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Towards a Broader Ecological Citizenship Repertoire

Exploring Climate Change Engagement,
Transformative Agency, and Post-Carbon
Transition Imaginaries among Citizens in Sweden

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Abstract

Current post-carbon transition trajectories are primarily based on a belief in technical solutions wherein considerations of the citizens' role in collective mobilisation and transformation are largely overlooked. To this end, the thesis seeks to understand how citizens can become active agents of change within transition efforts and how their political agency can be empowered accordingly. This, by exploring how climate change responsibility is perceived, negotiated, navigated, and enabled as well as what future pathways can be sourced from the imaginaries of the citizens themselves. The study uses data from a SenseMaker survey coded via a retroductive Grounded Theory methodology and analysed through the combined framework of Critical Realist and Ecological Citizenship. Through its lens and aims, the thesis contributes to understanding conditions for engagement, distribution and management of responsibility and sustainable transformations via individual and systemic change. Its conclusions argue for a need to broaden the collectively available 'Ecological Citizenship repertoire', partly by creating more autonomous, local, and cooperative channels for engagement embedded within concrete communities of practice.

Keywords: Ecological Citizenship; Climate Change; Agency; Critical Realism; Sustainability Transitions; Inner Dimensions

Wordcount: 19,411

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List of abbreviations

CR	Critical Realism
EC	Ecological Citizenship
GT	Grounded Theory
MCQ	Multiple Choice Question
PEB	Pro-Environmental Behaviour
UN	The United Nations

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1. Introduction

Sweden is widely regarded as an ambitious agent for climate change mitigation, especially given its aspiration to lead the way in becoming one of the first fossil-free welfare nations by 2045 (Government Offices of Sweden Ministry of the Environment and Energy 2015). Accordingly, “all actors in society must work actively to reduce emissions” (ibid.: 1), from institutional and private actors to civil society and individual citizens. In embracing this ambition and state identity, questions regarding what this entails for the social contract towards its citizens emerges.

Sweden has a high degree of environmental awareness among its citizens. A dominant majority of Swedes view climate change as both real and something that will affect those who live in Sweden, according to a survey by the Swedish Environmental Protection Agency 2018 (Gullers Grupp 2018) and Blennow & Persson (2009). Most Swedes also consider it vitally important to take both societal and individual measures to prevent the intensification of climate change (Gullers Grupp 2018). There is thus an apparent awareness and a willingness to adequately address the challenges posed by climate change among citizens in Sweden.

However, awareness and willingness do not necessarily translate into concrete and adequate action (Kollmuss & Agyeman 2002). In considering embedded emissions in imported consumer goods, Swedes are currently living a lifestyle that would require the equivalent of 4.2 Earths to sustain should everyone on the planet adopt its lifestyle (WWF 2016; 2020). This places Sweden close to the likes of the US when it comes to consumption footprint (ibid.) As is the case of most, if not all, high-income nations, the practical and real progress in addressing climate change has, so far, remained inadequate (Swedish Climate Policy Council 2021; IPCC 2018).

There is thus an inherent tension and puzzle in the discrepancy between the ambition to adequately address climate change and actual practice and pace of change currently taking place. As an affluent welfare nation, Sweden and its inhabitants enjoy a high standard of living and material quality of life, potentially presenting contradictions when seeking to decarbonise the economy and its related lifestyles. How people navigate this tension, partly via the extent of their political agency (O’Brien 2015) as potential ecological citizens (Dobson 2003), and how knowledge of their perceptions can inform empowering democratic practices surrounding post-carbon transition pathways constitutes the central point of departure for this thesis.

1.1 Aims and research questions

Until recently, climate change has predominantly been seen as a technical issue; however, this assumption is now increasingly put into question (Leichenko & O’Brien 2020; Wamsler 2020). Given the apparent inadequacy of the prevailing approaches and related discourses, new approaches to sustainability transitions based on social, cultural, and personal drivers of change are, therefore, well warranted.

From a political science point of view, the thesis contributes to the broader field of citizenship and post-carbon transitions. This, by generating knowledge on potential drivers to citizenship mobilisation and, in turn, how these insights can inform post-carbon transition pathways¹ that seek to accommodate and empower citizen engagement² along with adopting a more interdisciplinary lens to examine so-called personal and inner drivers of change (Woiwode et al. 2021). From a theoretical point of view, the thesis seeks to explore the potential of people living in Sweden to become agents of change as part of a wider systemic and societal post-carbon transition process. This will be done by applying the normative Ecological Citizenship model proposed by Dobson (2003) coupled with a Critical Realist understanding of agency as something which can either transform or reproduce prevailing social structures.

Three research questions have been formulated to address the overarching aims of the thesis outlined above. The first seeks to explore how climate change, as a global phenomenon, is internalised and subsequently negotiated on an everyday level. This question serves to explore the extent of citizens agency and its relation to systemic and social structures. Perceptions refer to the subjective dimension; the negotiation is about how citizens strive to incorporate engagement into their lives; navigation is about the possible tensions within this process of incorporation. Subsequently, the second research question moves from the practical plane to the personal ‘inner’ dimension to look at what activates, motivates, and hinders citizens from acting on climate change. This relates to areas such as what is being considered and valued when relating to personal ideas of sustainability and what some of the necessary personal capacities and motivating drivers are.

Finally, the third research question shifts the temporal focus to look at what citizens in Sweden wish to see further prioritised in the future in relation to sustainability. This, to further understandings of possibilities for action and how citizens can become active agents of change as part of a wider post-carbon transitioning effort. Taken together, the thesis aims to identify empowering drivers sourced from lived experiences and imaginaries from ordinary citizens and subsequently understand how these can inform new forms of engagement, cooperation, and, thus, post-carbon transition pathways.

The research questions are formulated as follows:

1. How do citizens in Sweden perceive, negotiate, and navigate climate change and its stemming obligations for personal and systemic change on an everyday level?
2. What are some drivers motivating people to change (in relation to climate change)?
3. What non-technical future post-carbon transition pathways are imagined by the citizens?

The thesis is written under the LUCSUS-based interdisciplinary research project TransVision (“Transition Visions: Coupling Society, Well-being and Energy Systems for Transitioning to

¹ Pathways, as a concept, is here understood as a way to communicate “plausible stories about large-scale [sustainability] transformations” (O’Brien 2018: 153)

² Engagement will, in this thesis, broadly be understood as “a personal state of connection with the issue of climate change” (Wolf & Moser 2011: 550), however, it is also highly linked to the concept of Ecological Citizenship outlined in the theory section (section 3.2.).

a Fossil-free Society”), which is part of the ‘Contemplative Sustainable Futures Program.’³ Professor Christine Wamsler is the project and program director and acts as an external supervisor for this thesis. The TransVision project seeks to generate new knowledge and critical analyses on the potential interlinkages between personal, practical, and political spheres of transformation to support sustainability outcomes at different levels (individual, collective/ organisational, and systems). In this context, the focus is on the role of citizens as agents of change for climate policy and action.

Since September 2020, I have been part of the TransVision project as a research assistant to support different tasks, including a literature review, data collection in the form of a SenseMaker survey, and drafting an article and policy report results. This work has provided a basis for the thesis. The literature review (Wamsler et al. 2021a) allowed me to identify relevant literature as well as gaps and tensions within the field of research while the collected data (further discussed in methodology, [section 4](#)) acts as the empirical foundation of the thesis. Finally, the initial results and associated publications act as both a base and material for further analysis (Wamsler et al. 2021b; 2021c).

The aims of the thesis align to some extent with the project’s aims in taking the interlinkages between the personal, collective, and systemic levels as an analytical point of departure and maintaining the citizen as the focus and subject *of change*. The thesis’ unique contribution lies in its deepened qualitative analysis of the data via its theoretical lens and contextualisation within the Global Studies and Political Science disciplines, which aims to understand post-carbon transition efforts as a democratic process inclusive of citizen engagement. Through this, the gaps identified in prior analysis of the dataset (Wamsler et al. 2021b; 2021c) will be developed and partly addressed. This will be further discussed in the background ([section 2](#)).

1.2. Structure and outline of the thesis

The thesis is structured around seven main sections. This [first section](#) outlines the research problem and focus, along with its resultant aims and research questions. The [second section](#) surveys current research fields and theoretical discussions related and relevant to the thesis’ aims and serves to situate and motivate the choice of theory and perspective through a discussion around the tensions shortcomings of externally deterministic models of explanations.

[Section 3](#) presents the theoretical framework consisting of Critical Realism as an underlying theory of science coupled with Ecological Citizenship. Together, they provide the thesis with an emancipatory ideal and conceptual access to the areas sought to study. Subsequently, [section 4](#) concerns the methodology and empirical foundation of the thesis, wherein it introduces the SenseMaker survey and retroductive Grounded Theory. [Section 5](#) presents the results structured according to the three research questions and via open, axial and selective coding. Finally, [section 6](#) and [7](#) brings the findings together and discuss the implications and recommendations arising from the findings and suggests directions for future research.

³ Link to project website: <https://www.contemplative-sustainable-futures.com/research-1>

References and appendixes follow.

2. Background

As a historical moment marked by the global efforts to mitigate and adapt to the effects of climate change, active reconsideration of the role and concept of the state and citizens is well warranted (Dobson 2003). As will be further developed in the theory section ([section 3](#)), globalisation and climate change represent processes mainly generated from one part of the world but disproportionately impact other more vulnerable areas of the world (ibid.). Aiming to understand how people make sense of this reality and how they can potentially choose to resist, transform, or reproduce its structures warrants consideration of how climate change is to be understood as a problem.

The issue of climate change and sustainable transformation is inherently complex and unprecedented, a “wicked” problem which, by definition, defies any single way of characterising and addressing it (Grundman 2016; Rittel & Webber, 1973). Thus, while Political Science can shed some light on it, the problem also demands nuanced interdisciplinary perspectives (Bhaskar et al. 2010).

The majority of research and policy approaches aimed at understanding and addressing climate change has mainly been concerned with broader socio-economic structures, governance dynamics, economic interventions, and technological solutions (O’Brien 2018; Mundaca et al. 2019; Wamsler et al. 2020). The common denominator for all these areas is that they deal with forces external to the individual and follows a technical and biophysical discourse of climate change and its drivers, all the while less research and policies have been concerned with the personal, inner drivers of change (Ives et al. 2020; Leichenko & O’Brien 2020; Wamsler 2020). To help address this gap, it is crucial to understand how climate change manifests as, in the case of Sweden, an abstract problem with real future and distant present implications. The latter, since climate change is intrinsically linked to other human crises (such as poverty, food, or health) and associated root causes (for example, inequality and injustice) (Leichenko & O’Brien 2020).

Traditionally, scientific communication has been premised around the information deficit model, sometimes referred to as techno-managerial approaches, stating that people need the right information and understand the science behind climate change to be convinced and mobilised to act (Leichenko & O’Brien 2020: 38, 44). This perspective tends to emphasise the role of individual behavioural changes, such as biking to work or recycling one’s garbage, motivated through market-based measures such as incentives and nudges (ibid: 46-7). Many of these incentives and associated behaviours were identified in prior analyses of the data; however, their transformative potential was deemed limited (Wamsler et al. 2021b; 2021c) since they fail to recognise the need to address collective action, social struggle, and more fundamental political change (Leichenko & O’Brien 2020.: 46-7).

However, approaches reliant on external conditioning are being increasingly questioned (Hügel & Davies 2020). As Wamsler et al. (2020) argue, it is always the people, or citizens, which shapes systems and the changes they undergo while, in a political sense, they constitute the raw stuff of democracies, as Dobson (2003) reminds us. Based on this insight, new analytical directions emerge.

O'Brien's (2018) model of 'three spheres of transformation' portrays how personal change has the fundamental potential to ripple out to systemic change. According to this model, change originates in the 'personal sphere', is negotiated and transformed in the 'political sphere' (consisting of systems and structures) and realised in the 'practical sphere' (which includes behaviour and technical responses) (ibid.). Paradigmatic change is by this understanding always a product of the personal sphere, which includes beliefs, values, worldviews, and paradigms (ibid.). With this, the individual occupies the centre of social and political change.

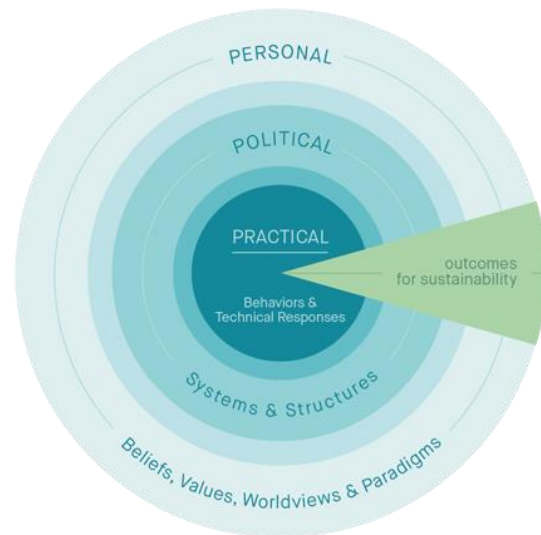


Figure 1: O'Brien's (2018) 3 spheres of transformation

In this view, ecological crises and the shift to a sustainable society is dependent on addressing all three spheres of transformation and making people realise themselves as agents of change, rather than 'objects to be changed' (O'Brien 2018). An example of this is the globally arising counter-consumerism movements based on a simplified lifestyle and new community structures (Thiermann & Sheate 2020) in contrast to the arguably undependable promises of green growth (Brand 2012; Hickel & Kallis 2020; Wanner 2015) and myths of decoupling based on a continued intensification of material and energy output (Haberl et al. 2020; Jackson 2009; Vadén 2020). Arguably, these latter discourses still operate on the practical sphere of transformation while keeping its political and personal spheres intact.

With this considered, capturing citizens' experiences, attitudes and 'grounded discourses' (Van der Merwe et al. 2019) and how these relate to agency capacities can help inform policies and interventions with the potential to empower alternative and parallel trajectories of change. To do this, considering the epistemological and ontological grounds on which the researcher can access this type of knowledge is imperative (O'Brien 2012). Therefore, the thesis will adopt a Critical Realist (CR) theory of science, which considers individuals to hold the capacity to transform or reproduce social structures through agency and reflexivity (Bhaskar 2009). Combining this with the framework of Ecological Citizenship (EC), emphasising ethical reasoning as a powerful and inherent individual property for transformative action (Dobson 2003), the resulting theoretical apparatus is suitable to produce new insights on what can empower citizens political agency in relation to climate change.

Empirical operationalisations of the EC model have also, until recently, been lacking (Jagers et al. 2014), although the field is growing⁴. Most applications of the theory pertain to areas such as sustainable consumption (e.g., Evans 2011; Seyfang 2006; Middlemiss 2010),

⁴ Methodologically, the literature review was instructed by the work of Booth et al. (2012) and all literature discussed in this section was identified via Google Scholar, Scopus, and Web of Science using Boolean operators (i.e., 'AND', 'OR', and 'NOT') (ibid.: 74-8). For example, in the case of EC literature, results had to include some work of Dobson (the author who formulated the theory).

education (e.g., Eugenio et al. 2021; Lummis et al. 2017) and general behavioural drivers (e.g., Jagers et al. 2014; Wolf et al. 2018). Apart from growing the body of empirical operationalisations of the theory, the thesis also combines EC with CR, thus grounding the framework in a robust theory of science framework. So far, this has not been done (indeed, ontological and epistemological discussions within the literature of EC are absent⁵).

Related to the scope of the thesis, Jagers (2009) conducted a study finding 25 per cent of 1724 participants from Sweden matching the definition of ecological citizens via four identified factors: ideology, interest in the environment, perceived urgency of climate change, and age. The thesis further builds on these findings by considering how people in Sweden manage their roles as potential ecological citizens and what drives this type of engagement.

Implicitly, EC shares some links with fields pertaining to climate change and behaviour, such as ‘pro-environmental behaviour’ (PEB) (Jagers et al. 2013) and the ‘value-action gap’ *problematique*. PEB, broadly defined as “behaviour that harms the environment as little as possible, or even benefits the environment”, according to Steg & Vlek (2009: 309), stems from social psychology and is often premised on the role of personal moral norms or rational choice theory (such as the theory of planned behaviour within social psychology) (Turaga 2010). The value-action gap problem is an umbrella term covering numerous models seeking to explain why environmental awareness does not translate into PEB (Kollmuss & Agyeman 2002). This is partly relevant to the thesis since it too acknowledges the shortcomings of the information deficit model.

However, the fundamental difference between the perspective of the thesis and PEB lies in its ontological underpinning. No articles taking a CR perspective on PEB or the value-action gap field could be identified, which is unfortunate given that one of the core contributions made by CR lies in its assumption that people have an inherent capacity to transcend given norms, values, incentives, habitus, and socialisations (Sayer 2010: 97). In the case of EC, ethical reasoning around the materially rooted realities of climate change is one way to do this (Dobson 2003), something which the rational choice theory and narrowly focused analysis of social norms can overlook. With this, the perspective of the thesis also seeks knowledge on what enables people to transcend current unsustainable structures and paradigms to become change-makers (defined as ecological citizens).

To parallel this with the findings already made with the empirical material used in the thesis, the report and article established that most people engage in what was termed ‘routinised everyday practices’ (Wamsler et al. 2021b; 2021c). These practices consist of micro-actions which are easily integrated into the everyday life routines of individuals and consists of, for example, sorting one’s garbage, consuming less or more consciously (which includes choosing renewable energy sources and eating less meat) and mobility (e.g., skipping the car in favour of biking, or reducing flying) (ibid.). Apart from that, engagement remains somewhat low, and most respondents testify to a lack of possibilities for action (ibid.).

⁵ Duroy (2011) uses EC in combination with the CR term ‘relational society’ but does not consider the ontological foundation of the concept of EC itself.

While important, these actions were found to not necessarily support broader systemic changes as they still inherently abide by current paradigms of consumption, materialism, and economic growth (Wamsler et al. 2021c). The thesis seeks to build on this by looking at what can support actions moving beyond the routinised everyday practices.

