. Just as wildlife proponents are motivated to protect valued habitats, the slow food's ecological commitments are tied to the production of healthy and wholesome food.[16]

While much of the slow food movement's organizational resources remain in Europe, it has had some notable success developing a base in the United States. At present, more than 7,000 members subscribe to 70 American *convivia* and produce a national publication aptly named *The Snail*. The guiding values of Slow Food USA are sustainability, cultural diversity, pleasure and quality in everyday life, inclusiveness, and authenticity and integrity. One of the major programs sponsored by the American arm of the movement is "Ark USA" (part of the worldwide "Ark of Taste"). Ark USA seeks to identify, protect, and promote indigenous foods deemed to be in

[15] For example, the European Union's food and sanitary regulations stipulate that the traditional curing of Tuscan pig lard be done in stainless steel containers, instead of marble vats. Advocates of the traditional process argue that the marble vats are essential to creating the right flavor and texture for the lard. Another rule prohibits baking pizzas in traditional wood-burning ovens that contain carcinogenic ash (Smith, 2000).

[16] One commentator has called Slow Food the "gastronomic version of Greenpeace: a defiant determination to preserve unprocessed, time-intensive food from being wiped off the culinary map" (Osborne, 2001).

danger of "extinction." Slow Food USA has established a committee that maintains a data bank to collect information on cultivars, breeds, products, and producers, as well as restaurants and shops that sell Ark products. In the eyes of some observers, this project provides the slow food movement with a greater semblance of legitimacy than it would otherwise have if it were simply dedicated to the pleasures of indulging in traditional foods.[17]

The worldwide success of slow food, and its call for simpler lifestyles, has inspired more ambitious activities in recent years and led to the establishment of a new organizational infrastructure. Towns and cities around the world are pledging to promote urban planning agendas geared toward improving the quality of life by reducing the frenetic pace of social activity. Launched in Italy in 2000, "Slow Cities" is an international organization that seeks to build upon the successes of the slow food movement. If the intent of slow food is to preserve the integrity and traditions of deliberate culinary pleasures, then the slow cities offshoot is its geographic equivalent.

Designation as a slow city entails permitting more neighborhood restaurants, combating traffic and noise pollution, facilitating bicycling, planting trees, and maintaining parks and urban squares. These requirements translate into more practical measures: banning car alarms, television antennas, and neon signs. Slow cities are also encouraged to enlarge pedestrian areas and to move automobile parking lots to the edges of city centers. While these initiatives are only likely to be practicable for smaller cities, this does not mean that larger municipalities are discouraged from pursuing slow city status. To date, only four Italian cities (Orvieto, Greve, Bra, and Positano) have secured formal recognition as slow cities and a further forty jurisdictions in Italy are being considered for certification.[18] There are no American municipalities presently up for nomination to become slow cities, though given the similar commitments of slow cities and new urbanism it is likely only a matter of time before a worthy candidate steps forward.

Public Policy and Sustainable Consumption

As noted earlier, sustainable development has not been a central issue for governmental planning in the United States, and the adverse impacts of consumption have been even further removed from mainstream public policy agendas. Despite his loose endorsement of sustainability, President Clinton did little to advance the issue, and the current Bush administration has pursued an avowedly anti-environmental political program. Nonetheless, if one adopts a broad-minded view of sustainable consumption, there are indeed a number of officially sanctioned initiatives taking place in the United States that are fully consistent with the aims of this policy program.

Local Greenhouse Gas Reduction Schemes

While anthropogenic climate change has become, over the past two decades, a central international environmental policy issue, the American federal government continues to postpone substantive actions to reduce the country's greenhouse gas emissions. The lack of national action in this area has left a void that a handful of environmentally progressive states are now stepping forward to fill. Several states have created their own greenhouse gas reduction schemes and, among the northeastern states, a promising effort is afoot to create a regional market for trading emission credits (Johnson, 2003a).[19] The following section reviews the individual climate change policies of three of these states—New Jersey, New Hampshire, and Massachusetts.[20]

First, the New Jersey Department of Environmental Protection (NJDEP) issued in 1998 an administrative order calling for a statewide greenhouse gas reduction of 3.5% by 2005.[21] To support this objective, two years later NJDEP released the New Jersey Sustainability Green House Gas (GHG) Action Plan that advances strategies to achieve reductions in several specific areas, including energy conservation, transportation, innovative technologies, pollution prevention, waste management and recycling, and open space and natural resources protection. To measure progress, the plan establishes indicators predicated upon the total volume of GHG emissions (based on data developed by the Energy Information Agency), commuting by public transport, and annual mean surface air temperature.

