

Article

## Self-Organisation and the Co-Production of Governance: The Challenge of Local Responses to Climate Change

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### Abstract

The arena of locally embedded and engendered responses to climate change offers a particularly fruitful and challenging space in which to scrutinise the encounters between established forms of governance and knowledge as they become entwined with locally generated forms of self-organisation. The issue of climate change offers a particularly fertile case for study because to date it has largely been dominated by state and market-based responses and associated forms of governance selectively articulated with knowledge generated through scientific and expert modes of knowledge. The central focus of the article is on identifying the variegated forms of understanding associated with the groups we researched and how they drew upon/utilised knowledge (knowledge-in-action) vis-à-vis the governance of ecological politics and environmental governance. The article draws on case studies of self-organising locally based groups in Germany, the Netherlands and the United Kingdom that are addressing climate change, in a broad sense, within their locality. These groups represent a range of responses to the issue and associated modes of action, exhibit different levels and forms of ‘organisation’ and may challenge more established forms of governance and knowledge in different ways.

### Keywords

climate change; comparative; governance; Q-Sort method; self-organisation; urban; urban governance

### Issue

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### 1. Introduction

In this article we address the issue of how forms of locally generated self-organisation interact with (or do not) existing forms of state and market-based forms of governance on ecological issues covering a variety of ‘green’ politics like energy supply, agriculture or sustainable communities and neighbourhoods. We deal with the associated knowledge forms they incorporate and establish to co-produce their own knowledge and forms

of governance. In particular we consider how locally embedded and engendered self-organised responses to climate change encounter and interact with, or relate to (perhaps negatively), established forms of governance and knowledge. Our central focus is on identifying the variegated forms of knowledge associated with our groups and how they draw upon/utilise that knowledge (knowledge-in-action) vis-à-vis the governance of ecological politics and environmental governance.

The empirical context for this article draws on the on-going research of the SELFCITY research project.<sup>1</sup> This project explicitly set out to investigate how selected urban and regional place-based forms of self-organisation (cf. Boonstra & Boelens, 2011) develop new forms of ‘collective governance’ and action. We sought to understand how they contribute to the enhancement of innovative societal capacity and the potential for societal transition in the face of climate change.

The article is structured as follows: we first briefly review the literature on self-organisation, governance and knowledge before then moving on to outline the methods used in our research, and finally to consider the implications of our, still incomplete, research for the issues raised above.

## 2. Self-Organisation, Governance and Knowledge

The literature on governance is massive and we cannot review it here, but generally speaking the approach aims to describe and comprehend changes in the process and meaning of governing. The emphasis is on network forms of governance in multi-actor arrangements and processes of self-governing (see Kooiman, 2002, pp. 71–73). From this perspective governance is a means of coordinating social action organised around vertical, horizontal and cooperative mechanisms in contrast to traditional state intervention and control from above. Thus governance signifies alterations in the institutional arrangements for the coordination of action (Newman, 2001, p. 26) and the role of government in this process becomes contingent (Pierre & Stoker, 2002, p. 29). Governance represents a way of organising social action through vertical, horizontal and cooperative mechanisms in contrast to more traditional hierarchical forms such as bureaucracy (Börzel & Risse, 2010; Dardot & Laval, 2013; Rothfuß & Korff, 2015; Shamir, 2008).<sup>2</sup> However, it is important to bear in mind that the concept is used somewhat differently according to national and political contexts and we need to be cognisant of the argument developed by van Kersbergen and van Waarden (2004) that governance offers a linguistic frame of reference in which to understand complex patterns of collective action and associated changing processes of governing that encompasses various forms and procedures for coordinating action (e.g. hierarchical, horizontal).

By contrast focussing on self-organisation may be seen as an approach which seeks to understand notions of social norming, social learning and social change within communities/groups and their forms of organising and acting in response to locally encountered and constructed problems (Seyfang & Smith, 2007). It is a way of institutionalising new social relationships deriving

from (or establishing) a variety of local networks (Atkinson, Dörfler, Hasanov, Rothfuß, & Smith, 2017), which offers potential new pathways for the emergence of ‘alternative forms of governance’. It is achieved through encounters, perhaps of a serendipitous nature, that lead to the identification of mutual interests, positions and relations based on shared knowledge, values and norms (see Mayntz, 2006; Ostrom, 1990; Ostrom, Burger, Field, Norgaard, & Policansky, 1999); in our case about the nature and future chances of tangible sustainable efforts. While Ostrom et al. (1999, p. 278) show the concept itself is not new, particularly when it comes to managing collective (or common-pool) resources, in contrast to their approach we would argue that self-organising is a key element in an open and non-linear process based on and mediated by a mutual intentionality through dynamic micro-level interactions with structural forces that operate as a potential driver for sustainable transformation of societies. Thus, we argue that the emphasis on governments or markets has not produced significant changes in adaptation to a sustainable future in general and more specifically to climate change and that the role(s) of local forms of collective self-organisation have been neglected (see Klein, 2014).