Furthermore, analysis of the answers to the survey's second question, asking to share a story about actions taken by the local or national government⁶, revealed that most people could not think of an example (Wamsler et al. 2021b; 2021c). Those who did have an example spoke mainly of initiatives supporting the routinised everyday practices, such as building more bike roads, recycling stations and taxing plastic bags (ibid.). While these measures are important, they mainly relate to the practical sphere of transformation and, in their one-directionality, provide no opportunity for the citizen to engage in post-carbon societal transformation actively (ibid.). Therefore, the thesis will seek to generate knowledge on principles and potential practices that empowers actions beyond these routinised everyday actions.

⁶ "Think about a recent action, event or decision that you think can have a positive impact on managing climate change in your city (directly or indirectly). It can be an activity or decision taken by the national/ local government or citizens/ citizen groups."

3. Theoretical background and framework

Considering the calls for new epistemologies to inform knowledge production on new post-carbon transitions (O'Brien 2012), Critical Realism (CR) has been arrived at as a suitable framework. This, due to its stable yet critical ontology, the concept of transformative agency, and emancipatory ideal. The chapter starts by outlining the key principles of CR, followed by its related concept and emphasis on the agency-structure relationship and concept of transformative agency. The latter will subsequently be conceptualised via the principles of Ecological Citizenship (EC).

CR, as a theory of science, will be coupled with the EC model proposed by Dobson (2003). Developed through a discussion around the asymmetric and disembedding nature of globalisation, EC rests on a post-cosmopolitan understanding of citizenship. Dobson (2003) argues that due to the changes brought about by globalisation and climate change, a new concept of citizenship is needed to cope with the ideological and material changes currently taking place in the world. The theory is thus both descriptive and normative but will be operationalised in an explanatory and emancipatory fashion to mirror the research ethics of CR.

The resulting theoretical framework aims to conceptualise agency through a type of social role individuals can embody through reflexive reasoning. This agency and role is one way citizens can resist and transform the asymmetric and unequal global process of climate change through local and individual action.

3.1. Critical Realism: ontology and epistemology

CR's main contribution to the theory of science debate lies in its distinction between the intransitive and transitive domain and takes ontology as its point of departure by rendering it irreducible to a question of epistemology (Bhaskar 2008). This distinction allows the researcher to make claims about phenomena not detectable by senses (for example, social structures) while still maintaining an objective reality to which each claim can be judged based on its explanatory utility (Zachariadis et al. 2013).

Human knowledge captures only a small part of a deeper reality (Fletcher 2016). We can only know the intransitive dimension through socially produced methods, theories, concepts, descriptions, and models (the transitive dimension), which is always influenced by current paradigms, discourses, and culture (Zachariadis et al. 2013). Axiologically, it encourages researchers to relate critically and produce 'explanatory critiques' of the topic under study (Buch-Hansen & Nielsen 2020: 146).

The transfactual element of CR, claiming that we can know more about reality than we sensually observe, allows for accounting of 'generative structures' and 'causal mechanisms', not empirically visible but still considered ontologically real in that they carry real implications for actual events (Zachariadis et al. 2013). Uncovering these entities are the main task of the researcher (Buch-Hansen & Nielsen 2020: 146).

Within CR, the concept of causality operates within three ontological domains of reality (Buch-Hansen & Nielsen 2020: 30). The first domain is the *empirical*, which exists of events

observed and experienced via our senses (ibid.). The *actual* domain consists of experienced events and phenomena that may or may not be sensually observed but still affect us (ibid.). Finally, and most central to CR, the ‘real’ domain, or the ‘deep’ domain (called from hereon), consists of experiences of events and phenomenon as well as mechanisms and structures not directly visible but, under certain conditions, can sustain and cause events and phenomenon in the actual domain. To illustrate, Table 1 gives an overview of each domain’s relationships to each other and causality (adapted from Buch-Hansen & Nielsen 2020 and Fletcher 2016):

Empirical domain	Experienced and <i>observed</i> phenomenon or events (understood through human interpretation)	
Actual domain	Event	
Deep (real) domain	Mechanism ↗ Structure (causal force)	↘ Conditions (other mechanisms determined by liabilities and potentialities)

Table 1: CR ontological domains of reality

It is thus the deep domain that is the most central field of inquiry within CR. The central objective when pursuing CR-informed research should be to “use perceptions of events of empirical events [those that can be observed or experienced] to identify the mechanisms that give rise to those events” (Volkoff et al. 2007: 835 quoted in Zachariadis et al. 2013: 857). Underlying mechanisms and structures of the deep domain are thus *generative* in that they produce causal effects (Buch-Hansen & Nielsen 2020: 14).

Mechanisms, which is simply “something which makes something else happen” (Buch-Hansen & Nielsen 2020: 32), has causal properties which are dependent on certain conditions that apply in a specific context and the mechanism of other entities (ibid). Reality is ‘differentiated; containing different entities all with very different causal powers and liabilities (ibid), and in the social world, “causal powers inhere not simply in single objects or individuals, but in the social relations and structures which they form” (Sayer 2010: 71).

Causal effects are *contingent*, a possibility but never a given, and *relational*, dependent on the effects of other entities⁷ (Buch-Hansen & Nielsen 2020: 31). Causal and generative effects of structures and mechanisms are thus not always active; rather, they are characterised by their potentialities and tendencies, activated under certain conditions (ibid.).

The concept of causality within CR is closely related to its view of society as an ‘open system’. This refers to the impossibility for social scientists to insulate variables to look at correlations and causal effects in isolation (Buch-Hansen & Nielsen 2020: 33-4). This view rules out the positivist and Humean notion of ‘constant conjunctions’ and ‘the covering law

⁷ For example, to buy a computer there needs to exist, among others, a market, a monetary system, and a buyer willing to spend her money. All effects are dependent on each other.

model’, stating that causal laws are ‘out there’ for the researcher to discover and universally applicable across space and time (Bhaskar 2008).

However, the open system view of society does not rule out the possibility to identify rough trends or patterns. While quantitative methods have a somewhat disputed position within CR, Zachariadis et al. (2013) and Fletcher (2016) shows how quantitative data can serve to identify empirical ‘demi-regularities’, which is assumed to relate to tendencies, and not (positivist) laws.

Delanty & Strydom (2010:376) summarises CR’s conception of causality in the following way:

“The different levels of causation go beyond reductive cause-effect models of explanation, such as the mechanisms by which effects operate, the powers and properties that they produce and the intricate interlinkages between the different levels of structures which all make causation very complex and thus irreducible to single factors.”

Whereas (neo)positivist informed research would start from the premise of “when A, then B”, then seeking to find out what constitutes A, a CR driven research question would instead orient around realising the process and conditions under which “A” causes “B” (Zachariadis et al. 2013; Buch-Hansen & Nielsen 2020). This is done via retroductive, abductive analysis, going back and forth between observable phenomena and possible explanations (Belfrage & Hauf 2017). With all this, the focus is shifted from prediction to explanation as the aim of research. The retroductive mode of analysis will be further outlined under the method of data analysis section ([section 4.3](#)).

The layered understanding of reality explains the emergence of structures and phenomena; however, CR maintains epistemological anti-reductionism. For example, the laws of physics cannot in itself explain a social phenomenon; instead, it is the combination of mechanisms that produce the results in the appearance of new entities (Buch-Hansen & Nielsen 2020: 36-7; Sayer 2010: 97-101). This connects to another core analytical concept within CR: ‘emergent properties’. Something having an emergent property means that it is more than-and irreducible to its part (Buch-Hansen & Nielsen 2020: 36-7). This notion is deeply connected to CR’s view on causality as it is often the combination of mechanisms that produce phenomena under certain conditions (ibid.).

3.1.1. Agency, structure, and social roles

Within CR, the central relation within social reality is between agency and structure (Oliver 2012). These are viewed as ontologically distinct and generate emergent properties with causal effects through their interplay (Buch-Hansen & Nielsen 2020: 54-6, 145).

The central thesis Bhaskar (2015) develops in *The Possibility of Naturalism* is that, while individuals always find themselves within social structures, confronting them as objective phenomena, they only exist through, and as a product of, human activities in a relational manner. Accordingly, actors can either transform or reproduce social structures depending on the internal and external conditions of the agent (ibid.). This view also mirrors the model of

three spheres of transformation proposed by O'Brien (2018) as they both recognise the interplay between agent and structure while placing the individual in the core of transformative processes.

Two significant ontological implications arising from the intransitive-transitive distinction are here important; one being that social structures exist however and regardless of how individuals may interpret them, and the other is that since actors themselves poses emergent properties, they can always shape these social structures through reflexive activity (Buch-Hansen & Nielsen 2020: 54-6; Sayer 2010: 97)⁸. Causal powers here manifest as capacities to behave in specific ways, whilst liabilities refer to the likelihood of certain kinds of changes (Sayer 2010: 11).

Social roles follow a similar logic as social structures in that they are activity-dependent and exist regardless of people's perceptions of them (Buch-Hansen & Nielsen 2020: 55-6). In this, they are *facilitating* (necessary conditions for social actions of agent), *motivating* (having positional interests in the maintenance of, for example, power relations and interests) and *constraining* (influencing and shaping, although not determining) (ibid.).

Despite the reality of social structures, they are, as mentioned, always contingent. Like Sayer (2010: 97) states, "people, as language-using, meaning-creating beings, are able to change themselves, their social relations and their environment, and hence are able to transform the ways of acting, relating and thinking that hold at any particular time." In comparison to post-modernist and strong social constructivist understandings of human agency, which risks reducing the individual agent solely to a product of discourses or social structures (Buch-Hansen & Nielsen 2020: 199-200) (e.g., "the death of the subject").

CR holds that, while social structures always influence and socialise subjects, the emergent properties of people make them irreducible to particular structures of prevailing discourses and cultures and can thus, through exercising reflexivity, transform the social structures they move in (Buch-Hansen & Nielsen 2020: 90). In sum and essence, people can either reproduce or transform social systems, as illustrated by the figure below:

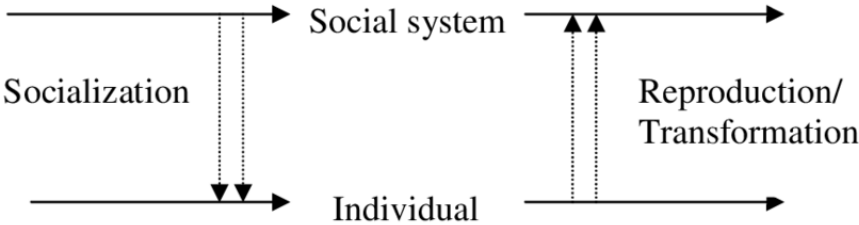


Figure 2 The transformational model of social activity (Bhaskar 2015: 40)

⁸ To exemplify; the Swedish state exists and will continue to operate and affect the inhabitants of Sweden in some way or another, regardless of if some people believe in its existence or not, however, it is still dependent and ultimately based on individuals for its continued existence.

3.1.2. Operationalisation and ethics (implications for theory, methodology and role of the researcher)

Central for the thesis aims will be the concept of transformative agency and what causal structures, properties and mechanisms enable it. CR is an ‘underlabouring’ framework (Belfrage & Hauf 2017), meaning that it operates on a high level of abstraction. Following this section, the theoretical framework of Ecological Citizenship will be outlined, which serves to inform and concretise what many of these aspects entail in practice (as understood and operationalised within this particular thesis).

The layered and relational ontological view of reality will be used as a framework of how to understand the results. For example, engagement can be seen as an emergent property of many factors (i.e., causal drivers). Thus, when exploring what drives people to engage, the findings can be axially linked to create a conceptual narrative.

CR maintains that social theories function as ‘proto-theories’ used to guide and make sense of people’s experiences and inform the direction of research (Belfrage & Hauf 2017). However, as CR treats all knowledge as fallible (Bhaskar 2008) each theory should be treated as such too, meaning that the researcher should be open to support, modify, develop, or reject theories should they not provide sufficient explanatory utility (Buch-Hansen & Nielsen 2020: 71; Fletcher 2016).

Like other agents, scientists are entangled in the open system of social reality. The element of epistemological relativism within CR does not equate to radical scepticism; rather, the researcher is seen as engaged and can choose theories based on her ‘judgemental rationality’ (Buch-Hansen & Nielsen 2020: 39-40). When a problem has been identified, the researcher should work backwards via retroduction to explain what has been identified (Hoddy 2019) with the intention to provide explanatory critique imbued with an emancipatory ideal (Bhaskar 2009). Within this, she should remain reflexive of her positionality by recognising the socially constructed nature of transitive knowledge (Sayer 1992).

3.2. Theoretical framework: Ecological Citizenship

Paterson et al. (2006) argues that representative democracy based around the competitive party system with periodic elections offers a very ‘thin’ account of citizenship. Especially concerning sustainability, this understanding of citizenship is reductive as the citizen becomes little more than a bearer of formal legal rights and whose primary relationship is characterised by compliance with the state (ibid.). The reflexivity and agency ascribed to the orthodox conception of citizenship are also limited as it fails to fully reflect the ontological capacity of agency outlined by CR.

As has been argued, transitioning from a fossil fuel-dependent economic and societal system requires fundamental changes that affect all levels of society (Leichenko & O’Brien 2020). With this, bridging democracy and climate change naturally implies an expanded scope of what should be considered political practices. While many authors have made contributions and conceptualisations relating to the field of climate change and citizenship (e.g., Barry 1999, 2003; Dean 2001; Henderson & Ikeda 2004; Micheletti & Stolle 2012), the thesis will mainly draw on the EC model founded by Dobson (2003). The adoption of the EC model is

due to its implicit relationship to the field of Global Studies in terms of the political space for action and its materially rooted ethics and considerations of personal inner drivers of change.

As a point of departure, Dobson (2003: 2-3, 129) imagines a concept of citizenship rooted in the assumption that people can make sustainable choices, not based on self-interest, but instead because they want to ‘do good’ and be virtuous. It thus stands in contrast to rational choice theory where utility maximisation and man as ‘homo economicus’ prevails (Hodgson 2012), which is often based on a positivist model of reasoning (Hay 2004) and the cultural belief stemming from modern economic thought that society flourishes most if people seek to maximise their egoistic interests (Thiermann & Sheate 2020).

Dobson’s (2003) conceptualisation of EC represents a reflexive relationship to a global and future collective rooted in the causal material reality of asymmetrical globalisation. This point links well to the CR understandings of social structures as something which confronts people as an objective phenomenon, but which are not behaviourally determining and can thus through agency potentially be transformed, given the right conditions and capacities (Buch & Hansen 2020: 54-5).

The political community dictating these obligations are determined by the ecological footprint index, in concrete meaning that those whose actions pollute more have a responsibility to change more (Dobson 2003; Saiz 2005). The asymmetrical reality of globalisation creates the non-territorial political space where the relationship to the welfare of other people and generations is nonreciprocal (Dobson 2003: 82).

Including the ecological footprint index as one of the conditioning factors to the political space of action naturally warrants the inclusion of the private sphere⁹ as a legitimate arena for citizenship action. For example, in line with the feminist slogan, ‘the personal is political’, the same can be said about climate change. Campaigning for better access to sustainable ways to commute while also actively choosing to take the bus (rather than the car) should both count as citizenly practices since the individual uses her agency for a societal change she wishes to see; arguably, anything else would be a false distinction (Seyfang 2006).

EC practices will, in this thesis, be defined as a reflexive and performative form of agency individuals use to engage with and seek to transform society partly based on ethical reasoning around climate change and its implications. The CR conception informs this definition of agency, structure, and social roles. To recall, individuals are said to inhabit emergent properties making their activities influenced but never irreducible to a particular structure of discourses or paradigms (Buch-Hansen & Nielsen 2020: 90).

⁹ Dobson’s (2003) conception of ‘the private sphere’ can easily be mistaken for O’Brien’s ‘personal sphere’ (2018) due to their syntactic similarity, however, while the first refers to a sphere of practice the latter refers more to ‘the inner dimensions’ of change (see section 3).

3.2.1. Theoretical background: the disembedding and asymmetrical dimensions of globalisation

Studying politics in territorial isolation is becoming increasingly impassable and, to some extent, obsolete (Scholte 2005: 67). In relation to the thesis aims, two reasons can motivate this argument: the disembedding and asymmetrical nature of globalisation.

Starting with disembeddedness, Eriksen (2014: 19) describes the phenomenon as the historical movement towards an increasingly abstract world, both a prerequisite and central characteristic of globalisation. Commonly associated with Polanyi's (1944) work, disembeddedness refers to the 'lifting out' of social relations from their local embeddedness, partly eschewing their origins. In Eriksen's (2014: 19) broadening of the term, anything that can be accessed from anywhere at any time can constitute a disembedded matter. This process not only applies to information, money and other types of capitals typically associated with the transnational flows of globalisation but also issues such as identity orientations and allegiances (ibid.).

If globalisation represents a historical movement towards abstraction, individuals are increasingly less imaginatively bound by their local environments and can instead increasingly choose to act and live according to ideals extending beyond the immediate borders of nation-states. However, owing to the change brought about by globalisation and the environmental crisis, Wolf et al. (2009: 505) argues that "the temporal and geographic boundaries that previously confined the consequences of individuals' actions have been dispelled by the effects of globalisation and have augmented the reach of private agents' remits to the future and the global".

Wolf et al.'s (2009: 505) point brings us to the second of the two dimensions emphasised concerning globalisation: asymmetry. Liberal theorists of International Relations often ascribe 'interdependence,' assuming a mutual interest of exchange among nation states, as a key driver and upholder of peaceful integration of the world (Keohane & Nye 1973). However, such understandings can easily overlook both soft and hard power relations dictating the conditions of globalisation due to the post-colonial and unequal nature of ecological exchange between the Global South and Global North (Hornborg 1998; 2019). Vandana Shiva (1998: 231) makes a critical point about this relationship, as she states:

"The 'global' in the dominant discourse is the political space in which a particular dominant local seeks global control, and frees itself of local and national international restraints. The global does not represent the universal human interest, it represents a particular local and parochial interest which has been globalised through the scope of its reach. The seven most powerful countries, the G-7, dictate global affairs, but the interests that guide them remain narrow, local and parochial."