Second, New Hampshire governor Jeanne Shaheen signed the Clean Power Act (CPA) into law in 2002. This legislation represented a milestone for state-level climate change policymaking, as it was the first instance in which a state required power plants to implement a four-pollutant emission reduction program. The CPA calls upon electric utilities operating in New Hampshire to cut their releases of sulfur dioxide, nitrogen oxides, mercury, and carbon dioxide by implementing new pollution control technologies or by participating in emission trading schemes. Because of the state's susceptibility to transboundary air pollution from other states, the CPA makes it more expensive for electric

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17 The number of endangered foods listed in the Ark of Taste program numbers ninety worldwide, with nine of them indigenous to the United States: Dry Monterey Jack Cheese, Green Mountain Potatoes, Blenheim Apricots, Creole Cream Cheese, Heritage Turkeys, New Mexican Native Chiles, Delaware Bay Oysters, Heritage Clone Zinfandel, and naturally grown wild rice.

18 Full accreditation is currently pending for forty cities, including Canale, Loreto, Penne, Todi, and Trevi (Kennedy, 2001).

19 The Conference of New England Governors and Eastern Canadian Premiers in 2000 also adopted a coordinated climate change plan that includes regional targets, state and provincial commitments to implement their own greenhouse gas reduction schemes, and statements of intent to develop specially tailored educational outreach programs.

20 In addition to the northeastern states, California has also been a leader in the development of a state-level greenhouse gas reduction program.

21 The target is calculated in CO_2 equivalent units and requires the state to reduce its greenhouse gas emissions by approximately 20 million CO_2 equivalent tons (NJDEP, 1999). Current projections indicate that the state will likely not achieve its reduction target, largely because of increases in emissions from transport vehicles.

utilities to purchase emission credits from facilities outside of the region.[22]

Finally, Massachusetts, through implementation of its voluntary environmental stewardship program, represents a different state-based approach to sustainability and greenhouse gas reduction. This program requires participating businesses to commit to improve, over a three-year period, at least four aspects of their environmental performance. Intended, for companies that already have environmental management systems in place and are in full compliance with all environmental regulations, this initiative seeks to secure improvements in energy conservation, water use, toxics, air emissions, discharges to water, solid and hazardous waste management, and product performance.

On a complementary front, the International Council for Local Environmental Initiatives (ICLEI) assists municipal and county governments in the United States and elsewhere in organizing their own proactive anti-climate change policies. ICLEI, a new institutional entity that operates under United Nations auspices, serves, in its own words, as the "international environmental agency for local governments" (International Council). Through the provision of policy guidance, training, and technical assistance, the organization presently serves more than 350 sub-national governmental units that are committed to building a global movement of localities committed to sustainable development.

ICLEI has developed its Cities for Climate Protection Campaign (CCP) to support local governments in formulating and implementing policies to achieve measurable local greenhouse gas reductions, to improve air quality, and to enhance urban livability and sustainability. Two cities in the United States that exemplify the ICLEI's mission are Burlington, Vermont and Austin, Texas.

Both residents and visitors frequently characterize Burlington as a politically liberal community with a palpable new-age ethos, though this description captures only a portion of what invariably is a much more complex political economy. Throughout the 1980s and 1990s, the municipal government championed environmental and social projects that established a nascent culture of sustainability.[23] In partnership with ICLEI, Burlington has begun to formulate an alternative community model, one rooted in the ideals of sustainability and good urban governance. Much of the city's sustainability planning has occurred within the context of its so-called Legacy Project, a multi-stakeholder initiative that aims to embrace residents from all communities and economic sectors and to initiate a dialogue for giving direction to local development over the next thirty years. The program calls upon people to articulate this vision of the future in accordance with five major themes: economy, neighborhoods, governance, youth and life skills, and environment. The challenge for municipal leaders has been to reconcile Burlington's seemingly inevitable growth with its commitment to sustainability. The city's pioneering experience with sustainability planning has brought forth two especially notable outcomes. The Burlington Eco-Info Project provides residents with easy access to data on local air, water, land, and energy trends, and the Education for Sustainability Program trains schoolteachers to incorporate sustainability issues into their curricula.

Many observers admire Austin, the capital of Texas and home to the state university's main campus, for its relatively progressive municipal politics.[24] The city's CCP campaign seeks to shift 5% of local electricity production to renewable sources. To meet this objective, Austin's municipally owned utility has implemented a variable pricing scheme to induce residents to favor non-polluting forms of electricity. In this manner, Austin expects renewable energy to account for approximately one half of its expected increase in electricity demand. By generating 340 million kw/year from renewable sources—primarily wind—this Texas city will reduce its annual carbon dioxide emissions by approximately 255,000 tons.