These interactions *may* generate trust derived from newly established individual relationships which, over time and through further interactions, become articulated through collaboration that can create a form of ‘collective intentionality’ (cf. Hasanov & Beaumont, 2016; Searle, 2006). Here trust emerges from repeated reciprocal encounters between people within specific organisational, social and spatial settings and, where this reciprocity occurs, takes on a self-reinforcing character. Self-organisation is therefore the process by which social relations, common in loose networks, are stabilized through the collective definition of mutual interests, positions and aims. This can become an alternative, ‘new’ way of (local) governance based on collective practices ‘in addition to’ or ‘beyond’ existing trajectories of political and social engagements, typical of parties, associations, (voluntary) welfare work, etc. It is based on ‘self-made’ bottom-up policies at a local level, offering the *potential* to influence sub-national intermediates (i.e. those closest to it) of the wider political system.

Self-organisation can take on many different forms as it develops within local contexts in response to locally experienced and defined ‘problems’. Given this, in terms of an attempt to identify an ‘overarching definition’ of self-organisation, we need to exercise caution. There are multiple ways of defining self-organisation that are not necessarily mutually exclusive. Two examples will suffice to illustrate this: Nederhand, Bekkers and Voorberg (2014, p. 2) describe self-organisation as a ‘collective process

<sup>1</sup> SELFCITY (Collective governance, innovation and creativity in the face of climate change; see [www.selfcity-project.com](http://www.selfcity-project.com)) is a three-year research project under the umbrella of JPI Climate with partners from Germany (University of Bayreuth), the Netherlands (University of Groningen) and the United Kingdom (University of the West of England, Bristol). The views expressed in this article do not necessarily reflect those of the funding organisations or the other members of the research team.

<sup>2</sup> However, we should point out that this does not rule out that the move to governance may lead to centralised, hierarchical exclusionary ways of organising or that bureaucracies cannot evolve to become more flexible and open (cf. Atkinson & Klausen, 2011).

of communication, choice, and mutual adjustment of behavior resulting in the emergence of ordered structures'; while for Boonstra and Boelens (2011) it is the absence of government involvement and thus of external control (see also Boonstra, 2015). As we focus on forms of self-organising which, in some cases,<sup>3</sup> have consciously chosen not to engage with established forms of governance, we found that they did this to demonstrate that there are alternative ways of organising society. Meerkerk, van Boonstra and Edelenbos (2013) point out that self-organised initiatives represent a challenge to existing governance structures, yet evolve together within existing institutional settings. In our research we discovered that some of the initiatives we researched and engaged with explicitly wanted to achieve a certain level of autonomy and independence from—in their view sometimes unsatisfying, instrumental and ineffective—modes of existing 'green policy', which is usually characterised by state or market lead attempts, such as supporting 'green', sustainable technology (solar panels, e-mobility, etc.).

In terms of our approach, while acknowledging the value of the examples provided above and the need to build upon them, the most fruitful way of doing this and of understanding these motives and intentions for self-organising is a twofold one. On the one hand our research approach is praxeological and seeks to identify the particular interests and aims people pursue, and understands these 'performances' as a certain form of practice, a way of leading a sustainable life at a concrete, local and everyday level. We attempted to reconstruct the mechanisms noted above that led to the emergence of self-organisation along with the associated forms of meaning and knowledge that were developed and deployed to identify particular courses of action appropriate for the local contexts they operated in.

Thus the process of self-organising is a dynamic one that takes place (if it takes place) in response to the development of shared local understandings of issues and how to address them. Empirically it is important to focus on the way groups achieve this (the level of practice and how to organise/assemble things) and how they develop a certain form of local power, of competence and influence (the level of micro-governance—how do they attract people, achieve change in the local context). On the other hand, we drew on a discursive method by using the Q-Sort method to identify groupings of 'attitudes' that represent particular 'types of activism' within each of the groups and the associated discourse/narrative participants deployed to explain their choices for their specific engagement (see the following section).

Put simply the implications of the above are that self-organisation *may* pose a challenge to existing forms of governance or an alternative to them; how then does self-organisation relate to systems of governance?