Hence, the global is the product of a specific local, namely, (in broad terms) the Global North. This observation captures the essence of the asymmetrical dimension of globalisation, and, as Shiva (1998: 233) further argues:

“The notion of the ‘global’ facilitates this skewed view of a common future. The construction of the global environment narrows the South’s options while increasing the North’s. Through its global reach, the North exists in the South, but the South exists only within itself, since it has no global reach. Thus, the South can *only* exist locally, while only the North exists globally.”

The reality of the unequal flow of globalisation carries several implications, not the least in terms of environmental justice and who the real protagonists of the Anthropocene are. It is now a well-known fact that, while the Global North are the main emitters of CO₂, the Global South will be most affected by its consequences, primarily due to pre-existing vulnerabilities and limited capacities for adaptation (Hornborg 2019).

Bauman (1998) discussions around globalisation further add to this argument in considering who gets to ‘be global’ in their actions, as these are the ones who get to set the tone and compose the rules of the game. However, while the few compose the rules, some can choose to follow or resist them. The remarks by Shiva quoted above was written over 20 years ago, and since then, global inequality has only increased but also made its way into public consciousness partly due to authors such as Piketty (2018) and Klein (2015) together with organisations like Oxfam (e.g., 2020).

While the actions and lifestyles of citizens in the Global North are contributing to reproducing the unequal and unsustainable global exchange, the majority are not running the industries and corporations executing the polluting practices. Thus, in line with CR, *agency and Ecological Citizenship will, in this thesis, be understood as a way citizens can reflexively seek to resist this social structure with its associated lifestyle and paradigms to seek instead to transform them in line with the ethical obligations established by EC.*

3.2.2. Citizenship as a historically developing term and role

Citizenship as a concept and social role has been historically determined, exclusionary and ambivalent (Dobson 2003: 72). In its traditional guises, the term is commonly divided into two schools of thought, namely, liberalism, emphasising rights, and civic republicanism, emphasising duties (Dobson 2003; Seyfang 2006).

Both strands of thought are to some extent compatible with integrating considerations for climate change. Liberal political philosophy, emphasising the rights of individuals, can extend its language to include the rights of future generations (by, for example, drawing inspiration from the Brundtland report¹⁰), the environment, and even animals (van Steenbergen 1994). Meanwhile, civic republicanism emphasises duties and obligations serving the common good (Seyfang 2006), making it more compatible with some utilitarian models of thought and, potentially, an ethic of care.

Traditionally, the notions of rights and obligations have been defined in their relationship to the state with roots in the Hobbesian account and later challenged and developed via, among others, Locke, Rousseau, Kant, and Rawls (D’Agostino 2019). Its historical development is

¹⁰ “Development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (Brundtland 1987: 43), wherein the word “ability” could be replaced by “rights”.

partly characterised by a continuous and processual inclusion of less privileged groups (van Steenbergen 1994). The concept is still, as of today, under constant re-evaluation. While, for example, feminist scholars have contributed with deconstructing the notion of citizenship and in parallel argued for the political nature of the private sphere (Lister 2017), globalisation has, as argued, made the interconnectedness of the earth a political space with a direct relationship to the private (Dobson 2003). In considering all of this, EC rises above traditional understandings of citizenship by making it less of a *status* and more of an *activity* (Seyfang 2006; van Steenbergen 1994) firmly embedded within an ethical positioning based on the material reality of globalisation and climate change (Dobson 2003).

Partly decoupling citizenship from the state is not something new or unique to EC nor its theoretical siblings. For example, cosmopolitan citizenship, with Kant being the first one to link the two concepts (van Steenbergen 1994), challenged the belief that the individual's central political obligation is to the nation-state (Dobson 2003). However, cosmopolitanism, defined as a belief in a universal moral personality (Bergman-Rosamond 2011), can result in a 'performative contradiction' as its challenges are often articulated by those not covered by it (Mendieta 2009). As Mendieta (2009) argues, this 'who' excluded from the cosmopolitan articulation of the universal also represents the contingent limit of universalisation, which directly relates to Shiva's (1998) and Bauman's (1998) arguments about who gets to orchestrate globalisation.

As cosmopolitanism relies on an ethical universalism, a *post-cosmopolitanism*, as discussed by Dobson (2003: 80), has its obligations produced by "the activities of the individuals and groups with the capacity to spread and impose themselves in geographical and diachronic space". These obligations are intimately linked to the asymmetrical and disembedded nature of globalisation. Its diachronic space has no determinate size (city, state, nor universal) but is instead rooted in the identifiable relations of real harm (*ibid.*), which is part of the intransitive dimension of reality in CR ontology. These relations conditions the obligations of different groups since not all humankind contributes to climate change equally (*ibid.*: 81). Cosmopolitan community announces the community of citizenship, whereas for post-cosmopolitan it is produced (*ibid.*: 114)

Conclusively, as a form of post-cosmopolitanism, EC represents an ethical position based on the objective material realities and relations of globalisation (Seyfang 2006). It is thus not about superficial incentives implying a symbolic relationship between strangers (*ibid.*). Nor is it the conventional legal status, but a broader conception understood as a moral category and, to some extent, a moral (and political) identity (Wolf et al. 2009).

3.2.3. Arriving at an Ecological Citizenship Model

Following the preceding historical contextualisation and debates, some main pillars emerge, which will be central to the analysis. The framework of Ecological Citizenship used in this thesis thus entails:

- 1) A *post-cosmopolitan* orientation emphasising *obligations and responsibilities* which draws its base of justification on account of the *material reality* of the asymmetrical flows of globalisation and environmental justice.

- 2) The relationship based on the above principles is *nonreciprocal, non-territorial* and has a *temporal* dimension, in concrete meaning that the points of reference for relevant action stretch beyond the state to include the welfare of the planet and those inhabiting it (now and in the future).
- 3) This relationship manifests through reflexive choices carried out on an everyday level. This naturally warrants the inclusion of the *private sphere* as a legitimate arena for citizenship practice.
- 4) All of this is rooted within the real, intransitive events that give rise to a political community defined by practice (and not by status) and thus constitutes a potential social role in the CR sense that individuals can act on and through.

To conclude, Ecological Citizenship reflects a reflexive relationship to a global and future collective. This ethical reconsideration is also firmly grounded in the causal material reality of the asymmetrical flows of globalisation, especially through its grounding in the debates surrounding environmental justice. This reality is created not by mental activity but by “the material production and reproduction of daily life in an unequal [...] globalising world” (Dobson 2003: 30). In this sense, “the political space of obligation is not fixed as taking the form of the state, or the nation, or the European Union, or the globe, but is rather ‘produced’ by the activities of individuals and groups with the capacity to spread and impose themselves in geographical, diachronic, and [...] ecological space” (ibid.:106). *Globalisation and climate change are thus best understood as a producer of a political space of asymmetrical obligation.*

3.3. Operationalisation

As was outlined in the theory of science section ([section 3.1.1.](#)), individuals can use their agency to either reproduce or transform social structures. In this thesis, the EC model serves to conceptualise the ontological content of transformative agency.

EC is a normatively descriptive concept, “a normative model of how an environmental ethics could be derived, and what it could advocate, and it contains a theory of change” (Seyfang 2006: 388). This theory of change will, in this case, be used to look at how people can potentially manage this social role, what makes them embrace the dependent-arising obligations, and how future post-carbon imaginaries can further inform empowerment of this type of transformative agency. In short, what are the emergent properties and causal drivers necessary to understand the transcendental question ‘what must be true for Ecological Citizenship to be realised?’.

Informed by a CR framework, research should be explanatory and emancipatory (Bhaskar 2009). This ideal is embedded within the aims of the thesis and its choice of theory. Applying an EC perspective allows the analysis to be centred around the individual and her agency, perceptions, and imaginaries while also recognising the relationality of her action in affecting distant populations, both in a geographic and temporal sense. Finally, the EC model grants conceptual access to particular types of practices and connects them to the broader structures and relationships outlined above.

4. Methodology

This section outlines the methodology of the thesis, which includes data collection, research design of the implemented survey, what type of data has been generated and how the data is analysed qualitatively. Firstly, the section explains the SenseMaker data collection and analysis tool with its practical and theoretical elements. Secondly, the qualitative coding method is presented, consisting of a Critical Realist (CR) informed Grounded Theory following a retroductive movement.

4.1. Empirical foundation: the SenseMaker

The SenseMaker research tool is a mixed-methods approach in the form of an online survey centred around capturing micronarratives that are partly interpreted and analysed by the respondents themselves through interactive widgets. As a method, the SenseMaker tool is a type of (digital) ‘distributed ethnography,’ but replacing interviews with micro-narratives sourced from people’s lived experiences based on a set of standardised questions (Van der Merwe et al., 2019). It seeks to situate respondents via a personal experience or decision, which relates to the research aims and design (Lynam & Fletcher 2015). One rationale underpinning the SenseMaker is to democratise research by inviting the respondents to reflect on the answers given, seeking to “rehumanise” the data while striving to minimise bias when interpreting the data (ibid.).

The survey design devised for the TransVision project and used for this thesis aimed to capture how climate change and its incentives are internalised and embodied in people’s everyday lives, experiences, and decisions to support new forms of transformative agency, political engagement, and healthy cooperation.

4.1.1. Theory underpinning the SenseMaker

As a concept, sensemaking is understood as the cognitive process people use to structure the unknown, understand the world, and instruct action (Van der Merwe et al., 2019). It constitutes an interpretative process informed by culture, knowledge systems and experiences where meaning is assigned to phenomena to inform behaviour on individual and collective levels (ibid.). How people act, in turn, shapes their social realities and future sensemaking as an ongoing process (ibid.).

Narratives, and their construction, is here central; within the micro-narratives of everyday life, the meaning assigned to the world is reflected (Van der Merwe et al., 2019). Accessing this colloquial form of social knowledge can reveal elements of grounded discourses that inform decisions, actions, interests, and principles, shaping public truth and preferable behaviour (ibid.).

4.1.2. The SenseMaker data collection and analysis tools

The SenseMaker package¹¹ consists of two components: the data collection tool in the form of a survey and a data analysis tool. The survey design is constructed following a ‘signification framework’ containing the concepts the researcher(s) wish to explore. The framework design

¹¹ Access to the tool is granted via a commercial software package produced by Singapore-based Cognitive Edge (<https://sensemaker.cognitive-edge.com>).

most often departs by soliciting a micro-narrative from the participant, followed by clarifying questions in which participants self-signify their narrative(s) (Van der Merwe et al., 2019). The clarification framework consists of interactive widgets to further extract the associated meaning from the respondent and grant conceptual space relative to the concepts utilised in the framework (ibid.).

‘Deliberate ambiguity’ among the options encourages people to exercise their judgment, trigger more contemplative, and ‘slow’ thinking to bring the experiences into working memory (Van der Merwe et al., 2019). Due to this encouraging contemplative factor, respondents are also welcomed to go back and retrospectively adjust their answers as the tool is designed to trigger new, deeper, and alternative modes of thinking (Van der Merwe et al., 2019). The contemplative aspect makes the tool unique in that it encourages reflexivity and transformation of thought already in its data collection phase.

The self-signification widgets consist of ‘triads’, ‘dyads’, and multiple-choice questions:

- A *triad* is a three-dimensional scale with labelled corners used to convey the relative strength and importance of three concepts. Respondents are here invited to place a dot (i.e., via a mouse click or mark) at the location in the triangular scale which matches the relationship of their narrative to the three factors.
- *Dyads* are helpful to indicate the relative strength of a single concept, quality, belief, or outcome along a continuum between two opposite extremes. Like the triad, this is often (although not always) related to the micronarrative.
- *Multiple-choice questions* are partly used to capture the participants’ demographic details, but they can also highlight certain aspects of the anecdote shared.

To illustrate, below is extracts from the survey used (the full survey can be found in appendix 1):

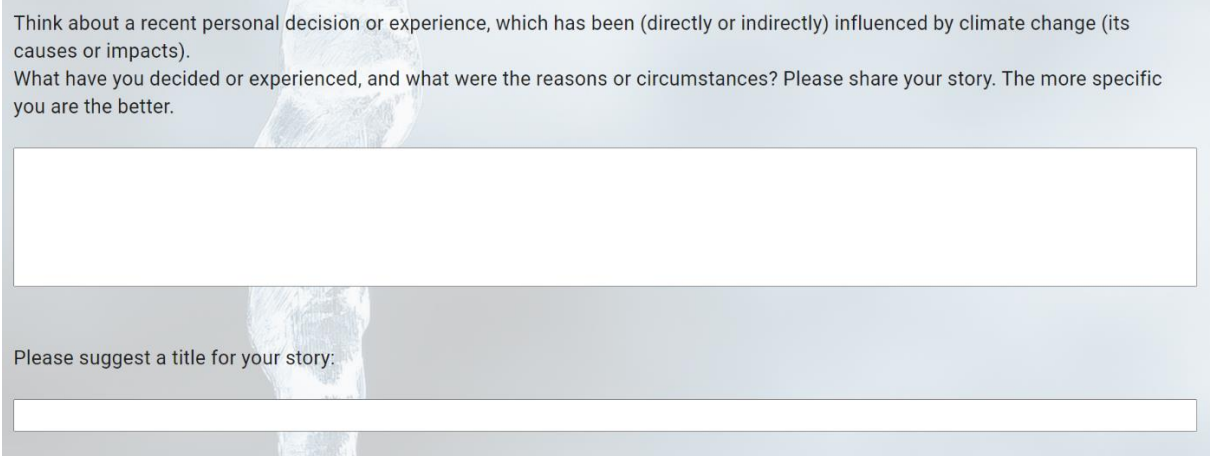
The image shows a survey prompt on a light blue background. At the top, there is a faint, artistic image of a person's face. The text of the prompt reads: "Think about a recent personal decision or experience, which has been (directly or indirectly) influenced by climate change (its causes or impacts). What have you decided or experienced, and what were the reasons or circumstances? Please share your story. The more specific you are the better." Below this text is a large, empty white rectangular box for the user's response. At the bottom of the prompt area, it says "Please suggest a title for your story:" followed by a smaller, empty white rectangular box for the title.

Figure 3: introductory question incorporating a storytelling approach acting as a “prompt” for a micro-narrative.

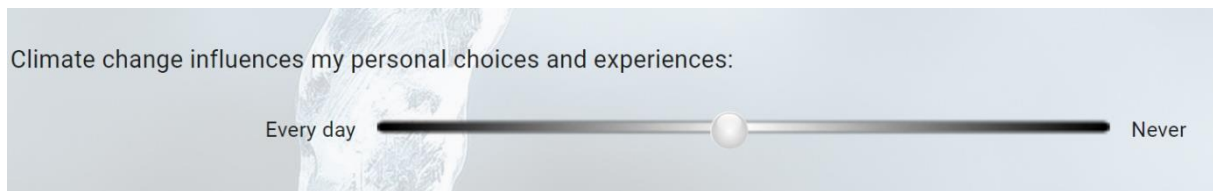


Figure 4: dyad used to indicate the relative strength of a concept, quality, belief, or outcome along a continuum between two opposite extremes.

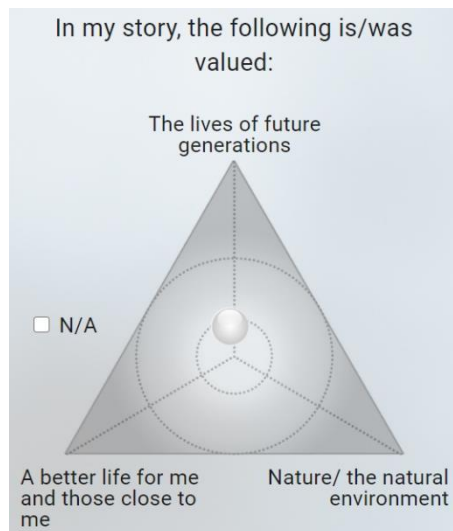


Figure 5: triad used to indicate the strength of a given value in relation to the main question.

The SenseMaker analysis tool provides several ways to explore and examine the data as it allows the user to easily shift between identifying patterns in any of the self-signifying widgets associated with the narratives, as well as the narratives themselves (Lynam & Fletcher, 2015). In this thesis, this function was mainly used to pre-explore the data, display and compare the qualitative findings to the overall sample, and compare groups.

4.1.3. SenseMaker survey design and dissemination

The survey was divided into three parts; the individual's behavioural level, the systemic level with perceptions of the distribution of climate change responsibility among actors, and the 'inner dimensions' of sustainability exploring what qualities and capacities are deemed relevant when addressing climate change (see appendix 1 for the full survey).

Two strategies of dissemination were implemented, generating two samples of data. One provides a representative sample for Sweden's three largest cities Stockholm, Gothenburg, and Malmö¹², which a market research firm was hired to collect¹³. Here, the survey was sent

¹² However, it is important to stress that since most answers come from people living in the three largest cities of Sweden, rural and small(er)-town perspectives are not represented to the same degree. Also, as will be explained under method of data analysis (section 4.3.), apart from the results from the coding procedure for section 7.3. (future imaginaries), far from all data was used due to the set inclusion criterion.

¹³ The sample collected by Norstad was based on figures produced by Statistics Sweden which is a government agency administered by the Ministry of Finance (which manages the official statistics for decision-making, debate, and research in Sweden).

to individuals who received a small compensation for completing the survey. The other (which I was mainly responsible for) primarily focusing on the Scania region and was more concerned with ‘quality over quantity’ by targeting individuals, networks, and organisations more motivated to provide richer answers. Data collection ran between November 2020 and January 2021, and, in total, 1,237 responses were collected.

With the targeted sample, efforts were made to ensure the inclusion of younger individuals (16 – 24-year-olds). To this end, I initiated a project called ‘Praktik vid Events’¹⁴ through Malmö City which offers young people short internship opportunities. The project ran for two weeks where five local youths from Malmö helped the survey reach more younger individuals and groups within Malmö. Due to the restrictions posed by the ongoing epidemic, all dissemination was done digitally. The SenseMaker also has a built-in recording function via the app allowing the researcher to conduct the survey more like an interview. This could not be used as originally planned.

4.3. Method of data analysis

The data is mainly analysed via qualitative analysis, focusing on the micro-narratives as its central analytical component. The self-signification figures serve a supporting role used to challenge, support, or develop emergent categories from the coding process.

