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Article

Citizen-Consumers as Agents of Change in Globalizing Modernity: The Case of Sustainable Consumption

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Abstract: The roles that individuals can adopt, or get assigned, in processes of global environmental change, can be analyzed with the help of three ideal-type forms of commitment: as environmental citizens, as political consumers, and as individual moral agents. We offer a discussion of the three roles in the context of sustainability changes in everyday life practices of consumption. Sociological accounts of (sustainability) transitions are discussed with respect to their treatment of the concept of agency vis à vis the objects, technologies, and infrastructures implied in globalizing consumption practices. Using consumption practices as basic units of analysis helps to avoid individualist and privatized accounts of the role of citizen-consumers in environmental change, while making possible a comprehensive analysis of the relationship between the personal and the planetary in the process of greening everyday life consumption.

Keywords: citizen-consumers; social practices; sustainable consumption; lifestyle-politics; globalization

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1. Introduction

With the expected intensification of climate policies, the active engagement of citizen-consumers with climate change becomes an important theme for both researchers and policy-makers. So far, the role of human agents as co-makers of change has been conceived of primarily in terms of individual

human actors trying to change their individual lifestyles and consumption behaviors, with the use of information provided by the government and environmental NGOs. The shortcomings of this model have become apparent, especially with the globalization of consumption. This has resulted in efforts to develop alternative models that emphasize the link between individual and global processes of (climate) change. By drawing on, as yet, separate bodies of literature, we introduce three ideal type roles for citizen-consumers in global environmental or climate change. The different roles are connected to different forms of environmental authority, as mobilized and drawn upon by human agents when engaging with global change: moral authority (as expressed in life-politics), political authority (as connected to ecological citizenship), and market authority (as used in forms of political consumerism). All three modes of environmental authority can be shown to be affected in specific ways by processes of globalization, resulting in distinctive ways of connecting the "personal and the planetary".

In the second part of the article, we discuss the three ideal-type [1] roles in the context of the process of greening the situated practices of globalizing consumption. We suggest distinguishing between different modes of "appropriation" and "provision" of (socio-technological) environmental innovations developed with reference to specific social practices in a number of consumption domains (housing, mobility, food, leisure, clothing, and personal care). When investigating processes of the provision and appropriation of environmental innovations at the level of situated practices within the different consumption domains, it can be shown that humans are key agents of change, in a number of circumscribed ways, for the greening of consumption practices. Human agency or subjectivity is also key to explaining environmental change when—due to globalization—the (green) provision of social practices is organized by "distant others," with the help of a lot of technological and infrastructural elements co-constituting the practices. The concepts of life-politics, political consumerism, and ecological citizenship help are useful for discussing the agency-structure topic because they highlight citizen-consumers' different modes of involvement with the greening of globalizing consumption.

The concept of globalization is used in the title of the article as an adjective for modernization. By using the concept in this way, we refer to globalization in its most abstract or generalized form. Globalization is regarded both as cause and as consequence of the switch-over from "simple" to "reflexive" modernity. Building upon the sociology of globalization as developed by Anthony Giddens, Manuel Castells, Ulrich Beck, Saskia Sassen, and John Urry, we use the concept to indicate a transformation within all the major institutions of modernity since the late 1980's. While documented particularly with respect to the institutions of (nation) states and markets, the application of the concept to civil society and its practices of consumption are of more recent origin. This application is less well developed theoretically. By exploring global environmental change on the level of situated consumption practices as well, and by looking into the different forms of engagement with global environmental change that are open to citizen-consumers, we intend to contribute to the sociological literature of globalization in a direct and meaningful way.

Outline of the Article

We will first introduce the three ideal-type forms of commitment for citizen-consumers with respect to global (environmental) change: ecological citizenship, political consumerism, and life (style) politics. By reflecting on the power of human agents in the context of both globalizing politics and

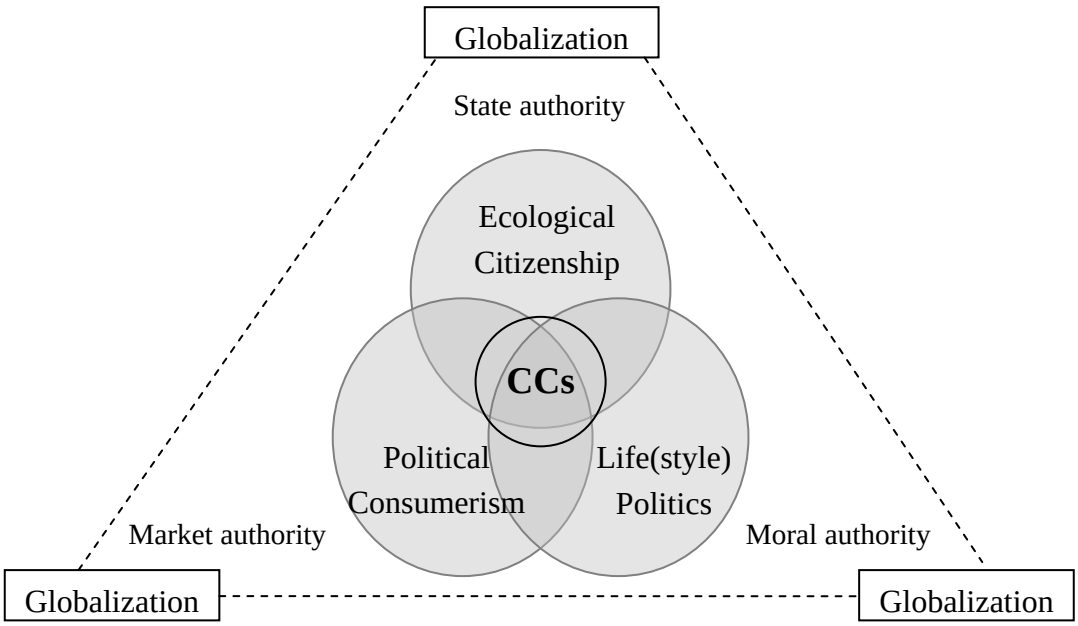
markets, we aim to provide a first formulation of a more systematic sociological treatment of the role of citizen-consumers as agents of change in global or reflexive modernity. We elaborate, in some detail, on lifestyle politics as the politics of practices, introducing formal concepts, which might help bridge the often witnessed gap between the politics of the individual and of public affairs. We then go on in section three to make use of our typology when analyzing the role of human agents in the process of changing everyday practices of consumption. We argue that within the recently established "sociology of practices", the topic of agency *versus* (technological) objects and infrastructure is still a matter of considerable debate. In response to the apparent neglect of the role of technology in earlier formulations of practice theory, the more recent theories of practices tend to emphasize the role of objects, technologies, and infrastructures in the structuring of social practices of consumption. However, the formulations of practice theory, as offered by Schatzki, Reckwitz, Shove, and other sociologists of everyday life, allow for this emphasis on technology and infrastructure to go together with the recognition of the crucial meaning of agency and subjectivity. The conceptual and empirical task ahead for practice theorists then, so we argue, is to show that the agency and subjectivity of citizen-consumers are indispensable elements of both social theory, and also (climate change) policy, in the era of globalization. Agency is also constitutive for practices, when the chains, infrastructures, and networks involved in the green provisioning of "local" practices take on global reach. The typology of ecological citizenship, political consumerism, and life-politics is used to pinpoint, in more detail, the impacts of globalization on everyday life consumption practices and the different ways in which citizen-consumers can become engaged with global environmental change.