Within the existing literature there has been a focus on how state, market and civil society sectors are articulated with a growing emphasis on networks which represent a plurality of actors and the organisational forms this takes (see Kooiman, 2002, pp. 71–73). By following Burris (2004, p. 336) who defines governance as 'the management of the course of events in a social system', it 'involves looking at context-specific, historically contingent and fundamentally political processes of the establishment, the operation, the negotiation and contestation of social institutions and how these are constantly 'brought to life' through social practices' (Etzold, 2013, p. 38). The concept of governance involves the purposive efforts by both state and non-state actors to 'steer' society towards the pursuit of particular goals and interests (see Kauffman, 2016; Kjaer, 2004).<sup>4</sup>

How then does self-organisation relate to these idealised two poles of governance? As self-organisation is a means of action 'from below', it emphasises interaction and discussion between participants leading to the identification of relevant (local) issues. This usually leads to the formation of an accompanying 'discourse/narrative' of problem definition (although this may be implicit rather than explicit), because those engaged need to develop a more or less common ground of conviction and knowledge regarding how to do things differently. As this may challenge and subvert existing governance forms it provides alternative ways of doing things, it potentially offers new ways of 'governing from below' that reflects local contexts and understandings of problems. So the initial mutual interest of some people to organise things in a different way links common convictions with the need to develop new forms of localised practice, which may produce new forms of shared (local) knowledge, albeit not in the codified form typical of scientific or professional type, but of a more tacit, incorporated and personal nature (Polanyi, 1958).

To be brief, for us knowledge is concerned with processes of sense making, the development and enhancement of capacities to act, and decision-making procedures. This also involves comparisons and assessment of the 'costs' (albeit not in terms of cost-benefit analysis) of action (or inaction), but it also involves judgements and values in relation to these assessments. In essence we are advocating a pragmatist perspective in which knowledge is always related to social processes of communicative interpretation, and associated narratives, which has as its objective the development of a shared understanding of how to enhance our capacity to 'do things'. Increasingly the literature has recognised a variety of forms of knowledge (Andersen & Atkinson, 2013; Matthiesen, 2005, 2009; Matthiesen & Reisinger, 2011), ranging from scientific, professional to everyday and local. Our concern is with identifying the forms of everyday and local

<sup>3</sup> As will become clear later some of our groups do choose to engage with existing forms of governance.

<sup>4</sup> Moreover, in addition to political modes of governing societies are also governed by the 'invisible hand' of the market which also allocates (societal) resources and structures the scope for what is deemed possible in terms of action. Although this will vary between societies depending upon the social values and mores in which market systems are anchored.

knowledge developed and drawn upon by the groups we engaged with.

### 3. Research Methods and Results

The SELFCITY project carried out research on three self-organising groups in Germany, two in the Netherlands and two in the United Kingdom. These groups were selected on the basis that they were consistent with the definition of self-organisation that we developed based on the literature review carried out in the first phase of the research. Based on this we sought to cover a range of self-organising activities that reflected the wide variety of groups involved in addressing climate change in its various manifestations at local level. Thus no claim is made that these groups are necessarily ‘representative’ in terms of a traditional sampling frame; merely that they characterize the variation of such self-organising groups that include climate change within their activities, albeit combined with other activities related to sustainability and social interaction.<sup>5</sup> The way we have approached this is to take the position that there is no one-way to address climate change, that local context, and the problems/issues and how they are problematised, affecting each context, vary both nationally and locally. In other words the groups do not exist in splendid isolation from the wider national, regional and local situations in which they exist and these shape/structure the context in which they operate. We would argue that is consistent with the variegated notion of self-organisation we have adopted. Moreover, climate change can comfortably exist within a wider spectrum of issues about how to live in a sustainable way.

Given the wide-ranging definition of self-organising that we adopted the initiatives we included in the research were diverse, including: a ‘transition town’, two energy coops, a ‘transition house’, a free café, a climate change group and an ecological garden. All did, however, meet our working definition of self-organisation and were, albeit in different ways, concerned with addressing climate change, although in a number of cases this was one among a number of aims.

The part of research we focus on here was concerned to reconstruct the variety of motives inspiring people to engage in the respective groups. This was based on the use of Q-Sort methodology which involved a statistical analysis of attitudes towards ecological issues, based on quantitative Q-Sort methodology (see Barry & Proops, 1999; Jeffares & Skelcher, 2011; Watts & Stenner, 2005). To the best of our knowledge no other research into

climate change has deployed this approach, although Fischer, Holstead, Hendrickson, Virkkula and Prampolini (2017) have carried out broadly similar research to distinguish individual attitudes in community groups addressing low carbon initiatives (we will return to their findings in the Discussion and Conclusion section).