4.3.1. Retroductive Grounded Theory

GT might at first seem counterintuitive given the thesis’ theoretical framework and the fact that GT, in its original form, follows a purely inductive methodology (Glaser & Strauss 2017: 3-5). However, from a reflexive point of view, the epistemological assumption that the researcher can approach the data purely inductively, as a *tabula rasa*, is increasingly questioned in later developments of the method (Oliver 2012; Belfrage & Hauf 2016).

A purely inductive GT is not compatible with Critical Realism (CR) due to its misrecognition of the socially constructed nature of our knowledge and the notion that “causal mechanisms does not speak for themselves” (Oliver 2012; 379). By departing from the orthodox versions of GT, it is instead possible to fruitfully integrate a GT method of analysis with a CR theory of science while utilising the strengths of both.

While later developments of GT have gravitated both towards constructivism (e.g., Charmaz 2006; Mills et al. 2006) and postmodernism (e.g., Annells 1996), the critical component negotiating GT towards CR is the concept of retroduction (Hoddy 2018). Retroduction, as touched upon under the theory section ([section 3.1.2.](#)), is in some ways similar to abduction, an increasingly common coding rationale within GT, according to Timmermans & Tavory (2012) and Oliver (2012).

In essence, an abductive reasoning model constitutes a dialectical movement between theory and data, letting each round inform the next to generate creative and novel theoretical insights (Timmermans & Tavory 2012). It departs from traditional GT, which demands a complete (and arguably impossible) absence of theories and preconceptions to instead approach the data

¹⁴ For more information, visit <http://praktikvidevents.se/>.

with a deep and broad theoretical base to develop the theoretical repertoires through the research questions (ibid.).

Retroduction, on the other hand, entails asking the CR transcendental question ‘what must be true for the observed phenomenon to be the case?’ and subsequently abstracting the potential causal mechanisms from empirical data through abstraction (Bhaskar, 2009; Oliver 2012). Like abduction, this entails a recurrent iterative movement between theory and data, only with a specific question in mind (Oliver 2012)¹⁵.

As Hoddy (2019) notes, GT’s movement from the empirical towards the abstract resonates well with the CR stipulation to move from the ‘concrete’ towards causal explanations via abstraction and careful conceptualisation. Producing these types of explanations of human behaviour must start with participants’ analyses of their intentions, which is what the SenseMaker aims to do, and, from there, examine the structural roots of contradictions between what is said and unsaid (Oliver 2012). Linked to its emancipatory ideals, CR believes that the participants’ experiences and understandings can challenge existing scientific knowledge and theory (Fletcher 2016), which links well to the general aim of the GT version developed by Corbin & Strauss (2008).

4.3.2. Coding procedure

The coding procedure is based on the model outlined by Corbin & Strauss (2008) and informed by the CR retroductive element discussed above. The analytical procedure here consists of three stages: open, axial, and selective coding, which starts by fragmenting the data to extract its potential meanings and then putting it back together to reach a higher level of abstraction and thus generate theory.

Open coding consists of breaking open and ‘fracturing’ the data to openly consider what potential and possible meanings may emerge from it (Corbin & Strauss 2008: 160). The focus is on identifying similarities that can be used to sort the data into higher-level categories (Maxwell 2012). It is thus not a process of ‘counting’ but rather about rearranging the data to extract meaning and facilitate comparison to develop theoretical concepts (ibid.).

At this stage, the answers to the survey were coded line by line using the NVivo software, with each open code being assigned to categories and sub-categories formulated during the first round of coding. Approaching the data retroductively here meant allowing the research questions and theoretical framework to partly inform but not dictate the procedure. This strategy allowed the procedure to be guided by the research questions and theory without being too rigid, which is preferable to avoid distorting observations (Saldaña 2013: 146).

Asking what some of the drivers for transformative agency and change is partly embedded within the understanding of Ecological Citizenship, which, although intendedly a broad and inclusive framework, helped situate participants reflections and stay close to the aims of the thesis. For example, the codes can be understood in relation to obligations (a central term

¹⁵ “Abduction involves theoretically redescribing or recontextualising the phenomenon in question; whereas, retroduction is a thought operation that involves postulating relevant causal mechanisms that may account for it – though, in practice, the two overlap” (Hoddy 2018: 113-14).

within Ecological Citizenship, see [section 3.2.](#)) and how the respondents' stories, actions, choices, and imaginaries relate to this reality.

The second step of analysis consists of axial coding, which puts the data back together by crosscutting and drawing connections between the open categories and sub-categories (Corbin & Strauss 2008: 198). Axial coding focuses on the conditions that give rise to a category (the phenomenon) and context (the specific set of properties) (Kendall 1999). In a CR-informed GT, axial coding can be used to identify 'demi-regularities' (Hoddy 2019), which, although not considered universal, indicates what types of causal drivers and potentialities produce the observed phenomenon.

Finally, selective coding is applied to capture the essence of the research and build theory in line with the research aims (Walker & Myrick 2006). A core category is selected, and all other categories are related to this core (*ibid.*). It is thus similar to axial coding but operates on a higher level of abstraction to draw clear conclusions of the coding procedure (*ibid.*).

In total, three open and axial coding procedures were conducted, each addressing one research question. All procedures followed a similar routine; however, both open and axial categories emerging from the first two often intersected, and several entries were frequently assigned to multiple categories (which is also the reason for not including the number of codes for each category in these cases). For the third coding procedure relating to the third research question, each entry was assigned exclusively to one open category. During the second reading of the dataset and axial coding process, some categories were reconsidered, integrated, or removed due to reasons such as insufficient supporting data.

For the first two research questions, the coding procedure sought to identify entries reflexively outlining why the respondent commit to making changes and choices according to the obligations posed by climate change. The first looked at open question 1 of the survey¹⁶, while the second at the open question 3¹⁷ (see [appendix 1](#)) while the third procedure relating to the third research question, took its data from open question 4 of the survey¹⁸. It is thus not about awareness about climate change in itself, as this has already been established (Gullers Grupp 2018), but rather about what makes people act upon the incentives posed by climate change. It is also not about what type of actions most people take in relation to climate change, as this has also been priorly established (Wamsler et al. 2021b; 2021c). Instead, it is about identifying information-rich entries providing sufficient qualitative depth into how people, through the lens of Ecological Citizenship, negotiate climate change and its related obligations into everyday choices, routines and experiences and what drives or hinders this engagement. Identifying information-rich groups is also a way to address one of the limitations of the SenseMaker method, namely, that most people did not provide the expected

¹⁶ Asking "think about a recent personal decision or experience, which has been (directly or indirectly) influenced climate change (its caused and impacts). What have you decided or experienced, and what were the reasons or circumstances? Please share your story. The more specific you are the better."

¹⁷ Asking "reflecting on my previous entries, this is what boosts my personal engagement and why (e.g. certain capacities, conditions, measures, actors)."

¹⁸ Asking "in relation to climate change, my wish for the future is that the following issues or challenges will be given more priority."

depth of reflexivity when filling out the survey (further discussed under limitations, [section 4.5.](#)).

For the third coding procedure relating to the third research question, open question 4 of the survey was coded and analysed.

4.4. Ethics and reflexivity

Throughout the research process, the Swedish Research Council's (2017) 'Good Research Practice' was actively considered and followed concerning truthfulness, transparency of premises and associations, accounting for methods and results, correct referencing, organised documentation, non-harm, and fairness.

The survey initiates with a form of consent informing the respondent of the voluntary, confidential, and anonymous conditions of participation and the intended uses of the answers collected (analysis and publication). To move on to the survey, the respondent must accept these terms by ticking an 'I agree' box. Respondents were also provided with contact details to Professor Christine Wamsler for any further questions. The data collected is stored on a secure Cognitive Edge server following the principles of GDPR.

As mentioned, orthodox GT has been criticised for assuming the possibility of approaching data purely inductively. Much of this controversy is avoided by adopting a retroductive mode of analysis and CR principles of reflexivity. As was mentioned under the theory section (see [section 3.1.2.](#)), CR does not view the researcher as a disinterested observer but as an active participant in society characterised by social antagonisms and power relations (Belfrage & Hauf 2016). This stance, however, requires active consideration of what transitive knowledge the researcher operates on. In pursuing interdisciplinary and GT- and CR-based research where each theory is treated as fallible (Corbin & Strauss 2008; Fletcher 2016), focus shifts from finding what fits the theory to instead focus on what explains observed phenomenon through empirical data and thus minimises bias towards the pre-conceptualised framework.

4.5. Limitations

While mixed methods are becoming increasingly more accepted and motivated within the academic community (Doyle et al. 2009), some challenges remain. While some researchers argue that mixed methods can offset the weaknesses of each approach (ibid.), arguably, the opposite can also be true. In the case of the SenseMaker, the qualitative depth and potential in some cases was rendered limited due to the integration of the quantitative element.

In an interview situation, there is a higher degree of control for the researcher as she can clarify questions if needed and pose follow-up questions to saturate the data¹⁹ (Esaïasson et al. 2017: ch. 14). This control is not possible via a survey. When scanning the data, it became apparent that many respondents had most likely misinterpreted the question, rendering the value of those answers highly limited. This confusion also affected how the given respondents

¹⁹ However, while interviewing situations can allow the researcher to make sure the respondent understands the question in accordance with its original formulation, the presence of the researcher might also affect the answers provided by the respondent. Removed from the situation, the respondent can instead take her time to reflect on her answers.

used the self-signification framework, which in some cases presented more ambiguity than clarity.

The SenseMaker is also different from conventional surveys, which might help to explain the apparent confusion and lack of reflexive depth of many entries. Especially since the representative sample consisted of a pool of people to which the hired company regularly sends surveys, the group might not anticipate the contemplative requirements a SenseMaker survey posed and thus not interact with it as intended. This assessment is based on an observation made during the first coding procedure (relating to the first research question) where most respondents only stated their actions and provided little or no reasoning behind them.

To address this, the thesis instead aimed to identify and investigate those entries providing a sufficient qualitative depth to pursue the formulated research questions. As a result, many of the entries used in this thesis are taken from the targeted sample where dissemination strategically targeted groups and citizens more engaged in democracy and climate change issues and thus more motivated to provide richer answers. The whole dataset was, however, useful when exploring future imaginaries.

For future use of the SenseMaker, it is thus important to identify motivated and engaged individuals. For qualitatively aligned research, the recording function making the survey more of an interview might be helpful. Follow-up interviews would also be useful to delve deeper into interesting entries found in the data.

5. Results

This section presents the research results through three main sub-sections, each addressing the three research questions in order. Each sub-section starts by outlining the main findings, followed by a more detailed review that divides the findings according to the categories identified (see [section 4.3](#) for methodology).

5.1. Climate change and agency on an everyday level: tensions and contradictions

The results of this section explore how climate change manifests through concrete actions and choices and the role sensemaking and agency has in this process. After scanning the dataset, 74 relevant cases²⁰ sufficiently meeting the inclusion criterion (see [section 4.3.2.](#)) was identified.

To address the first research question²¹, which this section functions to address, climate change and its stemming obligations can be said to be *negotiated* and *navigated* through an interplay between prevailing social structures and paradigms (such as consumerism and work) and the social role of Ecological Citizenship (EC) and the related repertoire of action available to each individual citizen. The *perception* of climate change is often viewed through this interplay, which has been termed the ‘double reality’ of climate change.

Below, a summary of the main findings relating to the first coding procedure and research question follows:

- Engagement takes place within the private sphere (Dobson 2003), but more specifically, the results suggest that engagement often operates through routines and habits. This has been termed ‘the habitual sphere’.
- As a global and internalised process, climate change acts as a potentiality in critical realist (CR) terms, meaning that it has a potential mental causal effect and, once activated, carries transformative potential in changing prevailing habits, mindsets and structures.
- While some respondents testified to the transformative mental effect changing perceived environmentally harmful habits can have, engagement must often be negotiated and navigated in relation to prevailing social structures and paradigms and their related lifestyles (such as consumerism and work). This framework of action is here termed ‘Ecological Citizenship repertoire’ and was thus deemed limited under current conditions.
- The relationship between climate change engagement and prevailing social structures and paradigms often manifests in a conflictual sense. Being an ecological citizen often constitutes an effort to ‘go against the stream’ as it seldom naturally aligns with current systematically incentivised lifestyles. This tension has been termed the perceived ‘double reality’ of climate change.

²⁰ Considerations for demographic differences (e.g., gender, age, geographical location) was not analysed as it falls outside the thesis’ scope and aims, however, future research may look into this (see [section 7.3.](#)).

²¹ Asking “how do citizens in Sweden perceive, negotiate, and navigate climate change and its stemming obligations for personal and systemic change on an everyday level?” (see [section 1.1.](#)).

For a complete list of the identified codes and categories, see [appendix 2](#), and for a full list of the results from the triads, dyads and MCQ's, see [appendix 3](#).

Below, the results summarised above will be outlined in more detail, following the themes outlined in the summary above.

5.1.1 The private and habitual sphere as a negotiating framework

Most people choose to embed sustainable practices within their current lifestyle, while a small number of participants make more drastic changes to accommodate better and reflect the level of engagement they seek. Common for both of these is how people can use climate change to cognitively break with old routines through sensemaking and moral reasoning.

The private sphere is the main arena for climate change and EC action. While most actions and changes are adapted and negotiated within the individual's current lifestyle, such change can still contain a transformative component as people adapt their lifestyle to move away from considered harmful practices:

“I have decided to stop driving and instead cycle or go to work. I took the decision when I was suddenly struck by how stupid it was to have a car at all when I both live and work in the city. I found myself taking the car everywhere, even if the distance was small. [...]. I decided to park the car for six months to see how it would go. I feel much better both physically and mentally, have lost weight, made an effort for the climate and the planet, and saved a lot of money, so the decision was easy. After those six months, I gave the car away to a relative.”ⁱ

“It has struck me lately how many new things are produced all the time. New clothes, new things in the form of electronics or something as simple as kitchen accessories. For most people, it is natural to go to a store when they need something new for the home or themselves. But there is mass production. All this is produced somewhere, and it takes power and energy and, above all, money. Why do we feel that everything have to be new all the time? [...] We must stop living in such hysteria as it eats away at our environment to produce and throw, produce and throw constantly. Recycle!”ⁱⁱ

The entries above illustrate how climate change can have a mentally disrupting effect making individuals question taken-for-granted or unconscious mental and practical routines. A second aspect to note, especially the first (i) entry, is how a change in routines led to new practical and mental patterns. From this, individual engagement can be understood as a potentiality (in a CR sense) that can processually reinforce itself as engagement grows and solidifies. In this sense, it is the everyday habitual sphere where climate change is actively negotiated and sensemaking occurs.

As established in the introduction, most people living in Sweden are acutely aware of climate change and see it necessary to act upon it (Gullers Grupp 2018). This was further strengthened by the responses to dyad 1 asking, “*Climate change influences my personal*

choices and experiences:”, to which the overarching majority responded that they are influenced every or almost every day:

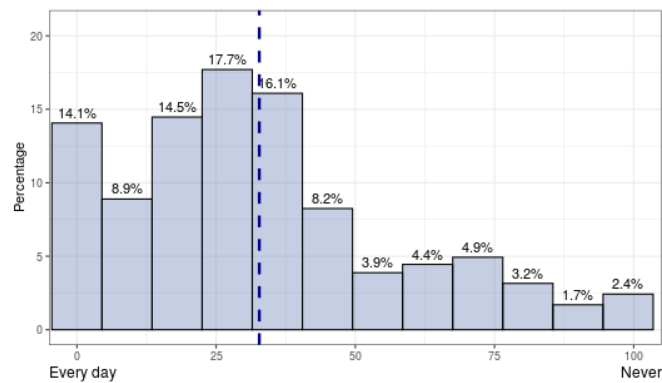


Figure 6: dyad 1

To this, the results show that people are often aware that changes should and must be made to their current lifestyle:

“Throughout my life, I have bought ALL my clothes from H&M, Shein and similar fast fashion brands. I buy a lot of clothes, shop maybe three times a month. Now I have finally started to work harder to stay away from such brands. I now shop primarily second hand, and if I shop at, e.g. Zara, it is because they offer a garment I could not find in a second-hand store. In addition, I make sure only to buy a certain item of clothing that I have wanted for more than a month. In this way, I eliminate spontaneous consumption of clothes.”ⁱⁱⁱ

Similar entries can be found where people actively choose to act on the awareness of the impact certain choices and elements of their everyday life have on the environment. Changes like these take effort, as it necessitates transcending taken-for-granted modes of living through ethical reasoning around climate change, where actions are put into a relationship to a global space of action, as proposed by the EC model (Dobson 2003).

5.1.2. Perceptions of climate change and everyday life as a ‘double reality’

Climate change and its relation to current and ordinary lifestyle routines can be said to represent a ‘double reality’ where many respondents critically reflect over current taken-for-granted practices:

“I am often surprised that the advice and recommendations I receive are routines and habits that I have had throughout my adult life. Like not wasting water and avoiding unnecessary car trips.”^{iv}

Climate change can present contradictions, tensions, and micro-conflicts within everyday life, which the individual must resolve through rationalised action. The negotiation and navigation touched upon above constitute an interplay between climate change as an intransitive phenomenon (an objective reality), the obligations arising from them in a transitive manner (how objective phenomenon is conceptualised), and the agency, which is partly the results of individual sensemaking, her social structures and capacities (see [section 5.1.1.](#)).

Depending on the level of engagement, being an ecological citizen is in many cases in direct conflict with one's immediate social structures; an example is the following:

“About a month ago, I faced a very tough decision concerning my environmental values. My new employer turned out to be less environmentally conscious than I thought (they were indifferent about frequent flying and approached sustainability issues in a very economic centric way), and I decided to quit the job after only a month. Given the current global pandemic, this was naturally a tough decision as I sacrificed a permanent contract and stability for my environmental morals. Despite this, I don't regret my decision as I think mitigating climate change and behaving in accordance with your values is more important than economic stability. I recognize my privilege in being able to financially support myself while looking for a new job.”^v

The entry above represents a high degree of commitment that, although rare, provides an illustrative example of how climate change can manifest through conflict where the citizen's inner engagement is not always met with equal outer opportunity.