2. Political Roles for Citizen-Consumer in Global Modernity: Three Ideal-Types [2]

As Ulrich Beck has made clear in a number of essays, politics in the 21st century are different from the politics of the post Second World War period [3-6]. The crucial difference, between politics in "simple" (pre-Chernobyl) and "reflexive" (post-Chernobyl) modernity, has to do with the pervasive impact of globalization. Firstly, due to globalization, the interrelations between the economy, politics, and civil society have changed. As a result of the more frequent and intense interpenetration of states, markets, and civil societies, the neat distinction between "citizens" *versus* "consumers" has been dissolved. Secondly, the roles of nation-states in national and international politics have to be especially reconsidered in the context of reflexive modernity. In a global network society, [7] states are no longer able to manage the flows of peoples, ideas, and risks in ways that are similar to the period directly following the Second World War. Politics and "authority" [8] in reflexive modernity are deterritorialized and denationalized in fundamental and irreversible ways. Additionally, their primary tasks and responsibilities have changed. Thus, thirdly, instead of managing the distribution of "goods" in the context of emerging national welfare states, the key challenges and tasks for politics in reflexive modernity have to do with the distribution of global "bads". In particular, politics has to deal with the environmental, financial, and health and safety risks, which cross-cut and perforate national borders. Instead of regulating access to (economic) resources, the regulation of exposure to global (environmental) risks becomes the key challenge for politics at different levels, from the regional up to the global.

It is against this background of the changing nature of politics in global or reflexive modernity that we have to discuss the different roles that individual human agents can adopt, or get assigned, in processes of social and political change. Discussing environmental and climate politics from the perspective of citizen-consumers is necessary; the analyses offered by leading sociologists like Beck, Baumann, Castells, or Sassen do not dive deep into the potential roles of citizen-consumers as agents of change for sustainable development. The three ideal-type roles we offer as an analytical tool—illustrated in Figure 1—refer to different forms of authority, which can be mobilized and used as legitimate sources of power, while at the same time, can emphasize different dimensions of the role of citizen-consumers (CC's) in the processes of environmental change [9]. At the outer circle, it is indicated that globalization is the key constitutive factor—the attractor—in the present phase of reflexive modernity; globalization affects all three roles in specific ways. In sociology and the political sciences, we only recently started to single out the different perspectives on, and dimensions of, the globalization process [10]. While the globalization of markets, with hindsight, has been accepted rather easily, at an early stage, and without much theoretical debate [11], the globalization of politics triggered major debates in political science and sociology, especially with respect to the role of the nation-state in (not) being able to manage (climate) change [5,12-14]. Compared to the huge interest in mapping out and understanding the consequences for nation-states resulting from the "shift from government to governance", the globalization of civil society only recently started to receive proper theoretical attention in the social sciences [15,16]. Discussing the role of "moral authority" and "lifestyle politics" in processes of global (environmental) change is expected to result in a more nuanced picture, with respect to the different forms of environmental authority that emerge next to, and partly beyond, the traditional forms of state authority.

Figure 1. The three ideal-type forms of engagement for Citizen-Consumers (CCs) with respect to (environmental) change in reflexive modernity.



When (re)viewed at the general level, social scientific debates on globalization can be said to amply illustrate the huge impacts of globalization as an "attractor" for change, while documenting the increasing importance of market- and civil society-based forms of authority next to the classical form of state authority. Since the debates proceed on the level of institutional analysis in particular, the sociological and political science literature on globalization has much less to offer when it comes to analyzing the ways in which globalization affects human agents, their life-worlds, and their everyday practices of consumption. The three bodies of literature we draw upon to develop our ideal-type roles for addressing and engaging the citizen-consumer with global (climate) change are not well established with respect to this theme, and show considerable inconsistencies and forms of overlap. What is presented here must be read as a first attempt to identify some of the conceptual and substantive issues that need to be addressed in order to develop a social science perspective on the role of human agents in the policies and politics of global (climate) change.