Relocalization Schemes

In the United States over the past decade, there has been an outpouring of public policy initiatives to bolster local economic autonomy. Campaigns to encourage consumers to buy indigenously produced goods, to support community-based agriculture, and to legitimize local currency programs have proliferated.[25] This wave of relocalization is, to a large extent, a defensive reaction to the forces of globalization that are disembedding economic activities from their situated contexts. Efforts to promote relocalization can be quite diverse, but they all share the objective of enhancing the sustainability of community enterprises and rekindling direct relationships between producers and consumers. This section reviews three broad categories of this phenomenon: local promotion schemes, novel modes of agricultural production and consumption, and local currency programs.

First, the mantra to "buy American," especially during periods of nationalist fervor or economic retrenchment, is familiar to consumers across the United States. Over the past two decades, states and cities have refashioned this strategy to promote the relocalization of economic activity by encouraging consumers to favor locally produced goods and services. Examples of these so-called "buy local" campaigns can be found in virtually all parts of the country and take a variety of different forms. For instance, the Savannah, Georgia Chamber of Commerce organizes a drive to support local businesses through public education and the distribution of "buy

[22] The CPA calls for annual emission reductions of 75% for sulfur dioxide and 70% for nitrogen oxides by the end of 2006 and a reduction of carbon dioxide to 1990 levels by 2010.

[23] See the website at http://www3.iclei.org/localstrategies/summary/burlington2.html.

[24] See the website at http://www3.iclei.org/iclei/casedetail.cfm?pid=40.

[25] During the aftermath of the attacks against the World Trade Center and the Pentagon, these appeals have assumed a certain nationalistic significance. Promotional inducements now regularly beseech consumers to purchase domestic (and indeed local) goods and services as a patriotic gesture (Shenon, 2001; Rather, 2001). A similar phenomenon occurred immediately following the capture of Saddam Hussein in Iraq (Morgan, 2003).

local" emblems.[26] A business promotion group in western North Carolina utilizes a logo to promote local commerce with the slogan, "Buy Local–Western North Carolina is Worth It."[27] An organization in Pittsburgh, Pennsylvania encourages consumers to purchase compact discs from local musicians.[28]

Agricultural commodities—especially fruits and vegetables—have been especially popular targets for policy initiatives to relocalize consumption. The sophistication of buy local schemes has improved markedly over the years, and appeals to geographic familiarity today are likely to rely on integrated promotional strategies developed by professional marketing specialists.[29] While all states use this approach to varying degrees, New Jersey, New York, California, and Massachusetts have demonstrated the most consistent commitment.

First, New Jersey claims to be the first state in the country to launch a local campaign to promote its homegrown agricultural products. State agricultural officials began marketing local produce under the slogan "Jersey Fresh" in 1983. The campaign has utilized radio, television, and billboards, as well as colorful signage in supermarkets, to encourage consumers to purchase local agriculture. The state's department of agriculture also provides grants to marketing associations that would like to sell their products in more distant locales. For instance, organizations designed to promote specific crops use the Jersey Fresh moniker to advertise to consumers in Virginia and Montreal.[30] In this way, the campaign has evolved into a regional marketing tool to increase state exports, undermining claims that this program is ultimately about fostering local sustainability.

Second, New York has devised a similar approach to market its agricultural products. The state's department of agriculture uses the slogan "Pride of New York" to persuade consumers to buy locally grown produce. The New York campaign relies largely on conventional advertising and in-store displays to showcase the state's agricultural products. In addition to this statewide program, New York's distinct regions have initiated their own promotional efforts to relocalize consumption at an even more proximate level of geographic scale (Hilchey, 2000; see also Moskin, 2004).

Third, agriculture officials in California have developed a coordinated program for marketing the state's prodigious output of fruits and vegetables to local consumers. This promotional effort is part of the state's familiar and long-standing export-oriented campaigns to encourage the consumption of locally grown raisins and peaches. More recent initiatives to relocalize consumption at the sub-state level in Placer and Sonoma Counties are typical of programs launched elsewhere in California. Placer County utilizes the conventional portfolio of marketing strategies, including print and radio advertising, public education, and supermarket displays, to enhance public awareness of local agriculture. Sonoma County, in part because of its reliance on wine production, has begun to formulate appeals that stress not only that local products are "Sonoma Grown," but that they are "Sonoma Made" as well.[31]

Finally, Massachusetts appears to have the most sophisticated campaign to promote the relocalization of agricultural production and consumption. The state's success is largely attributable to the creation of an array of public-private partnerships, and to savvy marketing. Agriculture officials in Massachusetts have set up a separate division, called "Massgrown," that provides financial and logistical resources to support state agricultural products, and that licenses its slogan: "MASS grown…and fresher!" The state also actively supports farmers' markets, "agritourism," and pick-your-own farms.[32] Despite its relatively small size, Massachusetts has also promoted the development of several sub-state level promotional initiatives. Especially notable is Community Involved in Sustaining Agriculture (CISA), an organization dedicated to encouraging the consumption of agricultural produce from the western part of the state. CISA actively draws attention to how the programs it facilitates can offset the damaging affects of globalization, and its campaign slogan, "Be a Local Hero–Buy Locally Grown," has attracted national attention.