The primary reason for using this approach was that based on the project’s research questions Q-methodology would allow us to explore the position that self-organisation occupied in the broader societal response to climate change; distinct from state and market led responses (including state led responses that foreground traditional ideas of participation). We then hypothesised that ‘self-organised’ groups will interpret the challenge of climate change in a particular manner and will have a certain degree of agency in responding to this challenge. We used the method to explore these interpretations along with (normative and empirical) ideas of agency and response. Thus allowing us to investigate questions such as: How do self-organised groups think about their role in the response to climate change—is this complementary to ‘mainstream’ state and market efforts, or does self-organisation respond to needs and aspirations that would otherwise be marginalised or excluded? Does it provide alternative ways of organising that challenge existing forms of governance?

It is important to note that Q-Sort is a mixed methodology. It is based on ‘qualitative decisions’ made by researchers in terms of reviewing the relevant literature and on this basis defining the ‘problem/issue’ and deriving the statements to be used in the investigation of the attitudes of participants. It then uses factor analysis to analyse the range of statements and organise them into ‘sorts’ or ‘types’.

Q-Methodology seeks to identify personal attitudes towards certain topics (such as sustainability or climate change), which is related to and are derived from the ‘concourse’;<sup>6</sup> this emerges from the way respondents select and group typical answers and attitudes. These answers and attitudes are derived from selected literature in the field which we put on 47 cards that the interviewees were asked to consider and then arrange across a scale to reflect their personal relevance. They were also asked to explain their choices. The whole method as a research cycle is grounded in a process of five basic steps: (1) representing the concourse (scope of debate) as a series of statements, (2) sampling the statements, (3) constructing a sample of respondents, (4) conducting the Q-Sort interviews and (5) factor analysis with interpretation.

<sup>5</sup> Additional work based on the European Social Survey (<http://www.europeansocialsurvey.org/data>) also highlighted the fact that there were different rates of and attitudes towards volunteering between the three countries. Volunteering was used as a proxy of the propensity of individuals to come together and to participate in activities to address issues such as climate change. Thus the use of Q-Sort was intended to further, and more specifically, investigate attitudes towards climate change (and sustainability) in our groups and any cross-national differences between them (although we do consider the latter in this article).

<sup>6</sup> The concourse refers to the range of debates/issues around a particular topic, in our case climate change. This was done through an exhaustive review of the academic and policy literature. On this basis a series of ‘short statements’ were constructed that reflected the range of debates/issues in the literature. The concourse is of course the key sample and we are investigating the attitudes of individuals within our groups towards the concourse. Both core and peripheral members of the groups were invited to participate in order to capture the full range of those involved from our groups and to see if there were variations between them.

Jeffares & Skelcher (2011, p. 6) describe Q-Sort in the following terms:

Q methodology involves each participant in the sample (the P sample) sorting a series of statements (a Q sample) representative of the breadth of debate on an issue (the concourse) into a distribution of preference (a Q-Sort) from which statistically significant factors are derived.

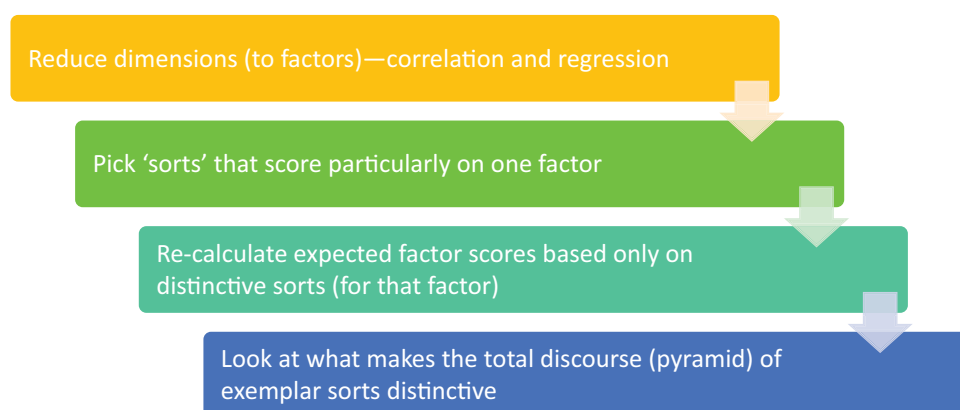
We carried out a pilot study of the statements to ensure they were relevant and comprehensible statements, made amendments on the basis of the study and these were then selected to be used with our participants. In the Dutch case the English version of the statements were used while in the German case these were translated by members of the German research team. Overall, the three research teams were able to collect 89 Q-Sort interviews, ranging from 10–20 cases per initiative. Participants were asked about why they selected particular statements and placed them in positions on a scale and these discussions were recorded.