2.1. Ecological Citizenship

Ecological citizenship is close to the existing concept of citizenship that is used in political science literature [12]. Andrew Dobson and colleagues [17,18], especially, have made substantial contributions to the discussion of citizenship rights and responsibilities, from the perspective of sustainable development. In the debates initiated by Dobson, the concepts of ecological or environmental citizenship are defined in a very broad way. Ecological citizenship is taken to refer not just to the public debate and the publicly defined roles for citizens in sustainable development, but is also said to embrace the attitudes and motives of individuals for behaving more sustainably, in both the public and private spheres of the market. Issues, which are normally discussed under the heading of "green consumption" and "the changing of attitudes and behaviors," are brought together under the umbrella of environmental citizenship [18]. By bringing together politically defined public roles for citizens on the one hand, and the moral/ethical considerations and motives of individuals on the other, there is the danger of losing sight of the different forms of (environmental) authority which can be mobilized and the different dynamics of change they refer to.

Our suggested usage of the concept of ecological citizenship remains a bit closer to the circumscribed meaning attributed to the concept of "citizenship" in the political sciences. Ecological citizenship refers primarily to the participation of citizens in, and their orientations toward, political discourses on sustainable development. Ecological citizenship then focuses primarily on the overt and explicit ecological commitments of citizen-consumers in the political sphere. In the context of this societal, public discourse, the rights and responsibilities, or duties [19], of citizens vis-à-vis the (nation) state, are debated and defined [12]. Citizenship refers to the set of elementary membership rights of the (state) community, which are equal for all individual members [20]. Citizens (rightly) demand to be free from the environmental risks inflicted on them by others, from inside or outside the territory of the nation-state(s) they belong to. They argue for "environmental security" in a similar vein as implied in the debates on national security. Citizens also demand a good quality of life in terms of a safe and clean living environment for themselves and their children. Citizens demand transparency and openness of information with regard to major political decisions affecting their lifestyles, *etc.*

In the field of environmental politics, there was no need for a 9/11 event to make citizens aware of the fact that nation-states alone, or by themselves, cannot guarantee environmental security or deal effectively with, for example, climate risks. Cross bordering pollution and global environmental risks have been at the center of environmental politics for a considerable time [3]. Ecological citizenship has already gone through a process of denationalization, or deterritorialization since the 1980s. The fact that many citizen-consumers do not perceive transnational ecological citizenship rights and responsibilities as such, has to do with the neglect in the political discourse on these new forms of "post-national or cosmopolitan citizenship" [5,8]. As a result, major groups of citizens do not feel empowered by the process of transnationalization and globalization of climate politics, but instead, experience a lack of trust in the institutions connected to the regular, emancipatory politics at the levels beyond the nation-state. The erosion of trust in, for example, the European Union, as witnessed from the debates and referenda in the Netherlands, Denmark, and France, with respect to the European Constitution and its successor, the Lisbon-treaty, can be offered as an illustration. Major parts of the European citizenry do not feel or act as "European citizens", even when environmental and climate change politics are established at the level of the European Union to a considerable extent [21]. Also, environmental NGOs have been slow in recognizing and organizing new forms of ecological citizenship at transnational levels, partly since they feared that the denationalization of environmental politics would result in lower levels of environmental protection/security.

However, post-national forms of ecological citizenship will most likely gain considerable importance in the near future, strengthened as it is by the upsurge in informational governance, and by the increase of both formal and informal transnational networks for environmental politics and governance [22]. The use of public score cards, internet based mobilizations of environmental activists beyond national borders, and the strengthening of ENGO-networks at international—and even global—levels are just a few examples of the new forms of environmental authority, which can be used by ecologically active citizens. And although the role of non-state actors, especially in the literature on environmental governance, is given pride of place, the key defining characteristic of ecological citizenship has to do with politics. Ecological citizenship refers to the fact that the equal political rights and responsibilities of the members of a "political" community are at stake, and are discussed in the public realm. These rights and responsibilities are supposed to be "guaranteed"—in the first or last instance, in a direct or indirect way—by state-like systems and networks at different levels of scale. Although with globalization, the notion of ecological citizenship becomes multilayered and multidimensional, its core characteristics still refer to politically defined networks in relation to their constituting members.

2.2. Political Consumerism

Whereas ecological citizenship rests upon environmental authority as defined primarily in the public domain, and in relation to the state, political consumerism articulates forms of authority which relate to the private realm of the market and consumption. The role of individuals as agents of change refers primarily to the "authority of the consumer" [23], who uses his or her buying power not just to satisfy needs, but to reveal to the providers of products and services their specific ethical and political preferences as consumers. In the literature on sustainable consumption, the power of the consumer

vis-à-vis producers or providers is generally discussed as being rather limited and insignificant [23,24]. The power of individual consumers, or end-users, is discussed most of the time primarily in terms of a lack of power. This is especially true when transnational companies, which operate in the context of globalized chains and networks of production and consumption, are at stake. Food-consumers, for example, are depicted as captive consumers who tend to fall victim to the power of retailers and major food producing companies [25-27].

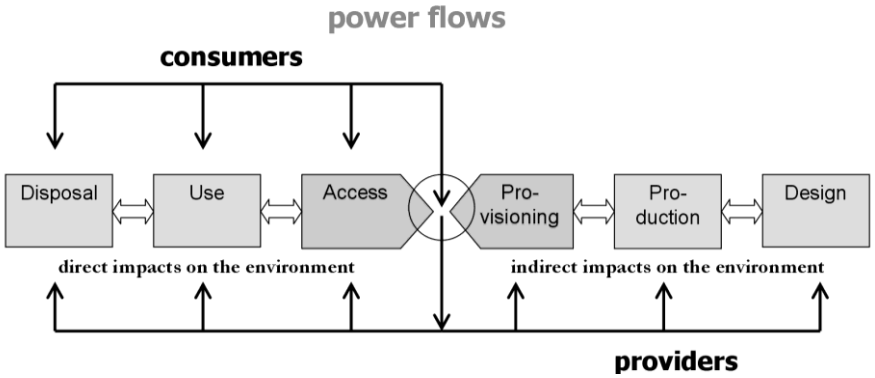
Although consumers are not the powerless victims of transnational corporations, it can be argued that with the globalization of production-consumption chains and networks, the need for consumer-empowerment increases. Actors at the lower end of production-consumption chains and networks have fewer possibilities, under conditions of globalization, of controlling the distant and anonymous providers of products and services [28]. Political scientists draw attention to the need for new forms of power and authority that citizen-consumers can mobilize and use in the context of globalized markets. Michelle Micheletti [29] has been among the first to recognize the importance of new market-based forms of politics, and has investigated them in some depth under the label of "political consumerism" [30]. These more voluntary, *ad hoc* organized, mostly civil society-based forms of (environmental) politics have, as their constitutive characteristic, the fact that they are directed towards upstream actors in globalized production-consumption chains and networks. Political consumerism refers to all the political forms that connect the environmental activities of upstream economic actors, of production-consumption chains and networks, more directly and visibly with the interests and activities of citizen-consumers at the lower end of these chains and networks, and vice versa.