5.1.3. Going beyond ‘routinised everyday practices’ towards a broader Ecological Citizenship repertoire

When inner engagement does not equate to outer opportunity, some people choose to make the necessary changes they see fit independently. This can be viewed as an active choice to extend one's ‘Ecological Citizenship repertoire’ of actions. People making this type of change often wish to take actions stretching beyond the ‘routinised everyday practices’ (Wamsler et al. 2021) discussed in the background ([section 2](#)):

“I resigned from a career path I had for 15+ years to study sustainability and build skills to create meaning for me and be able to help companies and organizations to change. I chose to study courses in many different fields, both in natural sciences and social sciences, to get many different perspectives, even though this may not fit into conventional forms of degrees, even though the scope is the same. I chose to freelance to a much lower fee level for a start-up within strategic sustainability work because it feels meaningful and valuable for both parties. I have gradually transferred the majority of my pension savings to sustainable funds. This is a vital part for me to be able to use my assets to drive a positive change.”^{vi}

“I have decided not to pursue a master's degree after my bachelor's because I see no reason to pursue a career given that society is likely to become very unstable in the near future. Instead, I have engaged in activism to influence public opinion and those in power. Given our many challenges in the future when there are conflicts over resources and so on. I see it as important to work to strengthen democracy so that we can best deal with these challenges.”^{vii}

This finding also strengthens the notion that striving towards being an ecological citizen often manifests as a conflict against prevailing social structures, which, in turn, requires one to cognitively break with taken-for-granted routines (see [section 5.1.1.](#)).

Thus far, it is clear that climate change, as a potentiality, can have a disrupting effect which people manage and negotiate differently. While some are content with switching the car for a bike or shopping more organically, others seemingly find this insufficient and make more radical changes accordingly.

To sum up, seeking to act as an ecological citizen largely constitutes an effort to ‘go against the stream’. This effort necessitates the causal driver of moral commitment to go beyond the prevailing unsustainable structures and their incentivised lifestyle. This moral commitment and ethical reasoning are no simple responses to external incentives since people must often transcend taken-for-granted assumptions and habits to embody EC principles.

5.2. Drivers for transformative agency and change

While the preceding section looked into how climate change engagement manifests on an everyday level, this section explores what factors and capacities drives the willingness to engage. This section is directly related to the second research question²². In total, 336 entries were here coded and analysed.

The identified motivating drivers and enabling capacities can be divided into five broader themes, namely:

- 1) *Belief in the importance and impact of personal agency* is a belief and capacity to view the importance of one’s agency as a necessary component for more extensive systemic change.
- 2) *Collective and communal embeddedness* contains a spatial, practical and pragmatic component and a locally tied relational aspect which points to the importance of embedding climate change obligations and practices into local communities.
- 3) *Embodied experience* makes climate change more concrete by moving the issue from imagined and abstract to concretely experienced. The former imagined aspect acts as a precondition to interpret experiences related to climate change. From a CR perspective, engagement is, in this case, an emergent property of experience, emotions, and awareness.
- 4) *Ethical, relational drivers* are based on the causal and materially rooted consequences of climate change, as emphasised by EC (Dobson 2003). Climate justice and considerations of future generations are here two themes; however, the latter was most present in the data.
- 5) *Autonomy* refers to the degree to which individuals can effectively pursue and exercise control over their inner engagement through concrete action. Many respondents expressed a lack of control and alienation in, for example, feeling that climate change is too momentous to act on as an individual.

For a complete table of the identified codes, see [appendix 2](#).

The following section will go through the results more in detail.

²² Asking “what are some drivers motivating people to change (in relation to climate change)?”

5.2.1 Believing in the systemic impact of individual agency

Believing in the importance and necessity of individual agency was revealed to be a strong motivating force and guiding belief for many respondents. It represents a type of personal ontology where systems are viewed as fundamentally shaped and reproduced by individuals, which mirrors CR’s ontology of society (Sayer 2010: 97).

This belief carries different nuances and degrees of commitment and, thus, transformative potential. Some people expressed engagement as a type of duty to ‘do one’s bit’, others a more creative belief wherein agency can change the course of developments and not simply sustain current trajectories:

“People can do anything, if only they want it,”^{viii}

“The fact that we can all do something,”^{ix}

“I think what happens at the micro-level actually impacts the macro level! The individual's way of behaving and how the individual feels affect the big picture!”^x

To connect these categories to the overall sample, triad 3 (asking “my story indicates that in a context of climate change:”) and dyad 5 (asking “based upon my previous reflections, influencing future actions feels:”) presented below illustrates that a highly significant number of people within the general sample believes that they can influence and act and that they deem it important to do so:

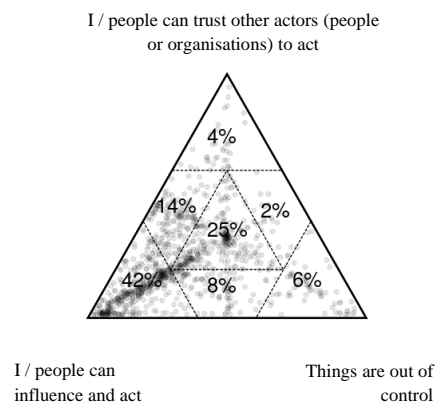


Figure 7: triad 3

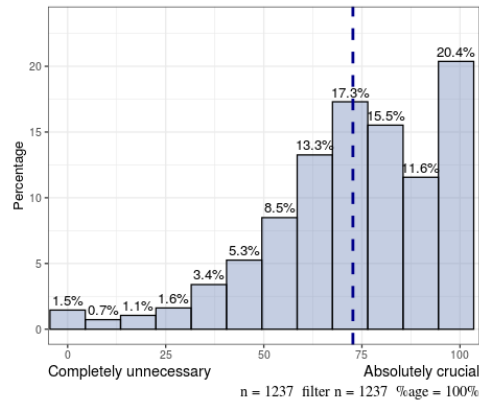


Figure 8: dyad 5

Thus, while most people did not explicitly express how their individual agency is a necessary or critical component for systemic change in the qualitative data, the results of the two figures above (7 and 8) indicate its relevance across the dataset.

5.2.2. Hope, community, and embeddedness

Other people mentioned hope and sources of inspiration as drivers for climate action. These two often overlap in their contingency on current global events, such as the work of Greta Thunberg or the victory of Joe Biden in the US presidential election. Stories like this often indicate a rekindling of hope:

“Hope is alive about the planet being saved since Trump lost power.”^{xi}

This type of hope and inspiration mentioned above mainly derives from global events; however, many people often spoke of hope and inspiration in the context of feeling part of a local community. The latter acts as a strong motivator and enabler for transformative change and engagement. The data shows that communities can serve as a refuge where individuals can find empowerment and feel part of a collectively mobilised shared vision. They also constitute a medium and forum through which ideas can be developed and honest reflections shared. In sum, they ground the individual and offer a concrete connection to a shared vision, goal, and related practices. Some examples are the following:

“Feeling of community and emotional connection - because that is what matters in life. Indignation and determination - because it CANNOT BE TRUE that this is the way we treat the planet we live on and depend upon and that we leave to our children.”^{xii}

“The need to meet other people confronting the most important questions facing us, however serious with a sense of active hope!”^{xiii}

“My contact with our countryside and the more concrete efforts which are created by the people there has provided me with food for thought. We need these groups of people who not only rethink but also create different contexts to be active in. Therefore, my longing for a concrete change resulted in taking a weekend course in organic farming, where there are already different ways to make use of our nature together concretely, and the conviction to start growing

yourself teaches me a lot about how nature works and what it needs. The people acting in these contexts leads the way for the rest of us in reducing and recycling. It is good to be able to discuss times of transitions with some who are already on the way.”^{xiv}

There is thus both an emotional and pragmatic component that local communities can empower for the individual citizen and her level of engagement. The data provides some illustrative examples of people both initiating collaborative projects and meaning-seeking individuals seeking their way into local community projects and networks:

“I have, together with some others here in the municipality, started a co-cultivation. We have received land from the church to use freely. We want to increase and spread learning about cultivation as well as create local collaborations and strengthen the local community and sense of community”²³.^{xv}

“I have sought my way to the Transition Network to find out how I can contribute since I don’t have the energy to start something on my own”^{xvi}

While EC stipulates that the political community of ecological citizens are dictated by the ecological footprint index and the asymmetrical flows of globalisation (Dobson 2003), this represents a disembedded community and more relates to the ethical source of obligatory actions. The data indicate that it might be equally important to embed the political community in concrete local communities of practice to inspire hope and action.

This notion is strengthened by prior analysis of the data showing that stories reflecting a more individualistic orientation also show a greater disposition towards not attempting to influence public climate work and view their influence as less important (Wamsler et al. 2021c). The communal aspect of engagement identified here might thus share a relationship to the capacity to believe in the impact of individual agency (see [section 5.2.1.](#)).

5.2.3. Experiencing climate change

As discussed in the previous section ([5.1.](#)), on an everyday level, climate change often manifests as a generative structure and as types of social cues triggering the awareness of climate change as a behavioural frame of reference; experiential drivers thus matter, and this finding was here further strengthened.

Many people shared anecdotes and stories about how they, in many cases, experienced first-hand the effects of climate change. Some entries tell how these experiences stirred up emotions such as grief and urgency and how they often transformed into concrete actions. In these cases, climate change engagement can be viewed as an emergent property of awareness together with emotional and experiential drivers to engagement.

The experiences do not necessarily translate into directly related actions (for example, a shortage of water leading one respondent to reduce her water consumption). People also

²³ Community, which can both signify a type of social cohesive force, and a geographically specific location has two distinct words in the Swedish language; “lokalsamhället,” literally translating to ‘the local society’ and “gemenskap,” more signifying ‘togetherness,’ were both mentioned in this entry.

connect, for example, warmer winters as an incentive to eat less meat. This linking illustrates a type of transitive realm, or discursive realm of practice, of climate change consequences and suitable actions in response:

“Experience: impact of climate change on the climate in northern Sweden. To be very specific: the mosquitoes stayed alive for a longer period because it took longer than usual for the temperature to go below 0 during the night. Besides the fact that mosquitoes were very annoying, it just showed how direct effects can be noticed and experienced kind of everywhere. Decision: be even more aware of my diet (vegetarian - and vegan as much as possible) and the way I transport myself (bike and public transport in as many situations as possible).”^{xvii}

“The summer of 2018 was so dry that I actually experienced physical pain from seeing the withered vegetation here at home in Skåne and during my train holiday to Jämtland, where the air was also filled with smoke.²⁴ When a few drops of rain finally came, I cried with relief. Therefore, I decided to take better care of the water in my garden. We now collect the rainwater from the roof in a pond and containers to use for irrigation in our greenhouse. The pond has given me a lot of joy. Studying dragonflies, frogs, and other life has been a daily highlight during this year's holiday. The neighbours are also happy, they hope that the water we now use in the garden will reduce the risk of them having their basement flooded again.”^{xviii}

The second entry quoted above also ties back to one of the observations made under section [5.1.1.](#), namely, how people can reflexively use climate change to ‘make or break routines’ and make outer changes that extend their EC repertoire. In this case, the changes made also gave way to new sources of joy and inspiration, increased local resilience (reduced risk of flooding in the neighbour’s basement), and cultivated new perspectives, all through transforming worry into concrete and hyper-local action (as also mirrored under [section 5.1.1.](#)).

All this further strengthens the notion that transformative agency (driven by and conceptualised via the principles of EC) stems from an internalised process that potentially creates new modes of action that are often maintained afterwards.

5.2.4. Non-reciprocity

Considerations for future generations and issues pertaining to climate justice, two categories outlined, and central elements to the EC model were present in the qualitative data. However, future generations were far more commonly occurring, especially in regard to the individual’s offspring or future offspring.

The survey includes two triads that relate to this finding made above. One asks, “*In my story, the decision or experience was influenced by considerations of:*” (T1) and “*In my story, the following is/was valued,*” the results can be seen on the following figures:

²⁴ Referring to the ravaging forest fires during the dry summer of 2018.

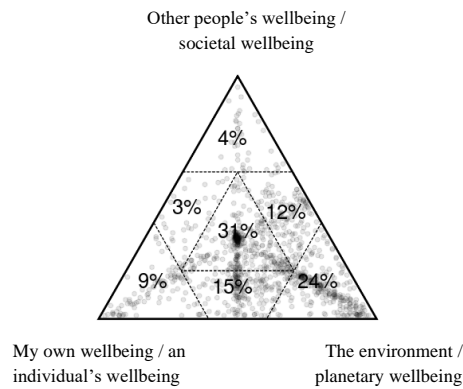


Figure 9: triad 1

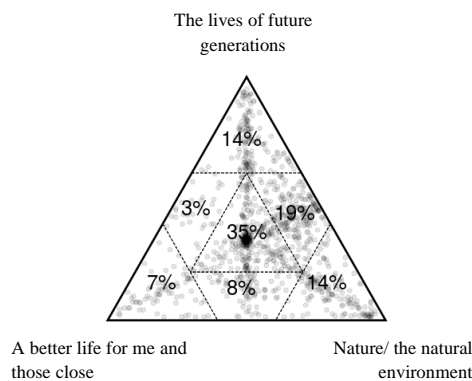


Figure 10: triad 2

While climate justice issues (such as considerations of distant populations) are not listed explicitly as alternatives, ‘other people’s wellbeing’ can encompass this category partly. Few chose to place their answer within this option, although many situated their answers between multiple categories, indicating some consideration.

Most centrally, however, the triads reveal that people are driven mainly by a sense of care for the environment and future generations and not to increase their personal wellbeing (see figure 10: triad 1) and quality of life (see figure 11: triad 2). The relational dimension of climate change action must, according to EC, contain a nonreciprocal element (Dobson 2003). Hence, the data indicates that while people are aware and driven by the temporal aspect of nonreciprocity, the non-territorial dimension remains largely absent.

5.2.5. Autonomy and alienation

Finally, autonomy and the capacity and space for self-determination emerge as a fundamental driver to empowerment and engagement through the sum of the results. Autonomy is, in this context, understood as being able to feel that one’s actions make a difference. This includes having concrete spaces to engage in beyond the routinised everyday practices identified in Wamsler et al. (2021b; 2021c) (see [section 2](#)), along with possessing a degree of self-determination (in contrast to behavioural nudges such as taxes on plastic bags, which many respondents found frustrating) wherein individual engagement can be both realised and nurtured.

Autonomy is intimately related to believing in the impact of one's agency (see [section 7.2.1.](#)) since it provides the space for realising this ontology. In opposition to autonomy is alienation; many respondents felt that climate change is an issue too momentous for individuals to impact, or that too much responsibility and demands are placed on the individual (rather than the big polluters):

“Not to spend time sorting garbage. I see today's sustainability discussion as one-sided, households must spend their valuable free time on various time-consuming actions and activities for the benefit of the climate. At the same time, companies only act in a climate-friendly manner if there is a profit interest in it. [...] The environmental and climate issue is today an income issue. Paradoxically, the richest emit the most, while they are the ones who can afford the expensive environmentally friendly alternatives.”^{xix}

The entry above illustrates well how routinised everyday practices (Wamsler et al. 2021b; 2021c) offer a very thin Ecological Citizenship actions repertoire. This limitation can be demanding due to the double reality of climate change (see [section 5.1.2.](#)). With this, autonomy also becomes closely related to a just distribution of responsibility. Something which will be further discussed in the following section and discussion ([section 6.4.](#)).

5.3. Post-carbon future transition imaginaries

This third and final section explores future transition imaginaries among the respondents, which is directly related to the third research question²⁵. In total, 619 entries were coded into 24 categories. While the respondents raised a diverse set of areas, they can be grouped into two levels of change which interdependently affects and reinforces each other:

- 1) Empowering individuals: Includes creating new spaces for engagement and broader opportunities for lifestyle change made available via systemic changes.
- 2) Regulating the large polluters: Increased responsibility of big industries and, to this end, governments (around the world). This, to create a sense of collective mobilisation where each actor manages her part of the transition fairly.

Central to this is how the management and distribution of the responsibility of climate change obligations (as emphasised by EC) should differ.

Below follows a summary of the results:

- While technical solutions are the most popular category, many shared visions revolving around a less materialistic lifestyle based on a reduction in material and energy output, rather than finding new means of continuing our current lifestyle with newer and greener technologies.
- Local initiatives, solutions and engagements can here serve a central role as people wish to see (and be part of) action on a local level led by citizens themselves.

²⁵ Asking “What non-technical future post-carbon transition pathways are imagined by the citizens?”

- A significant number of people see the current prevailing economic system and its related lifestyle as based on economic growth and high degrees of materialism and consumption as the most critical obstacle towards achieving a sustainable society.
- This critique is also partly mirrored in how participants often discussed the private and productive sector. Most saw it as necessary to put more pressure on businesses, corporations, and industries via government and general calls for more responsibility to be taken by the private and productive sector.
- In this, the government should serve a more prominent role (via, e.g., taxes, subsidies, and laws), both nationally and internationally.
- Few emphasised access to information as an area in need of further development, such as the media's role. Instead, the focus was on making people internalise and act on the information already established and foster a sense of interconnectedness and shifts in worldviews.
- Many expressed concerns over placing too much responsibility on the individual citizen. Meanwhile, people also saw the individual contribution as vital and something that should be empowered and facilitated better. The government plays a significant role in this.

See [appendix 2](#) for a table of a complete table of categories, their properties and the number of entries assigned to each category.

Below, a more detailed review of the results follow.

5.3.1. Systemic change and new conditions for engagement

While technical solutions are the most mentioned category, in line with the thesis aims, other post-carbon transition narratives also arise from the data emphasising instead pathways led by citizens and supported by the government. This emergent narrative instead strives away from the materialistic, consumerist, and technological way of life.