By using Q-Sort we sought to identify groupings of ‘attitudes’ that represented particular ‘types of participants’ within each of the groups and the associated discourse/narrative participants deployed to explain their choices. In addition the results from all three countries were brought together and additional statistical analysis carried out to identify commonalities and differences in response between countries, but also to attempt to identify ‘common cross-national types’. Thus the Q-Sort process produced two kinds of data: a pyramid of response preferences (i.e., respondents order 47 statements into a pyramid of preferences) and interview recordings (notes and recorded interview) where respondents explain why they selected statements that were most/least important to them. This explanation then provided insights into their wider understanding of the issue(s) and the extent to which it was ‘consistent’ or made up of potentially ‘contradictory’ attitudes. Figure 1 shows the steps in our analysis.

Given that we have sought to link particular discourses to the Q-Sort analysis we need to briefly state how we define ‘discourse’. Firstly, we need to recognise that the term ‘discourse’ does not refer to a unified body of work, there are a wide variety of theories of discourse (see Atkinson, Held, & Jeffares, 2011, for an overview). Furthermore, following Jameson (1989), we see narrative as a key epistemological category through which we gain knowledge of the world in the form of stories. Narratives are a way of presenting and re-presenting the world, or particular aspects of it, in a textual form that understands the world in a particular way. However, we should not take these ‘stories’ at face value, we need to consider how such individual narratives are related to wider social and power structures in society.

Based on the statistical factor analysis of the responses from the groups in our three countries and the qualitative reconstruction of meaning structures obtained through the accompanying discussions about why respondents decided to place particular statements in their position on the scale, four ‘distinct types’ of self-organising emerged:

- *Radical Green*. This group displayed attitudes that were radical and ‘anti-systemic’ (i.e., they blamed capitalism and ‘global elites’ for the current ecological crisis), embodying a critique of neo-liberalism and a challenge to the authority of the state. There was an explicit rejection of the state and a desire to develop alternative governing structures from below. They also viewed the environment as a ‘public good’, not to be exploited for profit. In addition they questioned the forms of knowledge deployed by governing elites to justify their actions. Furthermore, they considered that decisions were too often made about a local community by elites far away and with no commitment to or even knowledge of the places they affected. Thus they placed considerable emphasis on alternative knowledge forms and ‘local knowledge’—i.e., which were produced locally through people’s



**Figure 1.** Steps in Q-sort analysis.

everyday experiences and understanding of how climate change impacts locally. It is not too great a stretch to suggest that they saw the prevailing dominant knowledge as selective products designed to support the existing (capitalist) system. There is an underlying assumption that the current capitalism system of production and consumption is the cause of the current ecological crisis and that it will inevitably collapse. Thus developing alternative ways of producing and consuming was seen as a way to protect local communities against this and lay the basis for an alternative society developed from below.

- *Consensus Builders*: Their focus was on working with/engaging with the existing system of governance to bring about change through consensus building. There was no desire to create a new system rather the aim was to ensure that ecological issues were at the heart of the policy agenda and the 'collective intentionality' of all those engaged in action to address ecological issues whether from the public, private or civil society sectors. Nor was there a rejection of the market, again the emphasis was on ensuring that ecological issues were addressed by market forces in the sense that they be central to the decision-making structures of investors, firms and consumers (i.e., at the heart of both production and consumption). This embodied an Ecological Modernist approach (see Mol & Spaargaren, 2000), a belief that technological developments could address issues such as climate change within a market framework and a desire to mainstream these changes in production technologies (i.e., create a 'green economy'). Nor did this entail a belief that living standards, in Western societies, needed to be limited or actually reduced. There was very much a focus on the development of 'win-win' scenarios whereby all sectors of society could benefit from the development and use of green technologies. Whilst not rejecting existing forms of knowledge there was an argument that these forms of knowledge need to be supplemented by new 'green' forms of knowledge arising from new technological niches and that they needed to be institutionalised in the thinking and action of both the state and market sectors. Similarly, whilst there was no outright reject of prevailing governance forms there was a recognition that more flexible governance forms needed to be developed that both supported the development of 'green technological niches' and facilitated the dissemination of these technologies and their embedding in the actions of states and markets.
- *Eco-egalitarian*: This approach was based on the notion of 'Green Limits to Growth' allied with an emphasis on social justice. Thus there was a recognition that the current system of production and consumption was unsustainable and needed to be