Figure 2 displays the relationships of power between actors at the upstream and downstream ends of production-consumption chains and networks. It visualizes the concept of "environmental power," which—in the tradition of Weber—could be defined as "the capacity of social actors to reduce the environmental impacts of consumption and production where these impacts are directly connected to sets of practices predominantly under the control of other actors". In reflexive modernity, due to the massive impacts of globalization, these "other actors" are more and more often also "distant" and "absent" actors that citizen-consumers do not know first-hand, and with whom said consumers do not interact with on a face to face basis. As Barnett *et al.* [31] show in a convincing way, the need for consumer empowerment and the urge for developing instruments and arrangements supporting the exertion of environmental powers from the side of human agents is directly rooted in the process of globalization. This need becomes visible in the stretching of production-consumption chains and networks over increasing spans of time and space. In the environmental literature, the concepts of "direct" and "indirect" environmental impacts are used to refer to situations in which environmental performance is under the control of actors in the downstream (consumer or end-user determined) and upstream (provider dominated) ends of production consumption chains and networks, respectively. With increasing globalization, the concept of "indirect" takes on a specific meaning, relating as well to the distance between practices of production and provision on the one hand, and practices of consumption and appropriation on the other.

To analyze and discuss market-based forms of consumer-based politics, the label "political" consumerism is preferred over "ethical" consumerism to emphasize the fact that these low-entry forms of (environmental) politics also have to be organized so as to gain extra legitimacy and authority. Then,

a liaison can be realized, with state environmental authorities at different levels of scale. The main and frequently discussed examples within this category are environmental labeling and certification schemes, and related forms of consumer boycotts of sustainable products and services made available by (green) providers. As can be concluded from the studies on FSC, MSC, and Fairtrade labels, in particular [28,32,33], citizen-consumers' buying power is becoming an increasingly relevant source of power that is used for political purposes. This insight is recognized and worked upon by very diverse networks, which cover actors and interests from civil society, the market, and the state.

Figure 2. Relative power of consumers and providers in influencing the (in)direct environmental impacts within globalizing production-consumption chains and networks [34].



Whereas the FSC-labeling scheme is regarded as environmental NGO-initiated and dominated, the driving forces behind the MSC-label came from industry. Political consumerism is important for green providers, since it helps create and sustain "level playing fields" for green industries and products. While sometimes being organized and stimulated by the providers of green products and services, political consumerism, most of the time, originates from ENGOs, which try to mobilize citizen-consumers for environmental change [35]. In political consumerism, the un-focused concerns of citizen-consumers for sustainability become articulated, translated, and directed to providers in production-consumption chains, giving citizen-consumers authority and power in a non-trivial way. Due to the globalization of production-consumption networks, the role of trust (in distant providers, in invisible technologies, and in complex and diverse information flows) gains special importance in this respect [36]. Environmental NGOs again have a crucial role to play in this "economy of trust", since they are regarded by citizen-consumers as the most reliable and successful trust-enhancing mediators between market actors and citizen-consumers.

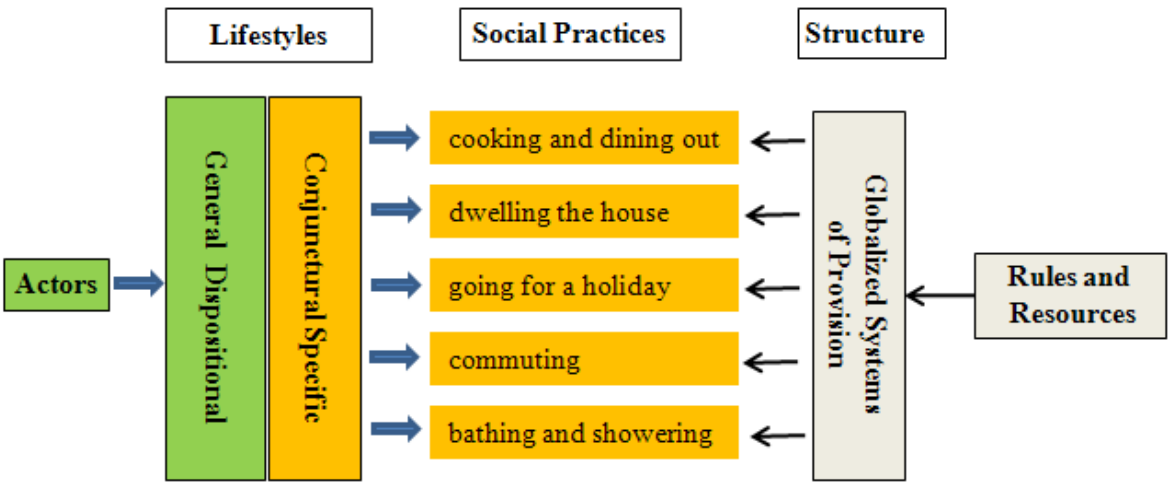
2.3. Life(Style) Politics

Where ecological citizenship comes closest to politics—and political consumerism refers to power relations in market contexts in particular—lifestyle politics are primarily about civil society actors and about dynamics of change, which go beyond states and markets. Life-politics are the politics of the life-world, and as such, are directly connected to the morals and choices that are implied in our ordinary (consumption) routines. Because, as Bauman has noted, "lifestyles boil down almost entirely

to styles of consumption" [37], we also see lifestyle politics and consumption as being very much interwoven at the micro-level of our everyday lives.