While the proliferation of buy local campaigns has been widespread, policymakers in the United States have actually been employing a much broader portfolio of strategies to promote the relocalization of food production and consumption. Three notable innovations include community-supported agriculture (CSA), direct marketing of agricultural produce, and community gardening.

CSAs are a latent outgrowth of profound demographic shifts in the United States. The process of rural-urban migration that has reshaped the national landscape over more than 100 years was accompanied (and in many instances motivated by) sweeping technological advances in agricultural efficiency and automated product processing (Hinrichs, 2000). As the size of farmholdings increased and people were displaced from local agricultural economies, they sought new opportunities in the expanding cities. At present, less than 2% of the American population is directly engaged in farming. The disappearance of the American family farm has become a popular focal point for critiques highlighting the dark side of capitalism and globalization.

It is from this nexus that CSAs have grown, and there are today an estimated 1,000 of these agricultural

[26] See the website http://www.buylocalsavannah.com.

[27] See the website http://www.mtnmicro.org/pages/about_us/subsidiaries.html.

[28] See the website http://www.mtnmicro.org/pages/about_us/subsidiaries.html.

[29] A cursory review of these initiatives suggests that geographically defined regions within particular states have developed more proficient programs for promoting their agricultural products.

[30] See the website http://www.state.nj.us/agriculture/markets/jerseyfresh.htm.

[31] See the websites http://www.sonoma-county.org/agcomm/pdf/2001_Crop_Report.pdf and http://www.placergrown.com.

[32] See the website http://www.state.ma.us/dfa/massgrown/index.htm.

enterprises operating across the country.[33] A CSA consists of a community of consumers, who enter into a seasonal "subscription" agreement with a local farm. In return for a preseason payment (normally a few hundred dollars), the farm owner supplies his subscribers with fresh agricultural products on a weekly basis. Farmers and subscribers satisfy one another's respective needs. On one hand, farmers obtain access to a flexible form of financing and a direct distribution channel for their produce. On the other hand, subscribers receive a personal connection to the food they are consuming and the knowledge that it comes from a local source. The relationship is also founded on the fact that most CSAs are committed to sustainable farming practices, and that subscribers often contribute their own labor during the growing season. Hence, a system has evolved in which both farmers and subscribers can insulate themselves from industrialized modes of agriculture and get a foothold for relocalizing themselves against the forces of mass consumerism and globalization.[34]

Another form of alternative production and consumption of agricultural produce is the concept of "direct marketing," which entails the distribution of fruits and vegetables without reliance on corporate mechanisms. While CSAs fall within this rubric, another common example is the growing popularity of farmers' markets (Grey, 2000). Farmers' markets are as old as agriculture itself, but their numbers began to wane in the United States following World War II with the advent of the modern supermarket. By 1960, there were fewer than 100 farmers' markets nationwide. During the past two decades, there has been renewed interest in this mode of engaging producers and consumers and today there are an estimated 2400 farmers' markets operating around the country. The resurgence of this mode of direct marketing is in part attributable to a backlash against mainstream agriculture. The success of farmers' markets resides in their ability to exploit the anonymity of the industrial food system with its tendency to produce goods that must conform to standardized guidelines regarding size, color, taste, and so forth.

A final, if understated, example of the innovative production and consumption of agricultural produce is provided by community gardening (see, for example, von Hassell, 2002). There are more than 10,000 community gardens in the United States, many of them located in the country's most economically depressed neighborhoods. The transitory and uncertain disposition of the land parcels used to operate community gardening schemes often means that it is difficult for devotees to gain secure title to their plots. However, policymakers in some cities—New York City has one of the largest and most successful community garden programs in the country—have devised strategies to ensure long-term tenancy.

Proponents of community gardening often frame the practice as an opportunity for low-income urban residents to reconnect to the local environment and to gain a degree of political empowerment—while at the same time growing their own wholesome food. Viewed from a slightly different perspective, it becomes apparent that community gardening is also an instance of the relocalization of agriculture and the promotion of sustainable consumption.