Beginning with the macro-level, a significant number of people see the current prevailing economic system and its related lifestyle as hinged on economic growth and high degrees of materialism and consumption as the most critical obstacle towards achieving a sustainable society:

“Re-evaluate economic growth - we need to change our mindset - collectively.”^{xx}

“I think the western world has made the biggest mistake in that they only trust money and they do not care about people or nature just GROWTH is all that they want, and it is absolutely WRONG, we have to reduce emissions drastically, otherwise the biggest disaster will come that we will not be able to cope with!”^{xxi}

“How the prevailing economic structure and capitalist logic is not a solution to the problem when these structures are one of the leading roots of the problem.”^{xxii}

“How blame / responsibility is placed on the individual and not on an economic system that is based on overproduction.”^{xxiii}

“The consumer society - the belief that through technology we can solve this and can continue to have economic growth. Environmental technology often exports emissions to other countries.”^{xxiv}

“Create time. Only in this way can people, regardless of role (private, political, business, civil society, research media, etc.), have the opportunity to make sustainable decisions, rather than fall into the filter bubble / squirrel wheel / the prevailing narrative that surrounds them.”^{xxv}

“For my part, I think we need to re-evaluate what we value most, money / consumption / individualism or more leisure / culture / collectivism. We must begin to understand and take seriously that we are part of a larger context and that everything is connected. That all life is closely connected down to the smallest cell level.”^{xxvi}

The selected entries above showcase a critique of the main engine of the current prevailing economic system – namely economic growth – and its relationships to lifestyles, mindsets, and social structures. Many respondents make this connection, as one (xxv), for example, mentions time as a necessary component for people to engage, and in some sense, have the space afforded to live as an ecological citizen.

There was also a point made above about blame or responsibility being placed on the individual (xxiii) rather than on the economic system, which ties back to one of the themes touched upon under [section 5.2.5.](#), namely how the distribution of responsibility can feel unjust. The observation made here might strengthen the indication that it is not individual responsibility per se which is the issue, rather its framing and the structure under which the demands are being put, which seemingly relates to individual autonomy.

To illustrate this theme’s significance across the general dataset, one of the survey’s triads asked, “*I will judge the work of the local and national government by whether they:*”, and here, the respondents could express what they deem should be the systemic goal of society:

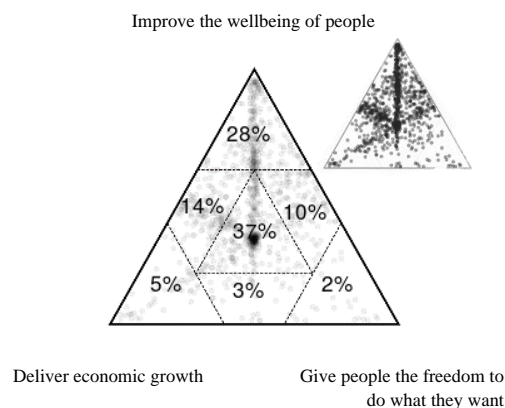


Figure 11: triad 6

As the triad above illustrates, while many people see it necessary to balance wellbeing, economic growth, and freedom, a large portion of the answers leans towards the top corner stating wellbeing as the most important goal. While somewhat ambivalent, it is clear that economic growth in and of itself is a less important goal for people in Sweden.

To delve further, as was also found under [section 5.2.2.](#), local initiatives and communities serve an influential role in motivating and inspiring individuals to take further actions. People wish to see more concrete action on a local level, for example, in the forms of farmer's markets, opportunities to grow one's food and small-scale initiatives led by citizens. Some examples are the following:

“More civic and communal initiatives to create a more sustainable society, for example, initiatives to share goods and services.”^{xxvii}

“Local engagements and small-scalability.”^{xxviii}

“Reduce energy consumption (reduce the transport of things we have access to locally), reduce leakage in energy systems, invest in ‘local regenerative agriculture’, ‘carbon dioxide-lowering innovations’ and ensure ‘clean drinking water’ for all. If we were to invest and prioritize these three areas, the transition would go faster & people would feel much better.”^{xxix}

“We should be able to support ourselves through closely and locally produced products. Distribute support around the country to grow and produce environmentally friendly wares everywhere. Not just everything in one basket.”^{xxx}

As was revealed in the preceding analyses of the dataset (Wamsler et al. 2021b; 2021c), concrete and visible measures are often absent from citizens' perspectives. Indeed, a majority of people had no examples to give on the second open question in the survey asking about initiatives in a city-level context (ibid.). Those who had examples mostly shared stories about measures supporting the routinised everyday practices, for example, building more bike roads and recycling stations (ibid.).

While these measures are important, they are exclusively one-directional, and there is an evident absence (or lack of awareness) of more dialogical initiatives in which citizens can actively engage and be part. Few people shared stories about collaborative efforts on a city level (see MCQ1 in [appendix 3](#)). Thus, the results here shed light on ways to address this lack of visible alternatives by creating locally embedded initiatives with a clear tie to the community and its citizens.

5.3.2. Collective distribution of responsibility

So far, it has been established that creating conditions for new spaces for individual action bears potential. These observations are best understood in relation to the results of the two preceding sections ([5.1.](#) and [5.2.](#)), where engagement was found to often present tensions and micro-conflicts since climate change engagement is seldom structurally encouraged on a day-to-day level. To address this, communal and autonomous conditions can be created to widen the possible repertoire of Ecological Citizenship actions.

Responsibility (of obligations) is central within EC (Dobson 2003); however, the results shed light on how this responsibility should differ on an individual and systemic level. While autonomy is seemingly central for the individual management of climate change responsibility, the way people perceive the agency and responsibility of the private sector's most polluting actors is more about limits than unconditional freedoms.

Many respondents expressed a need and necessity to put more pressure on businesses, corporations, and industries via government action (such as taxation), together with general calls for more responsibility to be taken by the private and productive sector:

“To restrict companies from contributing to the enormous overproduction and overconsumption that prevails. It is also important to have clearer rules on how they should protect the environment and vulnerable people, e.g. where the company's products are produced, by whom, what working conditions these people have and whether the methods of production are environmentally friendly.”^{xxxix}

“Private actors must take more responsibility. The government must pressure larger companies. Not only in Sweden but all over the world.”^{xxxix}

Two important functions of the government thus emerge from what has been presented so far: limiting harmful practices of polluting businesses, corporations, and industries and instead support small, local, and citizen-led initiatives and ventures. These actions must be embedded within an ethos of pursuing wellbeing for the people and planet and not within the frames of furthering economic growth. Abandoning the growth rationale might also be necessary as, seen from a purely economic point of view, many of the local, small-scale, and social initiatives might not prove as lucrative since it goes against the current hegemonic international free-trade regime.

The fact that many people see it necessary for the government to take on a more prominent role is also strengthened by the results of triad 5 asking, “*I believe that the following actors should be responsible for addressing climate change:*”:



Figure 12: triad 5

According to the respondents, the government, municipalities and cities are thus by many expected to take a central role in managing post-carbon transition processes; however, so does the international community and other states. Like companies, many respondents wished to

see other states mobilise, including by incentives posed by, for example, international organisations and communities:

“Sharper proposals in the global organizations. More binding agreements.”^{xxxiii}

“Cooperation, at all levels. Including internationally.”^{xxxiv}

5.3.3. Empowering individual capacities

Many expressed concerns over placing too much responsibility on the individual citizen; however, people also saw the individual contribution as vital and something that should be strengthened. Examples of this are informing citizens how they can contribute and engage, making it easy and accessible to do the right things, and the value of personal responsibility. The government can play a significant role in this, according to some respondents:

“Inform citizens so that we all make demands and feel that we can make an impact.”^{xxxv}

“Help us create a positive belief in the future where everyone in different simple ways feels that they are contributing. Make it easy to do the right thing.”^{xxxvi}

“Engage citizens, so we can influence politicians.”^{xxxvii}

“Speak plainly! I think the most important thing (and what politicians and the media have failed miserably with) is to inform society about the situation. That we are on the way (if not in the middle) of a complete disaster and that we are not even close to solving it.”^{xxxviii}

Few, however, emphasised the access to information and what role the media plays. Instead, the focus was placed on making people internalise and act on the information already established. Schools here play an important role in nurturing informed citizens. However, for others, shifts in worldviews and a sense of interconnectedness to nature and awareness about the effects of one’s choices and daily practices were also deemed important:

“That people have empathy for others (current and future generations) and understand the consequences of the decisions made today.”^{xxxix}

This point relates to an observation made under [section 5.1.](#), namely, effort and opportunities to act partly decide when climate change as a potentiality becomes an active causal mechanism. If climate change engagement is seen as an emergent property, information is but one of the realising properties. Internalising and acting on this information on a habitual day-to-day basis require a capacity to see and imagine the effects of individual agency on a global phenomenon such as climate change.

6. Discussion

The aim of this thesis is to generate knowledge on what can enable and empower individual transformative agency and climate change engagement. To address this, three research questions have been formulated. The first explores how climate change is perceived, navigated and negotiated into everyday life and how this relates to individual agency, the second look into drivers to engagement, and the third into future post-carbon transition imaginaries. The findings presented are sourced from citizens' testimonies and thus stay close to the phenomenological experience of the central agent. Analysis using Critical Realism (CR) and Ecological Citizenship (EC) reveals several findings which, via a retroductive Grounded Theory, form an analytical narrative wherein citizens play a more participatory and prominent role post-carbon transition efforts.

6.1. The frame of engagement

Individuals negotiate and act on climate change within the private sphere (Dobson 2003); however, the thesis has revealed the 'habitual sphere' as a central arena for engagement (see [section 5.1.1.](#)). This deepening of the private sphere constitutes both a cognitive and practical frame of action and the space in which people practice what has been termed their 'EC repertoire'. Both concepts carry transformative potential in that individuals can use their EC repertoire to make and break routines which, in turn, processually reinforces new practices and mindsets, which potentially further sustains engagement.

In exploring perceived extents and limits to individual agency, it was found that the transformative agency (understood through the principles stipulated by CR and EC), to a large extent, constitutes an effort to go against the stream. Climate change in its relationship to prevailing social structures often represents a 'double reality' most citizens are well aware of, but which requires continuous effort to make and break old habits and routines to embrace new, more sustainable ones (see [section 5.1.2.](#)).

The results thus indicate that, in line with a CR understanding, it is less demanding to reproduce rather than transform unsustainable social structures and patterns of behaviour and thinking (and thus systems) (Buch-Hansen & Nielsen 2020: 90). The repertoire of EC actions most people naturally have at their disposal are those encouraging continued consumptive and materialistic lifestyles (cf. Wamsler et al. 2021b; 2021c).

This finding can be paralleled with Wilhite's (2016: ch. 2) 'theory of habits', which argues for greater consideration of this habitual element within transition efforts. 'High energy habits', he argues, are tangled up with capitalist social relations that embed seeds of certain paradigms such as growth, speed and individual ownership (ibid.). However, knowledge and situatedness differ among individuals with a collective element inherited through cultural learning and interaction (ibid.) As found in this thesis, climate change disturbs the reproduction of these embedded habits of capitalism, thus creating a double reality between which individuals must negotiate.

6.2. Understanding agency and empowerment

The concept of EC repertoire developed in the thesis encompasses both a practical and discursive element. In analysing what drives engagement (research question 2), several findings pertaining to both of these dimensions were made.

People tend to recognise certain events (e.g., warmer winters) as an incentive to incorporate the repertoire more strongly in their life (e.g., eating less meat) (see [section 5.2.3](#)). Connecting events with specific actions can be viewed as a type of transitive domain, or discursive realm, of action where some cues are recognised, internalised and manifested in the actions the person has at their disposal (via their EC repertoire). Other research points to the important role direct and vicarious effects can serve for engagement, wherein pathways providing and inspiring hope and concrete action were found to be more effective than negative messages wherein the individuals feel no opportunity to engage (e.g., Wolf & Moser 2011). Worries about climate change are abounding, so creating opportunities to translate worry into action is a point this thesis has further strengthened (Bouman et al. 2020).

Considering the points so far made, since the thesis has aimed to identify ways to empower individual engagement and political agency by asking what drives commitment and engagement, the second research question translates into how the collective EC repertoire can be encouraged and even expanded, both in a pragmatic and individual-transitive sense.

Starting with the personal and inner dimensions, many people express a personal ontology or worldview, believing that their agency can have a systemic impact (see [section 5.2.1](#)). Past research has found that sense of agency and self-efficacy beliefs positively influence engagement and how the individual manages her responsibility (e.g., Bostrom et al. 2019; Carmi & Arnon 2014; Thiermann & Sheate 2020). This finding also aligns well with the CR notion of agency as an emergent property able to transform social structures and systems causally (Bhaskar 2015). Activating this potentiality, however, requires the presence of other causal drivers (ibid.).

From a social perspective, people are inspired and kindled to action when feeling part of an embedded community of practice offering concrete opportunities to engage in meaningful action and change (see [section 5.2.2](#)). According to prior analysis of the data, very few people had examples of these types of initiatives, despite the observation that individualistic orientations correlate with less engagement (Wamsler et al. 2021c). Past research also confirms how collectivistic oriented and communally embedded individuals are more engaged (e.g., Mørk et al. 2017; Xiang et al. 2019). The findings presented here further add to these findings as well as to the initial results of the data (Wamsler et al. 2021b; 2021c) by strengthening the importance of these currently lacking structures and opportunities.

The point raised above also offers suggestions for theory development within EC. The EC model represents and rests on a disembedded political community and space of action united by its ecological footprint index and obligations stemming from it (Dobson 2003). Thus, while the ecological citizen's positionality within the asymmetrical flows of globalisation produces the ethical obligations and political space for action, the actions themselves must be grounded and carried out within concrete social relations and communities of practice.

As mentioned, initiatives such as these are currently absent from most peoples' perceptions. Instead, the measures currently in place are often one-directional and highly individualistic (e.g., taxing plastic bags to steer individual consumptive behaviours) (Wamsler et al. 2021b; 2021c). Moser (2007) observes that this can be problematic since achieving or sustaining deeper affective engagement solely via one-way communication has limited effect. Initiatives embodying socially embedded EC principles is something that Duroy (2011) has touched upon but should be explored further. As discussed in the background ([section 2](#)), concrete empirical operationalisations of the EC theory, and especially its social-relational enablers, are still somewhat lacking.

6.3. An ontology of entangled agency

A relational aspect identified through the thesis is the ethical motivators of action ([see section 5.2.4](#)). Non-reciprocity and non-territoriality are core themes within EC (Dobson 2003), which can be linked to other research also pointing to the importance of altruistic behaviours (e.g., Dietz et al. 2005; Knez 2016). In the results, the respondents emphasised care for future generations much more than distant populations.

However, these results still serve to indicate that individual engagement and transformation are facilitated through reflexivity over one's different social roles (e.g., as a consumer, citizen, and globally situated agent), wherein considerations of others and nature and the responsibility attached are actively considered. In relation to the literature discussed in the background ([section 2](#)) regarding the ontological shortcomings of the theories value-action gap and pro-environmental behaviour, the thesis makes a strong case for the transcendental capacity of people, given the right conditions.

Capacities, social relations, and worldviews shape engagement but are continuously in flux and embedded within habitual mental and practical routines, as shown by the thesis (cf. Thiermann & Sheate 2020; Woiwode et al. 2021; Leichenko & O'Brien 2020). In this sense, the individual citizen should not be understood as a static and separate entity, but as relationally embedded (Wamsler et al. 2020; Walsh et al. 2021) and entangled actor non-reducible to a certain quality (such as social norms). This non-reductive and active entanglement is reflected within CR ontology through its concept of emergent properties (Buch-Hansen & Nielsen 2020: 36-7), which has served a useful explanatory role throughout the research process.

With this, the thesis further strengthens the growing consensus on the limits to the information deficit model (Suldovsky 2017), rational choice models (Whitmarsh et al. 2013) and extrinsic motivators (Thiermann & Sheate 2020) to instead point to the relevancy of addressing 'inner' and communal drivers of change (Leichenko & O'Brien 2020; Ives et al. 2020). The findings also overlap with a growing consensus within the field of environmental behaviour, namely, that intrinsic motivation (by internal factors such as beliefs, values, and worldviews) are more effective and long-lasting than extrinsically motivated behaviour (such as incentives and regulations) (Thiermann & Sheate 2020). Autonomy is within this central (ibid.), which also showed to be a significant driver to engagement and agency, according to the thesis (see [section 5.2.5](#)).

To this end, it is necessary to consider whose political agency (O'Brien 2015) is fruitful to empower. As established by the thesis, diverse groups of respondents felt alienated from the mobilisation process against climate change, and many felt the issue was too momentous and overwhelming for individuals to manage. Many others felt that too much responsibility is placed on individuals when they are not the main drivers of the climate breakdown (see [section 5.2.5](#)). Therefore, issues of 'responsibilisation towards citizens (Blühdorn & Butzlaff 2020) must go hand-in-hand with empowering autonomy and spaces for meaningful engagement, according to the results of the thesis.

6.4. The citizen dimension within collective mobilisation

In 2019, the UN Secretary-General proclaimed the need for 2020 to be "the decade of action" to advance the speed needed to meet the SDG's (UN n.d.). This call went out to all sectors of society, calling for global, local and people action (ibid.). However, the question remains as to where and how this collective mobilisation is to be centred. A key takeaway from this thesis is that, from a personal and individual perspective, empowering the people's part of collective mobilisation is also a question concerning how responsibility and obligations are given and managed on these different levels of society.

As argued, on the individual plane, responsibility must be coupled with autonomy and empowerment. In relation to this, signalling is important to communicate i) opportunities for citizen engagement and influence and ii) that larger actors are also mobilising and managing their responsibility, obligations and accountability, thus indicating that climate change is not only a question of individual lifestyle change confined to the materialist work-consumption paradigm.

Consumptive practices remain an important aspect of EC (Micheletti & Stolle 2012); however, the current Ecological Citizenship repertoire remains, for most people, narrowly confined to the work-consumption paradigm and its related habits. Examples include shopping more eco-friendly and choosing to bike instead of taking the car to work (Wamsler et al. 2021b; 2021c). The aspects of citizenship participation falling outside of this paradigm seem absent from the citizens' perspective and possibilities for action and thus rendering a thin account of citizenship (Paterson et al. 2006).

Therefore, providing less operative space for large corporate actors and embracing rationalities not hinged on economic growth can make way for smaller engagements for citizens (see [section 5.3](#)). A few concrete examples were here given pertaining to opportunities to grow food, creating local food- and energy systems and cooperative organisations granting more hyper-local influence to citizens (see [section 5.3.1](#)).