When living their daily lives in reflexive modernity, individuals are confronted with the impacts of globalization in a direct and concrete manner. The food we eat, the clothes we wear, and the cars we drive, come from systems of provision that, by now, have global reach. When considering the aspects of sustainability, with respect to products and services, in terms of geographical distance, traceability, and the social and ecological conditions of their production and distribution, we become aware of the massive impacts of globalization on production and consumption. It is because of the globalization of consumption that life-politics can be said to connect the personal to the planetary in a direct, unmediated way in the present phase of modernity. While it is true that life (style) politics are about private, personal, and individual morals, commitments, and responsibilities, it is important to note that lifestyle politics do not favor automatically, or exclusively, "individualist" notions of politics and consumer-empowerment. They are "individualist" policies in a very specific, circumscribed way. The concept of lifestyle, as used by Anthony Giddens, refers to the cluster of habits and story lines that result from an individual's participation in a set of everyday life routines that they share with others (Figure 3). Every citizen-consumer can be characterized by his or her unique combination of shared practices, the level of integration of these practices, and the story-lines that he or she connects to these practices [38]. Being a competent member of society in our global consumption culture means being able to find your way through the set of consumption practices that make up our everyday lives.

Figure 3. General dispositional and conjunctural specific elements of lifestyles.



Following Rob Stones [39] in this respect, we distinguish between a general dispositional dimension of the lifestyle of actors on the one hand, and a conjunctural specific dimension on the other (see Figure 3). The general dispositional dimension of the lifestyle consists of the foundational principles that specific actors adhere to, and which they use, throughout a number of behavioral contexts. As such, the concept resembles the concept of "attitude", as used in the sociopsychological tradition of research on (environmental) behaviors, and particularly on sustainable consumption [40-42]. The conjunctural, specific dimension of the lifestyle of actors refers to, and is connected with, the specific set of practices these actors embrace in everyday life. The rules and resources—or values and dispositions—operational in this dimension of the lifestyle are (tacitly) followed, reproduced, and

altered in the context of social practices, which actors share with other actors. By outlining and defining two dimensions of lifestyles in this specific way, it is possible to connect the "individual" to "the social" in a theoretically meaningful way without lapsing into individualist explanations of consumption behavior.

Lifestyle politics then refer to the ways in which (groups of) individuals, at some points in time (especially when confronted with sudden changes, challenges, or fatal moments), are made to reflect on their everyday lives and the narratives attached to those lives. The sources of de-routinization, and the ensuing discursive reflections, can be located either in personal, private life (divorce, illness) or can be rooted in wider social and political processes (BSE-food crisis, financial crisis). De-routinization of practices, so we argue, can (be made to) happen both at the level of the individual, and at the level of social practices. The direct consequences of agents reflexively (re)considering their existing behaviors and narratives will, most of the times, pertain to both the level of the individuals as well as to the practices involved.

Lifestyle politics are important for sustainable consumption policies primarily because they deal with individual affairs without disconnecting the private and the personal from the public and the global. If separate waste collection is well organized at home and engraved into the lifestyle of the individual, he or she will be disturbed, upset, and de-routinized when the infrastructure for waste separation turns out to be lacking in the office, at the railway station, or at the campsite. Conversely, when employers make a sustainable option for commuters available at work, they can seek to deliberately optimize the green mobility mix in such a way that actors start using this mobility mix also at home, for their private and family related mobilities [43]. Research concerning these different mechanisms of spillover is just in its infancy and makes us aware of some of the complexities involved [44,45]. Research on lifestyle politics, in both the sociopsychological and sociological traditions, seeks to highlight the ways in which actors interpret and make sense of the globalization of everyday life consumption practices, their ways of dealing with innovations in practices, and their handling of the inconsistencies that might emerge between the principles and dynamics that are operational at the different segments of their lifestyles e.g., within the different social practices they are involved in. These developments have to be given a place in the narrative of the self, which goes along with the lifestyle of the actor. When interpreting the globalization of consumption practices and when (re)framing the personal narrative against the background of (also globally rooted) social innovations, the personal is reflexively connected to the global in an ongoing process. This interplay between individual and private matters and dynamics on the one hand and the shared, public matters on the other, are central to the discussion in the next section.

3. Changing Consumption Practices: The Role of Citizen-Consumers

Through a series of both national and international research projects in different European countries, a distinct sociological approach to consumption behavior has gradually been established over the past ten to fifteen years [46]. Although it seems as yet too early and ambitious to refer to these studies as constituting a new paradigm for studying (consumption) behaviors, we are dealing with a coherent set of alternative assumptions for studying behavioral changes. These are assumptions and research questions, which seek to find a "third way" in between an individualist paradigm (economics, social

psychology) on the one hand, and a (technological) system paradigm (structuralist sociology) on the other. This third way is labeled the (social) practice approach to (consumption) behavior and its main theoretical roots are in (different formulations of) structuration theory, as developed within sociology in particular [47-55].

While researchers involved in developing the new practice approach agree on many key issues (for example, the need for a comparative, historical approach; the use of qualitative next to quantitative research methodologies; the use of practices as the most important units of analysis for empirical research and as the relevant level for policy interventions), the discussion on the role of citizen-consumers as agents of change is still a matter of considerable debate. For some, the emphasis on citizen-consumers and their lifestyles means a regression to the individualist paradigm and the concomitant neglect of the pervasive impact of structure or context, while for others, the discussion on human agency in environmental change is the litmus test for the new paradigm as the alternative to the deterministic outlook of classical system theory thinking. It is our contention that the controversial status of agency in practice theory, as presently applied within environmental social sciences in particular, has to do with two issues, which deserve further theoretical elaboration: (i) the nature of the interplay between agents and objects in general and (ii) the effects that globalizing systems of provision have on the interplay between modes of provision and modes of appropriation of socio-technical innovations.