While local promotion schemes and innovations in agriculture both clearly demonstrate a trend in the United States toward new consumption practices, the most conscious and dedicated efforts to create systems of proximate exchange are local currency initiatives. Long before national governments began issuing their own legal tender, and before monetary policy became a central function of centralized authorities, local currency was the norm. The modernization of national economies, however, has meant the demise of community-based scrip (Helleiner, 2002). More recently, a number of cities in the United States have seen the emergence of local currency schemes (or local exchange trading systems) designed to strengthen the local economy by stemming the outflow of money to distant locations and facilitating meaningful relationships between buyers and sellers.

The precise organizational characteristics of different systems vary, but the essential features are that the scheme is self-regulating and allows users to manage the money supply within a set of specified boundaries (normally a single municipality). Specially designated script serves as the means of exchange and participants negotiate the value they will attach to particular exchange transactions (organizers generally peg the value of a currency unit, and its exchange rate with conventional currency, according to the average hourly wage in the community).

Local currency systems began to develop a following in the early 1980s with the introduction of the first modern scheme on Vancouver Island, British Columbia. At present, there are an estimated sixty communities in the United States with some form of local currency, with especially vibrant systems operating in Ithaca, New York and Madison, Wisconsin (Shuman, 1998). What many of these cities share is a recognition that globalization is a doubled-edged sword and that local currency systems can ameliorate some of the dislocation and instability that frequently comes in its wake.

Consumer Credit

The use of consumer credit to drive the cycle of production and consumption in the United States is a relatively new phenomenon. The country's move away from a cash economy to a credit economy has enabled consumers to embrace the instantaneous gratification that comes from being able purchase goods without the need to save first for extended periods. An outcome of the widespread availability of credit cards, coupled with the endless enticements of mass consumerism, has contributed to an array of social problems associated with the accumulation of large personal debt loads and financial insolvency (Warren & Warren-Tyagi, 2003; Calder, 1999). The easy availability of consumer credit, often carrying exorbitant interest rates, contributed to a wave of consumer

[33] As described by Cone & Myhre (2000), the CSA concept actually developed in Japan and Europe prior to coming to the United States. The first CSA in the country was established in western Massachusetts in 1985.

[34] So-called buying clubs, which are gaining in popularity in some cities, represent a variation of the essential CSA concept (Johnson, 2003b).

activism during the late 1960s, and this political agitation gave rise to the first generation of modern consumer protection legislation. The most notable public policy initiative to curb unscrupulous purveyors of credit was the Consumer Credit Protection Act (CCPA) of 1968. In particular, the CCPA's so-called truth-in-lending provisions require lenders to state in clear language the terms and conditions of their offers.

Despite this groundbreaking legislation, the past thirty years have seen a massive accumulation of consumer debt in the United States. By 1999, per capita consumer debt had exceeded $30,000, nearly 50% more than it had been ten years earlier. Overall, American consumers are now in debt to the tune of $2 trillion, with approximately one-third of this amount payable on high-interest credit cards. The typical American household carried forward each month $7,500 in unpaid credit card debt, a two-fold increase in just ten years. 13% of families in the United States have outstanding balances that exceed 40% of their household income, a situation that means 90% of each monthly payment is solely dedicated to paying interest. The inevitable outcome of this situation is an ever-mounting number of personal bankruptcies—more than 1.3 million in 1999 alone.

As vendors have saturated the credit card market, they have aggressively sought to cultivate new markets, especially among university students. These companies regularly organize carnival-type promotional events, complete with loud music, games, and gifts. Accordingly, 32% of undergraduate students had four or more credit cards in 2000, and the average overall credit card balance was more than $2,700. Nearly 10% of these students owed more than $7,000 on their credit cards.[35]

In response to this dilemma, many universities now offer bankruptcy counseling to their students, and at all levels of education new courses in financial literacy have become part of the curriculum. There has even been new legislation to restrict campus access for credit card vendors and to tighten lending terms (USGAO, 2001). For instance, the College Student Credit Card Protection Act (CSCCPA) of 1999 imposes a number of new standards, including a restriction on issuing large-limit accounts to students, a prohibition on increasing credit limits without a parental co-signer, and a disallowance of open-ended consumer credit plans for full-time students with no annual income.

Conclusion

Though it is possible to point to various efforts to catalyze a new public dialogue about consumerism in American society, the question remains whether this inchoate activity has the potential to coalesce into a coherent social movement. It is probably too early to offer any firm assessments, but the mélange of initiatives described above does seem to denote a certain level of public discomfort in the United States—at least among some social segments—with contemporary mass consumption. Of noteworthy interest is that this unease does not stem primarily from concern about accumulating ecological harm, and environmental themes are at best peripheral considerations for Americans skeptical of consumerist lifestyles. In this sense, the oppositional political agenda developing around consumption in the United States is—at least for the moment—less about "sustainable" consumption than it is about "critical" consumption.