7. Conclusions

This thesis contributes to the growing field recognising that transitioning to a sustainable and post-carbon future requires transforming underlying social, political, and cultural structures and paradigms reproducing the current environmental crisis (O'Brien 2018; Leichenko and O'Brien 2020; Ives et al. 2020; Woiwode et al. 2021). This view is mirrored in O'Brien's (2018) model of three spheres of transformation as discussed and adopted in the thesis' background (section 2), wherein the personal, political, and practical spheres must be addressed jointly to facilitate a transformation meeting the demands posed by climate change (ibid.). Within this, the individual is the central agent of change (ibid.).

Epistemological considerations are required to address the demand for research in this area (O'Brien 2012); this thesis has illustrated one way of doing this. Applying the combined lens of Ecological Citizenship and Critical Realism allowed for conceptual access to citizen engagement in climate change from a bottom-up perspective. This approach allowed the thesis to generate insights on agency and empowerment, which contrasts approaches based on technological approaches, governmentality rationalities, and economic incentives.

Three research questions guided the process. The first relates to grounded experiences of agency (how climate change is perceived, negotiated, and navigated). Here, it was found that the repertoire of EC actions most people have at their disposal are, to a large extent, limited to current habitual paradigms of consumption and work, often resulting in conflict and tensions within everyday life. People can, however, transcend taken-for-granted assumptions and routines through active entanglement in new channels for engagement.

The drivers to engagement explored through the second research question strengthened this observation about the conflictual and potentially transcendental nature of climate change engagement. Communal and autonomous initiatives are lacking, and more considerations could be made to strengthen an ontology and belief in the systemic impact of collectively mobilised citizen engagement through local initiatives. Therefore, in arguing for an expanded EC repertoire, three dimensions of engagement should be considered: the practical, the inner, and the discursive, all relating to real and imagined possibilities for individual and collective action.

The third and final research question addresses future imaginaries. While technical solutions to many are still deemed a viable path forward, many others spoke of issues that, when interwoven, offers another perspective. As outlined, much of this boils down to a question of perceived fair distribution of responsibility: empowering citizens while limiting harmful practices of large (often industrial and corporate) polluters. This, in turn, requires addressing the personal and political sphere of transformation (O'Brien 2018), such as the growth paradigm, to make way for new rationalities and thus pathways to sustainable transformations.

7.3 Future research

As CR stipulates, all transitive knowledge is incomplete and fallible (Bhaskar 2008). Thus, the explanatory model offered in this thesis provides but some of the potential mechanisms and structures pertaining to climate change engagement. For example, unequal gender and

socio-economic perspectives have not been explored here. The former seems relevant since men tend to lead a more carbon-intensive lifestyles, according to a recent study made in Sweden (Carlsson et al. 2021). The latter, since different forms of capital can significantly influence what actions and EC repertoire a person can afford. This is also something that the Swedish Environmental Protection Agency has highlighted (Naturvårdsverket 2019), thus recognising the interdependent relationship between social and ecological sustainability (c.f. Eizenberg & Jabareen 2017).

This thesis has mainly been methodologically qualitative, using relatively large quantities of data and incorporating quantitative elements. While this has been useful for identifying larger patterns and themes, future research can consider taking the findings made and explore them more in-depth with fewer respondents in specific settings. Situating further analysis in such a way can help identify further causal mechanisms driving and sustaining engagement.

In some sense, this thesis has sought to find ways to partly decouple post-carbon transition efforts to continued technological development. However, this does not equate to the complete exclusion of technology. Technology is an ambivalent term (Feenberg 1999: 76), but what role it plays and can play according to citizens themselves would make an interesting avenue for future research. Like the thesis' lens, research drawing on citizens' perspectives can help further empower both capacities and new avenues to engagement.

References

- Anells, M. (1996). Grounded theory method: Philosophical perspectives, paradigm of inquiry, and postmodernism. *Qualitative health research*, 6(3), 379-393.
- Bauman, Z. (1998). *Globalization: The human consequences*. Columbia University Press.
- Barry, J. (1999). *Rethinking green politics: Nature, virtue and progress*. Sage Publications.
- Barry, J. (2003, September). Resistance is fertile: cultivating the virtues of sustainability citizenship. In *Citizenship and the Environment Workshop, Newcastle University* (pp. 4-6).
- Belfrage, C., & Hauf, F. (2017). The gentle art of retrodution: Critical realism, cultural political economy and critical grounded theory. *Organisation Studies*, 38(2), 251-271.
- Bergman-Rosamond, A. (2011). The cosmopolitan-communitarian divide and the Swedish military. In: Bergman-Rosamond, A., & Phythian, M. (Eds.). *War, Ethics and Justice: New perspectives on a post 9/11 world*. Routledge.
- Bhaskar, R. (2008). *A realist theory of science*. Routledge.
- Bhaskar, R. (2009). *Scientific realism and human emancipation*. Routledge.
- Bhaskar, R. (2015). *The possibility of naturalism: A philosophical critique of the contemporary human sciences*. Routledge.
- Bhaskar, R., Frank, C., Høyer, K. G., Parker, J., & Naess, P. (Eds.). (2010). *Interdisciplinarity and climate change: Transforming knowledge and practice for our global future*. Taylor & Francis.
- Blennow, K., & Persson, J. (2009). Climate change: Motivation for taking measure to adapt. *Global Environmental Change*, 19(1), 100-104.
- Blühdorn, I., & Butzlaff, F. (2020). Democratization beyond the post-democratic turn: towards a research agenda on new conceptions of citizen participation. *Democratization*, 27(3), 369-388.
- Booth, A., Sutton, A., & Papaioannou, D. (2012). *Systematic approaches to a successful literature review*. Sage Publications.
- Bostrom, A., Hayes, A. L., & Crosman, K. M. (2019). Efficacy, action, and support for reducing climate change risks. *Risk Analysis*, 39(4), 805-828.
- Bouman, T., Verschoor, M., Albers, C. J., Böhm, G., Fisher, S. D., Poortinga, W., ... & Steg, L. (2020). When worry about climate change leads to climate action: How values, worry and personal responsibility relate to various climate actions. *Global Environmental Change*, 62, 102061.
- Brand, U. (2012). Green economy—the next oxymoron? No lessons learned from failures of implementing sustainable development. *GAIA-Ecological Perspectives for Science and Society*, 21(1), 28-32.

- Brundtland, G. H. (1987). *Report of the World Commission on Environment and Development: Our Common Future*. Retrieved 2021-03-04 from: <http://www.un-documents.net/our-common-future.pdf>
- Buch-Hansen, H., & Nielsen, P. (2020). *Critical realism: Basics and beyond*. Macmillan Publishers.
- Carlsson Kanyama, A., Nässén, J., & Benders, R. (2021). Shifting expenditure on food, holidays, and furnishings could lower greenhouse gas emissions by almost 40%. *Journal of Industrial Ecology*.
- Charmaz, K. (2006). *Constructing grounded theory: A practical guide through qualitative analysis*. Sage Publications.
- Corbin, J. M., & Strauss, A. L. (2008). *Basics of qualitative research: Techniques and procedures for developing grounded theory*. Sage Publications.
- D'Agostino, F., Gaus, G., & Thrasher, J. (2019). Contemporary Approaches to the Social Contract. In: Zalta, E. (ed.). *The Stanford Encyclopedia of Philosophy*. Fall 2019 Edition.
- Dean, H. (2001). Green citizenship. *Social policy & administration*, 35(5), 490-505.
- Dietz, T., Fitzgerald, A., & Shwom, R. (2005). Environmental values. *Annual Review of Environment and Resources*, 30, 335-372.
- Dobson, A. (2003). *Citizenship and the Environment*. OUP Oxford.
- Doyle, L., Brady, A. M., & Byrne, G. (2009). An overview of mixed methods research. *Journal of research in nursing*, 14(2), 175-185.
- Duroy, Q. (2011). The path to a sustainable economy: sustainable consumption, social identity and ecological citizenship. *International Journal of Green Economics*, 5(1), 1-14.
- Eizenberg, E., & Jabareen, Y. (2017). Social sustainability: A new conceptual framework. *Sustainability*, 9(1), 68.
- Eriksen, T. H. (2014). *Globalization: The Key Concepts*. Taylor & Francis.
- Esiasson, P., Gilljam, M., Oscarsson, H., Towns, A., & Wängnerud, L. (2017). *Metodpraktikan: Konsten att studera samhälle, individ och marknad*. Norstedts Juridik.
- Eugenio-Gozalbo, M., Ramos-Truchero, G., & Suárez-López, R. (2021). University gardens for sustainable citizenship: assessing the impacts of garden-based learning on environmental and food education at Spanish higher education. *International Journal of Sustainability in Higher Education*.
- Evans, D. (2011). Consuming conventions: sustainable consumption, ecological citizenship and the worlds of worth. *Journal of Rural Studies*, 27(2), 109-115.
- Feenberg, A. (1999). *Questioning technology*. Routledge.

- Fletcher, A. J. (2016). Applying critical realism in qualitative research: methodology meets method. *International journal of social research methodology*, 20(2), 181-194.
- Glaser, B. G., & Strauss, A. L. (2017). *Discovery of grounded theory: Strategies for qualitative research*. Routledge.
- Government Offices of Sweden Ministry of Environment and Energy. (2015). *The goal is a fossil-free Sweden*. Retrieved 2021-06-28 from https://www.government.se/4add1a/contentassets/ef6483a702fd4d1a860e7ca7f4b6fe70/faktablad_fossil_free_sweden_en_webb.pdf
- Grundmann, R. (2016). Climate change as a wicked social problem. *Nature geoscience*, 9(8), 562-563.
- Gullers Grupp. (2018). *The public's views on climate 2018: A quantitative survey of the Swedish public's views on climate solutions*. On behalf of the Swedish Environmental Protection Agency. Retrieved 2021-04-02 from <https://www.naturvardsverket.se/upload/miljoarbete-i-samhallet/miljoarbete-i-sverige/klimat/attitydundersokning/Public-views-on-climate-2018.pdf>
- Haberl, H., Wiedenhofer, D., Virág, D., Kalt, G., Plank, B., Brockway, P., ... & Creutzig, F. (2020). A systematic review of the evidence on decoupling of GDP, resource use and GHG emissions, part II: synthesizing the insights. *Environmental Research Letters*, 15(6), 065003.
- Hay, C. (2004). Theory, stylized heuristic or self-fulfilling prophecy? The status of rational choice theory in public administration. *Public Administration*, 82(1), 39-62.
- Henderson, H., & Ikeda, D. (2004). *Planetary citizenship: your values, beliefs, and actions can shape a sustainable world*. Middleway Press.
- Hickel, J., & Kallis, G. (2020). Is green growth possible?. *New political economy*, 25(4), 469-486.
- Hoddy, E. T. (2019). Critical realism in empirical research: Employing techniques from grounded theory methodology. *International Journal of Social Research Methodology*, 22(1), 111-124.
- Hodgson, G. M. (2012). On the limits of rational choice theory. *Economic Thought*, 1(1, 2012).
- Hornborg, A. (1998). Towards an ecological theory of unequal exchange: articulating world system theory and ecological economics. *Ecological economics*, 25(1), 127-136.
- Hornborg, A. (2019). *Nature, Society, and Justice in the Anthropocene: Unraveling the Money-Energy-Technology Complex*. Cambridge University Press.
- Hügel, S., & Davies, A. R. (2020). Public participation, engagement, and climate change adaptation: A review of the research literature. *Wiley Interdisciplinary Reviews: Climate Change*, 11(4), e645.

- IPCC. (2018). *Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty*. Retrieved 2021-01-05 from https://www.ipcc.ch/site/assets/uploads/sites/2/2019/06/SR15_Full_Report_High_Res.pdf
- Ives, C. D., Freeth, R., & Fischer, J. (2020). Inside-out sustainability: The neglect of inner worlds. *Ambio*, 49(1), 208-217.
- Jackson, T. (2009). *Prosperity without growth: Economics for a finite planet*. Routledge.
- Jagers, S. C. (2009). In search of the ecological citizen. *Environmental Politics*, 18(1), 18-36.
- Jagers, S. C., Martinsson, J., & Matti, S. (2014). Ecological citizenship: a driver of pro-environmental behaviour?. *Environmental Politics*, 23(3), 434-453.
- Kendall, J. (1999). Axial coding and the grounded theory controversy. *Western journal of nursing research*, 21(6), 743-757.
- Keohane, R. O., & Nye Jr, J. S. (1973). Power and interdependence. *Survival*, 15(4), 158-165.
- Kerschner, C., Wächter, P., Nierling, L., & Ehlers, M. H. (2018). Degrowth and Technology: Towards feasible, viable, appropriate and convivial imaginaries. *Journal of cleaner production*, 197, 1619-1636.
- Klein, N. (2015). *This changes everything: Capitalism vs. the climate*. Simon and Schuster.
- Knez, I. (2016). Is climate change a moral issue? Effects of egoism and altruism on pro-environmental behavior. *Current Urban Studies*, 4(2), 157-174.
- Kollmuss, A., & Agyeman, J. (2002). Mind the gap: why do people act environmentally and what are the barriers to pro-environmental behavior?. *Environmental education research*, 8(3), 239-260.
- Leichenko, R., & O'Brien, K. (2020). *Climate and society: Transforming the future*. John Wiley & Sons.
- Lister, R., & Campling, J. (2017). *Citizenship: feminist perspectives*. Macmillan International Higher Education.
- Lummis, G. W., Morris, J. E., Lock, G., & Odgaard, J. (2017). The influence of ecological citizenship and political solidarity on Western Australian student teachers' perceptions of sustainability issues. *International Research in Geographical and Environmental Education*, 26(2), 135-149.
- Lynam, T., & Fletcher, C. (2015). Sensemaking: a complexity perspective. *Ecology and Society*, 20(1).
- Maxwell, J. A. (2012). *Qualitative research design: An interactive approach*. Sage publications.

- Mendieta, E. (2009). From imperial to dialogical cosmopolitanism. *Ethics & Global Politics*, 2(3), 241-258.
- Middlemiss, L. (2010). Reframing individual responsibility for sustainable consumption: lessons from environmental justice and ecological citizenship. *Environmental Values*, 19(2), 147-167.
- Mills, J., Bonner, A., & Francis, K. (2006). The development of constructivist grounded theory. *International journal of qualitative methods*, 5(1), 25-35.
- Mørk, T., Bech-Larsen, T., Grunert, K. G., & Tsalis, G. (2017). Determinants of citizen acceptance of environmental policy regulating consumption in public settings: Organic food in public institutions. *Journal of cleaner production*, 148, 407-414.
- Moser, S. C. (2007). More bad news: The risk of neglecting emotional responses to climate change information. In: S. C. Moser & L. Dilling (Eds.), *Creating a climate for change: Communicating climate change and facilitating social change* (pp. 64–80). Cambridge University Press.
- Mundaca, L., Sonnenschein, J., Steg, L., Höhne, N., & Ürge-Vorsatz, D. (2019). The global expansion of climate mitigation policy interventions, the Talanoa Dialogue and the role of behavioural insights. *Environmental Research Communications*, 1(6), 061001.
- Naturvårdsverket. (2019). *Förslag som kan bidra till att integrera jämställdhet i Sveriges genomförande av Parisavtalet*. Retrieved 2021-08-02 from <https://www.naturvardsverket.se/upload/miljoarbete-i-samhallet/miljoarbete-i-sverige/regeringsuppdrag/2020/forslag-integrera-jamstalldhet.pdf>
- O'Brien, K. (2018). Is the 1.5 C target possible? Exploring the three spheres of transformation. *Current Opinion in Environmental Sustainability*, 31, 153-160.
- O'Brien, K. (2015). Political agency: The key to tackling climate change. *Science*, 350(6265), 1170-1171.
- Oliver, C. (2012). Critical realist grounded theory: A new approach for social work research. *British Journal of Social Work*, 42(2), 371-387.
- Oxfam. (2020). Time to care: Unpaid and underpaid care work and the global inequality crisis. Retrieved 2021-03.04 from <https://www.oxfam.ca/publication/35449/>.
- Paterson, M., Doran, P., & Barry, J. (2006). Green theory. *The state: theories and issues*, 135-154.
- Piketty, T. (2018). *Capital in the twenty-first century*. Harvard University Press.
- Polanyi, K. (1944). *The great transformation: the political and economic origins of our time*. Beacon Press.
- Rittel, H. W., & Webber, M. M. (1973). Dilemmas in a general theory of planning. *Policy sciences*, 4(2), 155-169.

- Saiz, A.V., 2005. Globalisation, cosmopolitanism and ecological citizenship. *Environmental politics*, 14(2), 163–178.
- Saldaña, J. (2013). *The coding manual for qualitative researchers*. Sage Publications.
- Sayer A. (2010) *Realism and Social Science*. Sage Publications.
- Scholte, J. A. (2005). *Globalization: A critical introduction*. Macmillan International Higher Education.
- Seyfang, G. (2009). *The new economics of sustainable consumption: Seeds of Change*. Palgrave Macmillan.
- Shiva, V. (1998). The Greening of Global Reach. In: Brecher, J., Childs, B, C., Cutler, J. (eds.). *Global Visions: Beyond the New World Order*. Black Rose Books.
- van Steenberg, B. (1994). The condition of citizenship: an introduction. In: Van Steenberg, B. (ed.). *The Condition of Citizenship*. Sage Publications.
- Steg, L., & Vlek, C. (2009). Encouraging pro-environmental behaviour: An integrative review and research agenda. *Journal of environmental psychology*, 29(3), 309-317.
- Suldovsky, B. (2017). The information deficit model and climate change communication. In: *Oxford Research Encyclopedia of Climate Science*.
- Swedish Climate Policy Council. (2021). *2021: Klimatpolitiska rådets rapport*. Retrieved 2021-03-25 from <https://www.klimatpolitiskaradet.se/wp-content/uploads/2021/04/klimatpolitiskaradetrappport2021.pdf>
- Swedish Research Council. (2017). *Good Research Practice*. Retrieved 2021-05-26 from <https://www.vr.se/english/analysis/reports/our-reports/2017-08-31-good-research-practice.html>
- Thiermann, U. B., & Sheate, W. R. (2020). Motivating individuals for social transition: The 2-pathway model and experiential strategies for pro-environmental behaviour. *Ecological Economics*, 174, 106668.
- Timmermans, S., & Tavory, I. (2012). Theory construction in qualitative research: From grounded theory to abductive analysis. *Sociological theory*, 30(3), 167-186.
- Turaga, R. M. R., Howarth, R. B., & Borsuk, M. E. (2010). Pro-environmental behavior: Rational choice meets moral motivation. *Annals of the New York Academy of Sciences*, 1185(1), 211-224.
- UN. (n.d.). *Decade of Action*. Retrieved 2021-07-26 from <https://www.un.org/sustainabledevelopment/decade-of-action/>
- Vadén, T., Lähde, V., Majava, A., Järvensivu, P., Toivanen, T., Hakala, E., & Eronen, J. T. (2020). Decoupling for ecological sustainability: A categorisation and review of research literature. *Environmental science & policy*, 112, 236-244.
- Van der Merwe S E, Biggs R, Preiser R, Cunningham C, Snowden D. J, O'Brien K, Goh Z (2019) Making sense of complexity: Using sensemaker as a research tool. *Systems*, 7(2), 25.