changed (some respondents argued it need to be changed radically). Implicitly this entailed an argument that new knowledge forms associated with the above needed to be mainstreamed, in some cases this was thought to require the displacement of existing dominant notions of profitability and consumption and ideas of ever increasing levels of consumption as being a 'good thing' because it was a driver of, unsustainable and inequitable, economic growth. Moreover, it requires a wide-ranging rethink of features central to current production systems such as 'built in redundancy' of products and continuous minor upgrading of consumer products (e.g., smart phones) to encourage consumers to dispose of 'old' products and replace them with new ones. In terms of engaging with prevailing systems of governance a variety of attitudes were present: ranging from what might be described as 'reforming' to 'rejection'. At least implicitly this entailed a reduction in Western living standards in order to distribute growth more equitably globally. It also required the development of new production technologies that were ecologically friendly and that those living in the Global South should benefit from any such developments. This 'type' shared some similarities with both *Radical Greens* and *Consensus Builders*, but their placing of the statements and explanations were sufficiently different and coherent to justify their classification as a distinct 'type'.

- *Community Builders*: This group did exhibit a number of *Radical Green* ideals (such as a view that the existing system of production and consumption was part of the problem), but emerged as distinctive through their conviction that local collective action is primarily concerned with constructing a sense of 'togetherness' which is a 'good thing' in its own right and that creating a 'sense of place' is a central part of local collective action. Here the main focus was on local action and the construction of communities of place and interest. There was an overwhelming focus on bringing about change at the local level as a way of demonstrating the possibility of alternative 'ways of doing things' and living. The forms of thinking and practice they identified ranged from an emphasis on locally grown food, to local food and resource sourcing by businesses (e.g., shops/businesses should display the provenance of the goods they sold/supplied) to the development of locally based distribution systems and the development of new forms of ecologically friendly (local) systems of production. Here local knowledge forms generated by everyday experiences and 'learning by doing' were given a privileged status and dominant knowledge forms were viewed with suspicion. What was lacking was a thorough going critique of these forms and the provision of a formalised body of alternative

knowledge. At least implicitly there was a strong suspicion of existing forms of governance and in some cases an explicit desire not to engage with them, in some cases there was an outright rejection because prevailing governance forms were seen to be ‘part of the problem’.

While three of the groups do share certain ‘radical’ attitudes towards climate change significant differences remain between them in terms of how they understand climate change and the way(s) it can be addressed. Moreover, these four groupings do begin to allow us to identify distinct discourses and accompanying narratives which offer different ways of addressing climate change and relating to the prevailing modes of governance in their situations. What most groups do share is the view, that current climate change policies are regarded as too abstract, or too ‘far away’ from their practical everyday experiences to be of use to them; therefore ‘doing sustainability’ is seen as more important for their practices—by this we mean that they are primarily oriented towards doing things rather than seeking to theorise about it, although the *Radical Greens*, *Eco-egalitarians* and *Consensus Builders* did, at least implicitly draw on a more ‘theoretical’ body of knowledge to justify their positions. While *Community-Builders* placed a much greater emphasis on local knowledge generated by everyday experiences, and ‘learning by doing’; for them these forms were considered more appropriate and relevant to the issues of (local) climate change and sustainable lifestyles than other forms of knowledge.

However, it should not be assumed that all the individual members of the four groupings shared a common action frame of reference and that they acted according to a ‘strict logic’ consistent with the overarching group description we have given. In some cases groups were more homogeneous, with their membership falling overwhelmingly into one of the four groupings. Other groups included a mix of individuals expressing these attitudes and in these cases groups specifically avoided discussing wider issues choosing to focus on the ‘immediate task at hand’ (i.e., the main objective they had been founded to achieve—an example is the German energy coop) to side-step debates that might undermine the group’s coherence.

The ‘types’ identified also demonstrated their distinctive traits vis-à-vis action. For instance, the *Consensus Builders* are willing to engage with existing forms of governance with the intention of bringing about change through processes of ‘ecological modernisation’, perhaps based on niches developing new technologies and forms of action that demonstrate they can be profitable and therefore to show how things can be done ‘better’ by utilising green technologies. By doing this it is possible to build a consensus around them that will lead to the mainstreaming of green technologies and associated ‘ways of doing things’. This also has implications for forms of engagement with other stakeholders, in particular the

market sector, which needs to be convinced to use such technologies. But it also requires support from government in terms of regulation and the use/allocation of resources to support these developments.