Public opinion polling has regularly demonstrated the prevalence of environmental values in the United States, but these sensibilities tend to be relatively shallow and superficial. For instance, environmental politics rarely plays a major role in determining the outcome of American elections, and few voters in the country cast their ballots according to candidates' environmental records.[36] For this reason, there is a certain futility in propounding a political program to address the growing social problematization of consumption in the United States with appeals to how environmental gains will derive from more purposive lifestyles. While the clumsiness that accompanies environmentalists' efforts to talk about consumption is evidence of some profound difficulties, scrappy organizations such as the Center for the New American Dream appear to have learned this lesson. To the extent that critical consumption matures as a domestic political discourse, it will almost invariably be driven by relatively prosaic concerns about, for instance, working hours, leisure time, and family life. An array of less tangible misgivings about the insidious affects of commercialism and the lack of authenticity engendered by consumerist lifestyles may also prove important.

All of this suggests that efforts to reconfigure consumption practices in the affluent countries will proceed along different trajectories, and will be conditioned in specific places by political culture and institutional constraints. It is difficult to imagine an American political administration, regardless of party affiliation, embracing a meaningful program to move the country toward alternative modes of consumption. The economic risks are simply too high and the political payoffs too elusive. Progress in the United States to realign consumption practices will come from a combination of social activism and targeted resistance, but first it will be necessary for the various strands of the nascent critical consumption movement to forge a common identity and to launch a new politics of consumption.

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35 Nellie Mae, a quasi-government agency that issues education loans, conducts an annual survey of credit card usage among students. See the website http://www.nelliemae.com/library/research_8. html.

36 The bizarre outcome that characterized the presidential election in 2000 is more an exception than the rule. George W. Bush's victory was, at least in part, attributable to the Green Party's ability in diverting several thousand votes from Vice-President Al Gore in Florida. Had Gore been able to secure even a few hundred of these ballots, he would have prevailed in Florida and the protracted controversy surrounding the election's outcome would have been averted.

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COMMUNITY ESSAY

Sustainability science – and what's needed beyond science

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Author's Personal Statement:

Why would anyone write outside of their field of certified expertise? Why would an author venture beyond known and "safe" disciplinary boundaries? I do, of course, think beyond "safe" boundaries and I have ideas that I want to discuss with others. For many years I "stretched" my environmental science students to consider the necessarily uncertain long-term implications of the science and some of the associated moral issues. I have also begun to try to stretch – just a little – the traditional boundaries of the sessions at meetings of the Geological Society of America (GSA), and for several years have shared my concerns about the potential of successfully sustainable future with a stimulating group of colleagues in the Critical Issues Caucus of GSA. Today, I write this essay for *Sustainability: Science, Practice, & Policy* to stretch my thinking yet further to new readers in hopes of pushing them to think hard about the value of looking for solutions to environmental problems in links among seemingly disparate fields. And also, in truth, as a grandfather, I worry about the world my grandson will have to live in, and that motivates me to take the risk in the hope that what I write might constructively contribute – just a little – to a future I'll not see.

"Sustainability Science" is becoming a commonly used term, but what does it mean? Clearly it refers at least to science that is used to sustain, but sustain what?

If we begin with an anthropocentric focus, that is, on human concerns, we could answer, "To sustain human societies." But surely no one would want simply to sustain the maximum number of humans organized into societies, knowing that that would mean existence at the barest, meanest survival level of all individuals and societies far into the distant future.

Our anthropocentric focus must then be modified: "To sustain *successful* human societies," and that would surely include comfortable and healthy levels of nutrition, shelter, intellectual stimulation, self-realization, equity, peace – and probably more. For this to be the case worldwide and over a long time, societies could not systematically undermine the geoecological systems that support them. Natural geoecosystems 1) provide food, fiber, fodder, shelter, medicines, and energy; 2) process and store carbon and nutrients; 3) assimilate wastes; 4) purify water, regulate runoff, and moderate flooding; 5) build soils (necessary for food) and reduce soil degradation; and 6) house Earth's reservoir of genetic material and species diversity (Watson et. al., 1998). Thus, even an anthropocentric focus leads us to require ecocentric sensitivity at all levels, local to global – a human commitment to real global stewardship.