3.1. Agency, Objects, and Technological Infrastructures

In the school of STS (Science and Technology Studies), and also more recently in transition studies [56-58], the emphasis is on analyzing the dynamics of technological systems and their pervasive influence on social change. Because of the history and the specific development-paths of socio-technical systems, like the electricity system, the sewage system, or the mobility system, human agents tend to become locked-in in many different ways at different levels of scale [59,60]. For predicting and analyzing the future development of these systems, the existing hardware configurations—the physical, infrastructural networks of pipes, cables and their concomitant regulations and norms—are said to have the most pervasive and determining impact. To analyze possible transitions into new system configurations, the complex, institutional dynamics of the technological systems are the first and most important starting point. Human agents and human agency are “locked in” into these systems and analyzed, for example, in terms of “hybrids” [61,62]. Hybrid systems are constituted by objects and human agents as mutually dependent units, which both exert “agency” in terms of being able to exert influence over the future courses of actions of socio-technical systems. Because most socio-technological systems nowadays are global in reach and display dynamics of change, which are non-linear in character, and which are only to be understood with the help of complexity sciences, the relative impact of agents is (much) less, when compared to the impact of clustered objects as organized into networks and scapes of global reach [61-64]. This general approach to agency and technology, as based on the work of Bruno Latour [65] in particular, and elaborated upon within general sociology by John Urry amongst others, implies a challenge to the “actor centered” bias of structuration theories.

Structuration theory, and especially Giddens' formulation of it, is criticized for its neglect of the role of technology and technological networks in analyzing processes of (environmental) change [66]. In response to this criticism, a variant of structuration theory has to be developed, which recognizes the pervasive role of (environmental) technology in social practices, while at the same time, avoiding a technological determinist perspective to social change. We would argue that such a reformulation of structuration theory can be found in the works of Theodore Schatzki [67,68], Allan Warde [48,49], and Andreas Reckwitz [69,70]. We will shortly present their basic ideas on agency and technology, using the work of Andreas Reckwitz as an entry point.

Structuration theory was developed historically in parallel to Actor Network Theory (ANT), and neither Giddens nor Latour reacted upon each other's innovative, conceptual work in any particular way. This is because since the 1980's, the impact of (IC) technologies has proved to be profound and lasting, especially because of the globalization of socio-technical systems. Thus, Reckwitz sets himself the task of elaborating the role of technology in the context of a social practices approach. By building upon the work of Schatzki in particular, he argues for the need to reconcile a strong emphasis on the (autonomous impact of the) role of technology with the structurationists' key assumption of human agency as being the ultimate factor for making a difference in the world. He argues that the key role and status of objects and material worlds must be "restored" after having been removed from central stage in sociology as the result of the cultural or linguistic turn brought about by the work of Wittgenstein in particular. The impact of things in the social order must be fully recognized and conceptualized, not just in terms of representations, or as things that are assigned and attributed meaning to by human agents. The impacts and effects of the objects themselves, the role of inter-objectivity next to inter-subjectivity, and the idea of objects being "constitutive" for social practices all have to be considered and conceptualized in more detail.

Reckwitz proposes to complement Schatzki's work with Latour's idea of the equally important constitutive role of things for social practices: "things handled" are as important for theories of social practices as "minds/bodies performing", so he argues. In fact, he contends, "one can say that both the human bodies/minds and the artifacts provide 'requirements' necessary to a practice" [70]. Without things, objects and artifacts, there is no social practice. The crucial role of things and their use for social practices is expressed in one of the most elaborate definitions of the concept of social practices, as it is provided by Reckwitz and cited by Warde with great consent. Social practices are: "a routinized type of behavior which consist of several elements, interconnected to one other: forms of bodily activities, forms of mental activities, 'things and their use', a background knowledge in the form of understanding, know-how, states of emotion and motivational knowledge" [48,69] (italics added).

We have been elaborating upon the Reckwitz formulation of the material dimension of social practices, since we hold his account of theories of social practices as being the closest to ANT as possible without violating one of the most cherished assumptions of theories of practices: The crucial importance of the role of knowledgeable and capable agents in shaping social life. Reckwitz assigns greater analytical power to objects and technology without embracing the ANT-based idea that objects and things 'act' in a similar way as human agents.

When translated to empirical research, a number of consequences can be derived from the above. First, things or objects, as they are involved in orders and practices, do not come in isolation but—to use a key phrase of Schatzki—they do "hang together" in specific ways. This means that lock-in

mechanisms and other inertia usually ascribed to existing technologies and technological infrastructures can and must be analyzed as explicit forms of interdependencies between human agents and physical, material objects. Within the different types of relationships distinguished by Schatzki, especially the "prefigurational relationships" are interesting for studying environmental change [71]. These relations refer to the kind of future figurations that are particularly feasible and possible, given the existing state of affairs. For example when new objects or technologies are entering the practices, they can display a different level of "fit" or "misfit" with regard to the existing order of things. The successful introduction of new products entering social practices thereby comes to depend, not just on the "mental" appropriation of the product by human agents, but equally so on the level of fit or misfit the new products show, with respect to the existing portfolio's of objects involved in the social practice. Therefore, the portfolios, their specific formats, and modes of provision and appropriation actively set conditions for, and help shape, the incorporation of new products and services into social practices.