In contrast, the *Radical Greens* seem to be intrinsically driven by ethical norms and ‘sustainable practices’ in a broad sense (inclusion, consensual decision-making, money-free space, vegetarian/vegan nutrition, etc.). Some members describe their initiatives as ‘laboratories for utopias’. They claim not to be ‘eco-political’ in a classic sense, but see themselves as implicitly political by practicing an ecological, non-capitalist way of life in their own created ‘interstitial’ spaces for freedom through collaboration and by practicing a non-esoteric ‘being-together’. The form of governance here was collaborative, deliberative and experimental; it aimed to demonstrate alternative ways of organising.

Somewhat differently *Eco-egalitarians* are engaged in practices which secure or enable autonomy. For instance members of a solidarist agriculture sub-group sought to develop a collective ‘feeling’ that they were able to exist ‘independently from the system’; they were searching for a form of ‘authenticity’ by acting and communicating with one another. It was not enough for group members to have the ‘right’ moral convictions, they wished to see them *practically* at work when they collaborated with one another. For them this represented ‘evidence’ that a more just, environmentally-friendly way of living is possible by relying on the ‘practicing body’ (gardening, cultivating). The range of leadership here varied between ‘non-hierarchical’ to respectful-charismatic. The ‘art of collaboration’ is central to their collective intentionality and how they understand ‘ecological governance’ in terms of developing new pathways to address what they see as fundamental human needs (nutrition, housing, psychological well-being, etc.).

The *Community Builders* focussed on place and how to develop new ways of governing local communities through a ‘deliberative’ trial and error process, but essentially a form of governance that was non-hierarchical and inclusive. However, the overall focus was inward looking. Unlike the evidence reported in some other studies (e.g. Hadden, 2015; Kauffmann, 2016) they had little or no desire to engage with existing forms of governance or to transform it. On the other hand, as noted by Hadden (2015) and Kauffmann (2016) in their work, they challenged/questioned existing dominant knowledge forms and definitions of the problem being much more concerned with locally generated knowledge based in everyday life, ‘learning by doing’ and local production and consumption. Despite this questioning they did not seek to transform the wider knowledge landscape or problem definition believing that the existing system had ‘failed’ and their objective was to provide a practical demonstration that it was possible to develop alternative ‘ways of living’ and organising.

In terms of their degree of organisation and professionalisation our groups once again displayed consider-

able variation ranging from 'highly organised and professionalised' (most notably the *Consensus Builders*) to much more 'loosely structured' and 'amateur'. The more organised and professionalised groups tended to have a clearer, arguably more hierarchical, organisational structure and a focus on achieving particular tasks. For instance, three of these groups were registered charities with a board of trustees and received financial support from a variety of sources including local government. Some sought to influence local policy debates on climate change through the provision of locally tailored scientific knowledge and ways of measuring the impacts of climate change on the locality and action programmes to address it.

#### 4. Discussion and Conclusion

While, as far as we have been able to ascertain, no other study focusing on self-organised local responses to climate change has used the Q-Sort methodology to identify individuals attitudes and then on the basis of factor analysis attempted to identify particular groupings with an associated discourse/narrative or to consider the attitudes of groups vis-à-vis existing forms of governance, there have been other studies of sustainability that in a broader sense have sought to identify different individual attitudes within local groups. The most pertinent of these was carried out by Fischer et al. (2017); their focus was on what they described as the diverse views held by individuals in community groups addressing low carbon initiatives, the 'everyday politics' of the groups and how this related to 'processes of societal transition' which is close to what we were concerned with in the SELFCITY project. A key focus of their research was: 'the question of how such shared and coherent expectations develop and are negotiated in practice is hardly ever addressed in the recent literature on social aspects of sustainability innovations' (Fischer et al., 2017, p. 3) which broadly compliments our concern with self-organisation. Basically they identified what can be termed a range of, potentially dissonant, 'world views' (these might reasonably be described as discourses) held by members of the groups they studied. For instance some members of the groups wished to adopt a more 'confrontational' (i.e., overtly political) attitude whilst others wished to be apolitical and avoid confrontation when it came to arguing for change. This was likely to influence how they viewed engagement with existing forms of governance. Similarly the issue of organisational structure and ways of working differed considerably within and between groups. Some members clearly wished to work with other groups and networks whilst others wished to retain the groups' independence. This in turn influenced how they viewed working/engaging with existing forms of governance (including local authorities). As in our groups the different initiatives studied by Fischer et al. (2017) adopted a range of different ways of negotiating these dissonant 'world views' ranging from open discussion to tacit agreement not to confront them. This in turn produced vari-

ous, sometimes unresolved, tensions within the groups, in some cases leading members to leave groups. How these tensions were resolved (or not) is also likely to have influenced how the groups engaged (or did not) with governance systems (although this was not an explicit focus of their paper).