Successfully sustainable human societies must, therefore, be as attuned as possible to their local and regional environments, their geoecological support systems; lifestyles must be adapted to the ecosystems in which societies live and which support them with cultures, practices, economic systems, and governing policies each adjusted to fit their area, not a single dominant culture or way of living spread across the globe. This would be a world of multiple, diverse societies with their numbers also adjusted to what regional geoecological support systems can sustain.

This is a view of the future that is quite different from our present situation.

However, if something like this indicates the kind of successful societies that we desire, then the term we started with – "Sustainability Science" – refers to the cultivation, integration, and application of knowledge about Earth systems gained especially from the holistic and historical sciences (such as geology, ecology, climatology, oceanography) coordinated with knowledge about human interrelationships gained from the social sciences and humanities, in order to evaluate, mitigate, and minimize the consequences, regionally and worldwide, of human impacts on planetary systems and on societies across the globe and into the future – that is, in order that humans can be knowledgeable Earth stewards (Kieffer et. al., 2003).

Understanding Earth systems and applying the best possible technologies, based on local and global policies attuned to geoecological limitations, will require unprecedented success in educating students at all levels, continuous effective communication with the public aided by informed media, and uncommon wisdom among policymakers. This, at best, will be a formidable task, but will be impossible without a change in the dominant worldview that has led to our addiction to growing consumption (i.e., "In Growth We Trust!). This suggests a heretical path, a path that leads to questioning the dominant paradigm, our controlling myth (Rees, 2004), to asking whether "In Growth We Trust" really should be our motto. We all know that growth cannot continue forever. But who asks, "Have we *already* grown too much"? Too much in terms of numbers, too much in rates of consumption of essential and luxury resources, too much in excluding and confining other species, too much in degradation of ecosystems, too much in desensitizing ourselves and alienating ourselves from the non-human part of our world?

Can we learn from the past? Ossification of the governing approach societies used in dealing with their world, that is, fixation of the controlling myth, has led repeatedly to collapse of societies throughout human history (Wright, 2004; Diamond, 2004). A rigid commitment to our present dominant worldview, unwilling to see how it fails to respect the limitations of supporting natural systems, will likely bring about the collapse of our present globalized society.

Most people, including policymakers, don't realize the breadth and magnitude of the threats: for example, the growing scarcities of water, especially underground water, on all continents (Postel, 1999; Gleick, 2000); that the soils necessary for food are being lost much faster than they are able to renew (Pimentel et. al., 1995); the ecosystem disruptions that global climate change will trigger (IPCC, 2001; Kling et. al., 2003); the decline of grain production (Brown, 2004). Or, as put by Ayres (1999), most people are not actively conscious of the significance of "four spikes": the carbon dioxide spike, the species extinction spike, the consumption spike, and the population spike. Education to remove that ignorance – a kind of blindness – must assume a high priority.

It is wonderfully eye-opening and worldview-broadening to see the planet through geological eyes. Through this perspective we can better understand the implications of the human presence in the context of deep time, and the significance of a fossil record that demonstrates the changing communities of organisms and our recent emergence as a part of the latest community. We can see the archeological record that, across the planet, the earliest hunter-gatherer humans (with the exception of some wanton hunting) were integrated components of the ecological system living in dynamic balance with the rest of the system (Palmer, 2004). We can begin to see how we set the stage for our current problems when we began the agricultural revolution (Quinn, 1992; Chesworth, 1996, 2004; Diamond, 1997) and even more when we gained the power of controlled fossil fuel use (Reitan & Reitan, 2001). We sense with foreboding the impact of our present exponential growth and our addiction to it.

We have two big problems: blindness and addiction!

There are, however, those who see, but who cover or turn away their eyes, and deny what the sciences of Earth systems are telling us, deny the risks of their addiction. Denial is not the best way to treat an addiction. Can we accept or acquiesce in denial of our "In Growth We Trust" addiction (Cairnes, 2004), an addiction that is delusional in its unwillingness to admit to limits in a finite world?

Blindness and denial make impotent the body of scientific knowledge and block the use of helpful technologies. What alternatives, then, should we seek?

Effective education is the best treatment for blindness resulting from ignorance of the breadth and depth of the threats to sustainability. Self-interest must be enlisted to get past denial, whether of reality or of the dangers inherent in addiction. An addict must realize that his or her own self-interest is not served by experiencing a few more highs. The addict knows that getting off the "stuff" and going through de-tox will be very difficult. So the addict must *want* to change, must see that change is better not only for himself/herself, but for all concerned, and therefore *want* to quit the addicting "stuff."

Taking that analogy, however imperfect, and returning to the question of long-term human success, what can individuals and societies do to *want* to support collective efforts to bring global human policies and practices into accord with what Earth can sustain? What can help us to *want* to learn about and pay attention to what the sciences can teach us about how and where we threaten our necessary support systems, to select and use those technologies that minimize our impact, and to use the science and technologies that can reverse the harms we have done? What can help us to *want* to recognize that our own self-interest requires us to think about the non-human world with respect and concern for its own intrinsic values?