Elizabeth Shove [52,54,72] has been one of the few sociologists so far who has been exploring the impact of (also environmental) technologies in everyday life from a sociological, social practice based perspective. In her *Comfort, Cleanliness and Convenience* (2003) book, she discusses the co-evolution of practices, norms and technologies [53]. She illustrates the sometimes pervasive and autonomous influence of technologies on social practices by analyzing innovations in doing the laundry, showering, cooling, and heating [73]. Also, in the Dutch CONTRAST research programs [74], a number of ordinary social practices within different consumption domains (housing, food, mobility, travel, and clothing) are put at the center of analyses. In this project, the emphasis is on the role of citizen-consumers as change-agents and on the different ways in which they engage themselves (or not) with environmental innovations.

By building upon this "technology and everyday life"—research tradition, it must be possible to bring the analysis of agency and technology beyond the existing, rather deterministic variants of STS and transition studies on the one hand, and the voluntarist theories of the "adoption of innovations" on the other. Sociological analyses investigating at the level of social practices the fits and misfits of new ideas and technologies with the existing portfolios and socio-technical regimes are able to emphasize prefiguration, ratcheting, lock-in mechanisms, hybrids, and tipping points, while at the same time recognizing the active, constitutive role of human beings as the only real "agents of change" within social practices.

3.2. Globalizing Modes of Provision and Corresponding Modes of Appropriation

With Urry and Castells, the new emphasis on globalizing dynamics shaping reflexive modernity is framed in a particularly theoretical manner, which leaves little room for a detailed analysis of the diverging ways in which the new dynamics of globalization impact the everyday lives of citizen-consumers. With Castells, the interplay between actors and dynamics, in the space of flows, and in the space of place, is caught in a very general framework. For Urry, the power of globalization as a dominant and strong attractor, in the end, shapes social life in a direct and forceful way, leaving human actors relatively powerless when compared to the dynamics of the global socio-technical networks and scapes that they are part of [64,75,76]. As a result, both sociologists of the global

network society have little to offer when it comes to providing analytical tools for investigating the role of citizen-consumers as agents of change in the process of sustainable development. We aim to make a first start with this analysis, by building upon the ideal type roles discussed above and by using the greening of everyday life consumption practices as an empirical example.

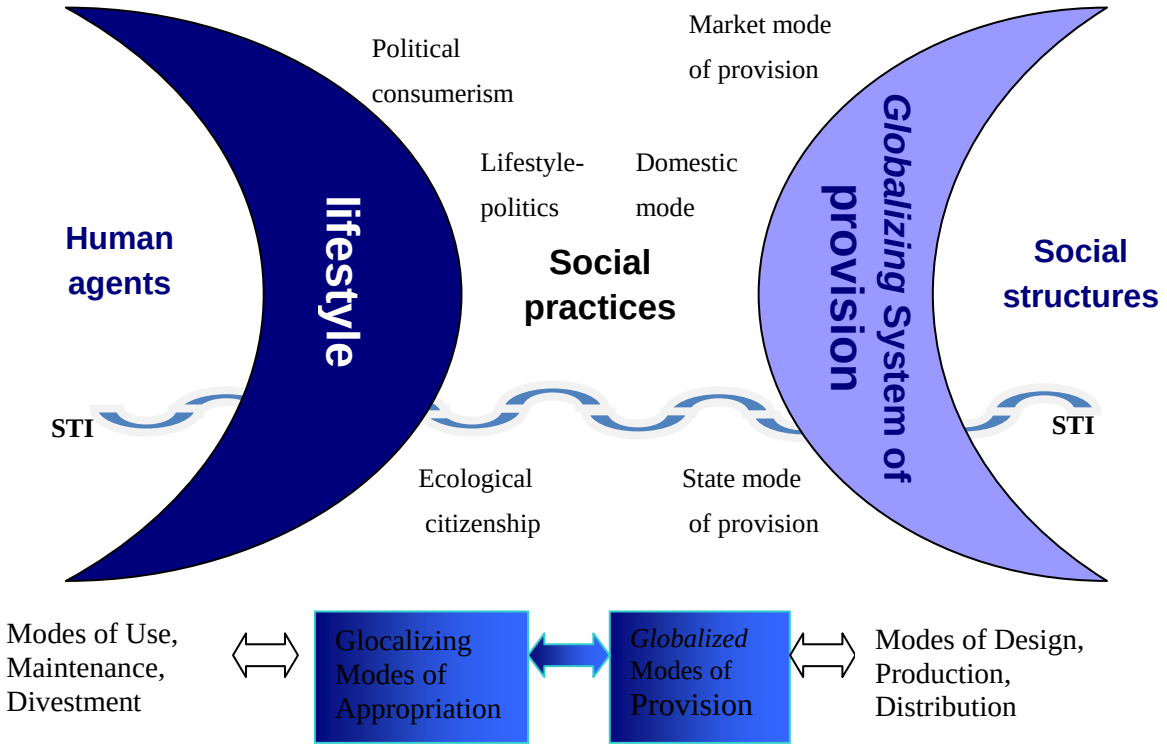
The different ideal-type roles of human agents in (environmental) change, as yet, have not been distinguished sufficiently in relation to the different modes of provision connected to social practices. When Figure 4 can be said to depict the basic outline of a practice approach to social change, the origins of change in social practices—represented by the flows of socio-technical innovations (STIs)—are shown to be rooted in systems of provision, in lifestyles, or in both at the same time. When discussing the ways in which systems of provision are "serving" social practices with (environmental) innovations, we adopt the distinction between three basic modalities of provision, as introduced by Alan Warde in his sociology of consumption: the market mode, the state-mode, and the domestic mode of provision [77,78]. As discussed in the next section, all three modes are affected by the globalization process in a particular way, producing different images of globalization, while emphasizing the different actors and dynamics that have key roles in the process. We think this analysis of the globalization of modes of provision can be complemented with an analysis of their impacts on the ways of appropriation and on use, from the side of citizen-consumers. When thinking about the specific roles of human actors in processes of (environmental) change, in situated practices of consumption, it is not difficult to relate the globalizing modalities of provision to the three dimensions of (environmental) authority we introduced as organizing the different roles of citizen-consumers in global environmental change in general [79]. Following structuration theory in this respect, human agents, in order to make possible the reproduction of everyday life consumption routines, "have to" appropriate the ideas and objects implied in consumption practices and as being put forward by providers using a particular modality of provision. Different modes of appropriation tend to go together with different modes of globalizing systems of provision as shown in Figure 4.