What might be stated at this stage of our research and for all our initiatives was a commonly shared (though not always made explicit), and of varying intensity, conviction or world-view that they had lost trust in the way(s) in which existing institutionalised politics addressed climate change, although the *Consensus Builders* clearly did not believe the 'system was broken'. A fundamental reason for these individuals to come together and 'get involved' therefore seems to be varying degrees of distrust of existing market or state led 'solutions', which they regarded as ineffective and/or 'abstract', being too far away from the local level and their everyday lives and thus unable to bring about any substantial changes that they could recognise as relevant to them. Therefore, at least in three of the 'types', they have sought to follow a different, less hierarchically ordered, course of action based on 'deliberative politics' (Macedo, 1999) and practices to reach their goal or at least set up pathways to do so. This approach compliments and supports new findings in critical studies on climate change that argues there is a widespread discontent with leading actors and initiatives seeking to tackle global warming (Stevenson & Dryzek, 2014).

A second aspect, which arguably constitutes common ground for all our self-organising groups, and perhaps more generally, is the level of social integration they offer (or aspire to). Each of the groups assembled a range of people from different backgrounds who, while sharing broadly similar ideas about climate change, might not be found together under other circumstances, i.e., they cut across traditional social divisions/boundaries. Thus we would contend that our results indicate the existence of a 'cross-milieu', integrative and egalitarian effect of engaging in such groups, which may display promising new ways to channel aspirations, however vaguely defined, for fundamental societal change and for a sustainably shaped direct (co-existent) and proximate (social and biological) environment.

In terms of the implications for their own self-governance forms the above suggests a desire to develop more deliberative and non-hierarchical forms of organising and taking decisions. Indeed we observed this in several of our groups, although the more 'professionalised' the group there was a tendency to utilise more traditional forms of organising particularly where they engaged with external organisations from whom they received funding (the *Consensus-Builders*, who favoured an eco-modernisation approach, tended to fall into this way of organizing). The very act of such engagement required them to develop relevant accounting practices that conformed to the regulations governing the relevant funds along with the language and problem conceptualization



of those with whom they engaged (see Atkinson, 1999, on urban regeneration). This in turn required ‘responsible’ individuals to be identifiable and decisions to be taken accordingly.

In terms of knowledge our research revealed a general suspicion, if not outright rejection, of dominant knowledge forms among three of the groups the Q-Sort analysis identified. While *Consensus Builders* were concerned to utilise new ecological forms of scientific and technological knowledge to develop new niche technologies, again consistent with their adoption of an eco-modernisation approach. What remains unclear is how the forms of knowledge generate by self-organising groups can be incorporated into wider governance and decision-making structures, i.e., to transcend their particular context. Among our groups only the *Consensus-Builders* displayed the willingness or the capacity to engage found in the groups studied by Hadden (2015) or Kauffman (2016). The other groups lacked the network ties identified by Hadden (2015) as being so important to influencing wider (global) policy on climate change. Although as Hadden (2015) notes, ironically, the very act of participating in these wider networks, along with the gaining of additional expertise and knowledge, had a negative impact on their ability to actually influence these debates and policy. Perhaps this reflects a wider dilemma for such groups; the more they become involved in these wider networks the more their autonomy is decreased. Thus they face the conundrum of how can their ways of organising engage with prevailing forms of governance to bring about change without their self-organising forms being regularised and incorporated in the process. It is perhaps ‘easiest’ for the *Consensus Builders* to do this because they do not wish to challenge the existing system, merely to modify it. The other groups, to varying extents, identified fundamental flaws in the prevailing system that are difficult to accommodate within their operating ethos and thus chose to work ‘at a distance’.

Finally in general terms it is clear that apart from the *Consensus-Builders* there was little appetite among the groups we studied to directly confront and change existing forms of governance and knowledge in the relevant arenas. They seem to have decided, deliberately or otherwise, to maintain their ‘autonomy’ by working in their own way(s) at local level and not to overtly confront the dilemma of how to transcend their local context—i.e., become networked. The ‘model’ of action appears to be ‘demonstrative’ and experimental—seeking out new, practical everyday solutions to localized manifestations of climate change.

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### Conflict of Interests

The authors declare no conflict of interests.

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