When asking these questions, I realize that the sciences and technologies in themselves are not enough, and that we need to think about what can motivate us to get off our addiction, to open our eyes, and to actually make use of science and technology to help us. Those tools are necessary, but willingness to accept policies that really address our needs is indispensable.

There are those--- and Mary Evelyn Tucker and John Grim are exemplary here (Tucker, 2003; Tucker & Grim, 1994, 2001; Tucker & Clugston, 1998) – who point out that all of the world's religions have a deep-seated respect for both the human and the non-human worlds, recognizing that humans have an obligation to care for the integrated whole. Anyone who is religious should be able to find in the essence of their religion ample reason and ethical guidance to want to know the long-term consequences of present policies and practices and how they will effect future human generations and the world in which they will live. And knowing the consequences, feel the moral mandate to act (Rockefeller & Elder, 1992; Tucker & Grim, 2001).

For both the religious and those who feel no special connection to any religion, there is environmental ethics, and for me, in particular, the philosophy called Deep Ecology (Naess, 1973, 1988; Fox, 1990, 1994). Some will read this and groan and regard me as hopelessly – even naively – idealistic. I would remind them that the way humans are now living on Earth is not working; essential Earth systems are breaking down and can't be sustained. In other words, the present dominant worldview, or overall philosophy, which directs how lives are lived and choices are made, is bound to fail. So let's heed the philosopher, William James (1991), who believes that the measure of a worldview's value or worth is its *practical* consequences. If the behaviors that follow from a worldview cannot work well in the long run, then that worldview really is not practical (Reitan & Reitan, 2001). So, rather than live in the truly naïve dream world of "business as usual," let's try to be practical and stick to what at least has a chance of working. That would be to adopt a worldview that makes us want to change course, one of respectful participation in the world's community of ecosystems in which "enough is sufficient." Do we, *Homo sapiens*, have the wisdom to do that?

This is what Arne Naess (1973), the Norwegian philosopher who introduced Deep Ecology, asks us to strive for, to go beyond concern for pollution, resource depletion, and geologic and biologic hazards. Though necessary, these are not deep enough.

Deep Ecology uses a total-field image, one of organisms as knots in the geobiospherical field of intrinsic relations. In this image the relation between entities is, in fact, an essential part of those entities. In Naess's view, without the relationships, the entities are no longer the same, no longer whole or complete. This expanded sense of identification is central to the Deep Ecology worldview and results from internalizing this total-field model.

It is exactly in this respect that Deep Ecology, with its enlarged sense of self – the recognition that "I am an integral part of the whole field and the whole field is an integral part of me" – changes my response to what is happening around me. I cannot look around and say, "First I have to take care of myself." That sort of lifeboat ethic is not conceivable, because by myself I mean the whole thing! We realize that the only lifeboat is the one that holds all of us – Lifeboat Earth (Hardin, 1974; Zen & Palmer, 2004; Reitan, 2004).

As individuals we must recognize that "by myself I *have* to mean the whole thing!" The psychological impact of that recognition, but – not necessarily the intellectualization of a coherent philosophical position, is the great benefit and power of Deep Ecology. The way we *want* to live is changed. To paraphrase the environmental philosopher, J. Baird Callicott (2000), what we do collectively depends upon what we collectively think and want.

We can only accomplish our goal, to change the behavior that undermines a sustainable future, if we change what we collectively think and want. That is, we will have to change the dominant worldview. The Deep Ecology worldview leads us to want to moderate our impact, to want to share equitably, and to want to adopt sustainable behavior.

The idea of "mutual coercion mutually agreed upon" (Hardin, 1968; Zen & Palmer, 2004) – the idea of cooperation according to mutually accepted rules – becomes a self-evident and *automatic* response when each of us sees ourself as inextricably embedded in the web of life and relationships, all of which are parts of myself and of yourself. We end up working together for our mutual best because we *want* to.

Educating broadly about the science and technologies of sustainability is essential, because it leads us to realize that a sustainable future is being undermined. The need to seek a worldview compatible with sustainability becomes evident. Education helps to remove the scales from our eyes; it can cure our blindness. But then we have to take the other step – deal with our addiction and denial. We have to find and communicate worldviews, such as Deep Ecology, that can lead us to want to cooperate with all other humans and with all of the non-human world, to respect Earth and its limits, so that all of us and our progeny can continue to enjoy this marvelous planet – our one and only lifeboat.

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