When innovation in practices is organized primarily via state provision, the appeals on human actors as agents of change will be primarily framed in terms of ecological citizenship rights and responsibilities. Examples are the sustainable housing policies initiated by national and local state authorities, or the introduction of congestion charge policies in inner cities. Within this mode of provision, the principle of equal access to ideas, objects, technologies, and risks for all the members of the community is among the leading principles of provision. The concept of "collective consumption" very well expresses this idea of publicly discussed and defined equal rights and responsibilities. We would argue that when reflecting upon the impact of globalization in this respect, the denationalization and deterritorialization of former nation-state policies tends to affect the modes of appropriation in a number of ways, such that further specification is needed through empirical research. Does it make a difference when conventional light-bulbs are banned by the EU or by the national government? Is there a local, regional, or global policy arrangement and rationale behind the introduction of the Personal Carbon Allowances, e.g., on what "collective community" do we base our figures on average climate impacts, *etc.*

Since the 1980's, in European countries in particular, the state mode of provision in several sectors had to give way to the market mode of provision. With the market mode of provision gaining prominence, political consumerism, as its corresponding mode of appropriation, became more

important, especially in the provision of energy, water, and waste services [54,80]. It is beyond doubt that the privatization and liberalization wave of the 1980s and 1990s has added to the acceleration not just of globalized production, but to the globalization of consumption practices as well. A prototypical example of globalized market provision can be found in the retail organized distribution of (green) products and services in the food sector. In the retail-organized process of the greening of shopping practices, a hierarchy of qualities is offered to lifestyle groups of consumers who differ not just in taste, but in income as well. Consumers are differently empowered with the help of a wide range of market-based instruments of change, and they tend to respond to these instruments in different ways [81,82]. When looking at key themes in the food discourse of OECD countries—carbon labeling, food-miles, and the upscaling of fair-trade products—it is obvious that our daily practices of handling food have become globalized, with the market mode of provision as the most important mediator.

Figure 4. Globalizing modes of provision and the appropriation of socio-technical innovations (STI) within social practices.



Thirdly, in the domestic or informal mode of provision, the civil society based forms of lifestyle politics are put to work in the context of production-consumption chains and networks, which take on some (radically) different characteristics when compared to mainstream markets. The most discussed examples here are "farmers markets" and "short supply chains" in the food sector and in particular, the different versions of LET-systems that organize local informal networks. At the global level, the Fairtrade model can be argued to offer an illustration of an informal mode of provision in this respect [83].

4. Conclusions

The main aim of this article has been to develop a sociological account of the involvement of (groups of) citizen-consumers in global environmental change in such a way that one-side individualist or determinist approaches are avoided. The practice approaches, as developed in sociology since the 1970s, offer a fruitful starting point for such an effort because they combine a focus on agency and subjectivity with the recognition that structures are inherent to practices. While sharing a recognition of the co-determination of practices by meaning, intentions, bodies, objects, and technologies, authors within the school of practice theory assign different analytical weight to agency and subjectivity when accounting for change in socio-technical systems, regimes, and practices. Agency is particularly under pressure when the globalization of social and technical relations, in the context of the emerging network society, is discussed. Is it still possible to assign analytical weight to agency at the "site of the social" [68], now that the scapes and networks underpinning our daily lives are increasingly organized within the space of flows, at global levels of scale? We tried to cope with these issues in two ways. First, we developed a typology of citizen-consumer involvement with global environmental change in general, drawing together insights from different bodies of sociological, sociopsychological, and political science literature. Second, we explored the applicability of ideal-type roles of citizen-consumers as agents of change when analyzing the greening of consumption practices under the conditions of globalizing modernity. We asked ourselves, "How can commitments of citizen-consumers, with changes in everyday life consumption routines, be connected to the 'wider influences of globalization'?" We suggested specifying this general question by looking at the different modes of globalizing provision that are connected to situated consumption practices. In the state mode of provision, ecological citizenship is suggested as the prime analytical perspective from which to explore the ways in which (organized groups of) citizen consumers deal with globalizing provisioning and its consequences for the local/situated consumption practices that such provisioning helps constitute. In a similar vein, political consumerism is offered as the appropriate starting point for discussing the commitments and the potential for consumer power and control when dealing with forms of market provision in the context of globalizing markets. Finally, the concept of life-politics, as introduced by Giddens, is offered as providing the most generalized account of the ways in which citizen-consumers, as moral agents operating in the sphere of civil society, contribute to the discourse on sustainable development, referring to modes of provisioning and access which are primarily—but not exclusively—within the sphere of domestic provision.

When using all three forms of engagement of citizen-consumers with environmental change in practices in relation to the different modalities of globalizing provision, we think a more inclusive picture of the role of citizen-consumers in global environmental change will result. The globalizing systems and modes of provision are confronted by citizen-consumers with localized modes of appropriation, resulting in mixtures of local and global dynamics at play in the reproduction of the situated consumption practices of everyday life. Improving citizen-consumer involvement in the state mode of provision will result in a further democratization of (post-national) environmental policies, from the local Agenda 21 levels, up to the regional (EU), and global levels of politics. Increasing the impact of political consumerism in global environmental change means getting consumers actively engaged with the upstream processes and with decisions previously left only, or primarily, to global

market actors. Enhancing the politics of lifestyle change that result from and feed the greening of everyday life consumption practices will release the politics of greening consumption from their individualist image. When "moral selving" about sustainable consumption is put in the context of broader changes in both globalizing markets and politics [31], the personal and the planetary can be connected in a non-trivial, political manner indeed.

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