- Walker, D., & Myrick, F. (2006). Grounded theory: An exploration of process and procedure. *Qualitative health research*, 16(4), 547-559.
- Walsh, Z., Böhme, J., & Wamsler, C. (2021). Towards a relational paradigm in sustainability research, practice, and education. *Ambio*, 50(1), 74-84.
- Wamsler C., Osberg, G., Hendersson, H., Osika, W., Mundaca, L. (2021a). Linking internal and external transformation for sustainability and climate action: Towards a new research and policy agenda. *Global Environmental Change*, 71, 102373..
- Wamsler, C., Osberg, G., Mundaca, L. (2021b). *My Malmö: Climate Visions – Transforming the Future*. Report by LUCSUS and Malmö City. In-press.
- Wamsler, C., Osberg, G., Panagiotou, A., Smith, B., Stanbridge, P., Mundaca, L. (2021c). *Meaning-making in a context of climate change: Supporting agency and political engagement*. Manuscript submitted for publication.
- Wamsler, C., Schöpke, N., Fraude, C., Stasiak, D., Bruhn, T., Lawrence, M., Schroeder, H., & Mundaca, L. (2020). Enabling new mindsets and transformative skills for negotiating and activating climate action: Lessons from UNFCCC conferences of the parties. *Environmental Science and Policy*, 112, 227–235.
- Wanner, T. (2015). The new ‘passive revolution’ of the green economy and growth discourse: Maintaining the ‘sustainable development’ of neoliberal capitalism. *New Political Economy*, 20(1), 21-41.
- Whitmarsh, L., O’Neill, S., & Lorenzoni, I. (2013). Public engagement with climate change: what do we know and where do we go from here?. *International Journal of Media & Cultural Politics*, 9(1), 7-25.
- Wilhite, H. (2016). *The political economy of low carbon transformation: breaking the habits of capitalism*. Routledge.
- Woiwode, C., Schöpke, N., Bina, O., Veciana, S., Kunze, I., Parodi, O., Schweizer-Ries, P., Wamsler, C. (2021). Inner transformation to sustainability as a deep leverage point: fostering new avenues for change through dialogue and reflection. *Sustainability Science*, 1–18.
- Wolf, J., Brown, K., & Conway, D. (2009). Ecological citizenship and climate change: perceptions and practice. *Environmental politics*, 18(4), 503-521.
- Wolf, J., & Moser, S. C. (2011). Individual understandings, perceptions, and engagement with climate change: insights from in-depth studies across the world. *Wiley Interdisciplinary Reviews: Climate Change*, 2(4), 547-569.
- WWF (2020) *Living Planet Report 2020 - Bending the curve of biodiversity loss*. Almond, R.E.A., Grooten M. and Petersen, T. (Eds). WWF, Gland, Switzerland. Retrieved 2021-01-04 from <https://f.hubspotusercontent20.net/hubfs/4783129/LPR/PDFs/ENGLISH-FULL.pdf>
- WWF. 2016. *Living Planet Report 2016. Risk and resilience in a new era*. WWF International, Gland, Switzerland. Retrieved 2021-01-04 from

https://c402277.ssl.cf1.rackcdn.com/publications/964/files/original/lpr_living_planet_report_2016.pdf?1477582118&_ga=1.148678772.2122160181.1464121326

Xiang, P., Zhang, H., Geng, L., Zhou, K., & Wu, Y. (2019). Individualist–collectivist differences in climate change inaction: The role of perceived intractability. *Frontiers in psychology, 10*, 187.

Zachariadis, M., Scott, S., & Barrett, M. (2013). Methodological implications of critical realism for mixed-methods research. *MIS quarterly, 855-879*.

Appendixes

Appendix 1: The complete survey

Climate Visions Sweden – Transforming th...



PART 1: EVERYDAY LIFE AND EXPERIENCES

Let's start with some questions about your everyday life in times of climate change

Think about a recent personal decision or experience, which has been (directly or indirectly) influenced by climate change (its causes or impacts).

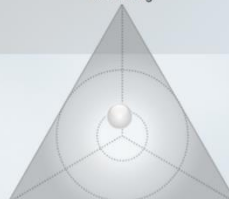
What have you decided or experienced, and what were the reasons or circumstances? Please share your story. The more specific you are the better.

Please suggest a title for your story:

Next are some statements to help reflect on your story. Please move the ball in the triangle to the position that best describes your decision or experience. The closer you place the ball to any one statement, the more you agree with the statement. You can place the ball also on the line between two statements. If all three apply equally, you can place it in the centre (after having moved it first). If a statement is not relevant or applicable for your decision or experience, you can click the N/A box.

In my story, the decision or experience was influenced by considerations of:

Other people's wellbeing / societal wellbeing



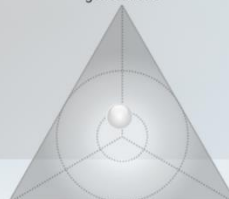
My own wellbeing / an individual's wellbeing

The environment / planetary wellbeing

N/A

In my story, the following is/was valued:

The lives of future generations



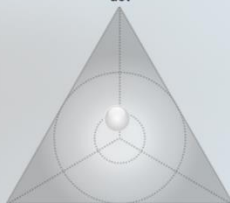
A better life for me and those close to me

Nature/ the natural environment

N/A

My story indicates that in a context of climate change:

I / people can trust other actors (people or organisations) to act

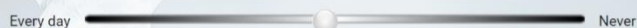


I / people can influence and act

Things are out of control

N/A

Climate change influences my personal choices and experiences:



In the long run, I believe that the influence that climate change has on people's personal choices and experiences will lead to:



PART 2: CITY LEVEL CONTEXT AND ACTIONS

Now follow a couple of questions to understand your context and city better

Think about a recent action, event or decision that you think can have a positive impact on managing climate change in your city (directly or indirectly). It can be an activity or decision taken by the local/ national government or citizens/citizen groups. Please describe your example below. The more specific you are the better.

Please suggest a title for your example:

Next are some statements to reflect about your example.

My example provides potential for positive change because it influences:

How the city is regulated and structured



What individuals believe and value

The way different actors work together

N/A

My story is about (select all that apply):

- Individual citizens taking actions
- Citizen groups taking actions/ Collective societal action
- Local government taking action
- National government taking action
- Cooperation between individuals and the local government
- Cooperation between individuals and the national government
- Cooperation between groups of citizens and the local government
- Cooperation between groups of citizens and the national government
- N/A

This is how I feel about (the lessons from) my example: (select all that apply)

- Empowered – things are starting to move, I want and can be part of the solution
- Frustrated – some things might be relevant but it feels too hard/ challenging
- Optimistic/ Hopeful – there is work to do, but I believe that it is possible to succeed
- Cynical/ fatalistic – taking or not taking action will have the same negative result
- Uplifted/ Motivated – the changes I can make together with others can have an impact
- Feeling of community/togetherness – we are in all this together, part of sth bigger
- Powerless/ excluded – there are no possibilities for me to influence
- Angry – all of this could have been avoided or addressed a long time ago
- Exhausted/ Left alone – I need more people to work with me on this together. Where are they?
- Despair – when will people finally take this seriously?
- Protected/ safe – there is work to do, but there are actors and structures in place that take care of the issue
- Independent/ in control – Even if others don't care, I can do much on my own
- Benevolent – I feel that my actions have a positive impact on others and their welfare
- Paralyzed – the situation feels so big, it is completely out of my control/influence
- Anxious/ depressed – I am losing hope for the future, am filled with grief and anxiety
- N/A
- Other

I have been trying to influence climate change-related work/ policies/ options by: (select all that apply)

- Personally contacting authorities, e.g. writing emails or letters to public officials.
- Actively using social media as a tool to spread awareness.
- Attending related political discussions and public consultations.
- Joining marches and other forms of social movements/ protests.
- Signing petitions.
- Donating money to environmental organizations/ groups.
- Through active membership in an environmental organization.
- Volunteering time to help environmental organizations/ groups.
- Voting for environmentally-oriented political candidates/ parties.
- Engaging in political activities you know will/might lead to being arrested.
- N/A
- Other

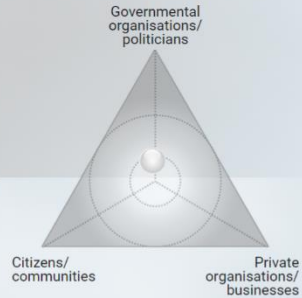
In the past, I have tried to influence local and/or national work on climate change:

Very often  Never

PART 3: CREATING THE FUTURE

We close with few reflections on addressing climate change in the future

I believe that the following actors should be responsible for addressing climate change:



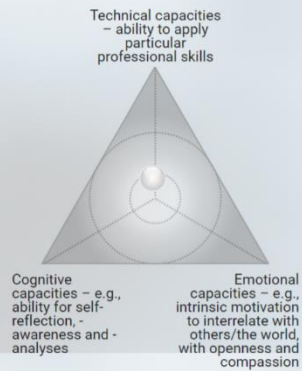
N/A

I will judge the work of the local and national government by whether they:



N/A

The following capacities are relevant for addressing climate change and supporting change:



N/A

Based upon my previous reflections, influencing future actions feels:

Completely impossible Definitely possible

Based upon my previous reflections, influencing future actions feels:

Completely unnecessary Absolutely crucial

Spending time in nature is important for my wellbeing

Not at all  Yes, absolutely vital

Reflecting on my previous entries, this is what most boosts my personal engagement and why (e.g. certain capacities, conditions, measures, actors):

I don't know

In relation to climate change, my wish for the future is that the following issue or challenge will be given more priority:

I don't know

NEARLY DONE: ONLY A FEW GENERAL DATA TO BE ENTERED

In which city do you live?

- Malmö
- Lund
- Gothenburg
- Stockholm
- Other

In which area in your city do you live?

Please indicate if you are, or have been, participating in one of the following programmes/ projects or courses: (click all that apply)

- Malmöakademin
- One Year in Transition (1YT) course
- LUMES Master course
- Sustainability and Inner Transformation course
- Klustret
- The Eskäret Foundation
- N/A
- Other

You are..

- Female
- Male
- Prefer not to say
- Other

How old are you?

- Under 16
- 16-17
- 18-24
- 25-34
- 35-49
- 50-65
- 65+
- Prefer not to say

What is your highest educational degree?

- Primary and/or secondary school
- High school
- Bachelor's degree
- Technical/Vocational degree
- Master's degree
- Postgraduate degree
- Prefer not to say

What is your approximate total gross monthly income? (gross salary, including any financial benefits)

- I do not have any income
- Less than 20.000 SEK
- 20.000 - 29.999 SEK
- 30.000 - 39.999 SEK
- 40.000 - 49.999 SEK
- 50.000 - 59.999 SEK
- 60.000 - 69.999 SEK
- 70.000 - 79.999 SEK
- 80.000 - 89.999 SEK
- 90.000 - 99.999 SEK
- 100.000 SEK or more
- Prefer not to say

Appendix 2: Tables of identified coding categories

Categories from coding procedure 1 (basis for results of section 7.1.; ‘climate change and agency’)

Category	Properties of open and axial coding categories	Examples from participants
The habitual dimension	Breaking and making routines; giving up habits, routines, or aspects of one’s lifestyle and often replacing them with new habits deemed more sustainable	<ul style="list-style-type: none"> • Having a consumption-free year • Choosing to go on vacation via train in Sweden or Europe, rather than flying abroad • Changing one’s diet (often to reduce meat consumption) • Resisting impulsive thoughts and habit to consume new wares • Changing means of transportation (for example, deciding not to own a car)
‘Double reality’ of climate change and everyday life	Climate change posing tensions within everyday life sometimes requiring sacrificing individual freedom	<ul style="list-style-type: none"> • Choosing not to go on vacation or visit family if it necessitates flying • Resigning from a job or career path due to it not aligning with environmental values
Extending one’s ‘repertoire of Ecological Citizenship action’ through outer change	Overcoming structural limitations inhibiting one to make changes perceived as necessary	<ul style="list-style-type: none"> • Switching one’s line of career to instead work with sustainability issues • Moving to be able to bike to work or grow one’s vegetables • Learning new skills • Buying an electric bike to be less dependent on a car
Ethical reasoning (internal process)	Actively considering and acting on the implications of a warming planet and what it entails for, e.g., future generations	<ul style="list-style-type: none"> • What planet is to be left for the participant’s grandchildren, or even children • Collective intergenerational responsibility • Care for the natural world
Total number of entries coded and analysed: 74		

Categories from coding procedure 2 (basis for results of section 7.2.; ‘drivers’)

Category	Properties of open and axial coding categories	Examples from participants
Believing that individual agency can have a systemic impact	Viewing small individual contributions seen as a necessary component to broader change Seeing one’s contribution as	<ul style="list-style-type: none"> • Active responsibility • Possibilities of change • Everyone can do something • Nobody is too small to

	necessary or obligatory	<p>make a difference</p> <ul style="list-style-type: none"> • Everything starts with the individual • Everyone is needed
Climate justice (distant populations)	Having a global perspective on one's action wherein caring for the more vulnerable populations is considered	<ul style="list-style-type: none"> • The west's responsibility towards the third world • Justice • Equality • Equal economic conditions • Earth is everybody's home
Future generations	Considerations of leaving an inhabitable planet for future generations	<ul style="list-style-type: none"> • One's children or grandchildren • The welfare of the future being dependent on the actions of today • Leaving a better world behind
Feelings of interconnectedness	Experiencing oneself as an intricate part of the nature-society and people-to-people relationships	<ul style="list-style-type: none"> • Empathy • Connectedness to nature and place • Sharing mother earth with all its living inhabitants • Cohesion between individual and society
Hope and inspiration	<p>Being inspired by other people, public figures (e.g. Greta) and events</p> <p>Believing it is not too late</p> <p>Believing things can change for the better</p>	<ul style="list-style-type: none"> • Belief in the future • Possibility for change • Greta • Joe Biden being elected US president • Hearing other's stories of transformation
Felt experience of climate change	Concrete experiences of climate change triggering a sense of urgency which is acted upon	<ul style="list-style-type: none"> • Seeing glaciers disappear • Increase in mosquitoes • Seeing dead coral reefs • Shorter and less snowy winters • Plastics in the ocean • Forest fires of 2018
Local community and action	Being part of a group, which inspires hope and action	<ul style="list-style-type: none"> • Succeeding together • Honest reflections,

	<p>Having the opportunity to engage beyond the ‘routinised everyday practices’</p> <p>Having access to space or channel for concrete action</p> <p>Feeling that initiatives and solutions are being worked at in one’s near vicinity</p> <p>Being able to be part of such initiatives</p>	<p>discussing with people</p> <ul style="list-style-type: none"> • Confronting the hard questions together • Engagement through meeting other people • Community gardens • Citizen assembly proposals • Associations working with sustainability issues • Taking a course on, for example, permaculture • Networks (such as the transition movement) • Farmers’ markets • Being able to grow one’s vegetables • Circular economic initiatives (such as localised recycling schemes)
Total number of entries coded: 292		

Apart from enablers, although not explicitly asked for in the survey, some people also raised discouragers which, although not always stopping them from acting, had oppressive or demoralizing emotional effects:

Open code	Properties	Examples from participants
Uneven distribution of responsibility	Feeling that other sectors of society and the world is not doing enough in comparison to Sweden and its expectations on citizens	<ul style="list-style-type: none"> • Current climate policies are punishing ordinary citizens (individuals being affected disproportionately) • Companies and industries should take more responsibility • Other countries than Sweden have to do their bit too • The individual citizen can only do as much • Discontent with the Swedish political approach to climate change
Global issue too significant for individuals to make a difference	<p>Feeling that individuals cannot contribute meaningfully to the work on climate change due to the magnitude of the problem</p> <p>Believing that only global efforts from big actors can solve the issue</p>	<ul style="list-style-type: none"> • Individuals should not be responsible for the environment, which is a global problem • How the individual acts do not matter

		<ul style="list-style-type: none"> • The individual cannot do anything which affects the environment in a positive and meaningful way
‘No one else is doing anything’	<p>Feeling that no one else is making necessary changes</p> <p>View of people as being inactive, ignorant, stubborn and/or selfish</p>	<ul style="list-style-type: none"> • People are unwilling to see the danger and to change • People do not care • People are ignorant and not thinking about the consequences • Nobody else is doing anything [for the environment]
Total number of entries coded and analysed: 44		

Categories from coding procedure 3 (basis for results of section 7.3.; ‘future imaginaries)

Category	Properties of open coding categories	Examples from participants	No. of codes
Climate justice	Issues of equality, justice, and fair distribution	<ul style="list-style-type: none"> • Animal welfare, human rights and justice for all living beings • Just and equitable food and energy system transitions • Equality 	12
Collective mobilisation	Make sure that every actor in society and the world does their part	<ul style="list-style-type: none"> • Take the climate threat seriously, and act now • Together we can accomplish a lot • Prompt more engagement • Act now, it can cost and be inconvenient • All actors must contribute 	38
(Reduce) Consumption	Reduction of unsustainable consumptive behaviours, structures, and lifestyles	<ul style="list-style-type: none"> • Reduce consumption before buying new electric cars • Overconsumption • End fast fashion • Reuse and recycle, stop mass-producing 	30
Diet	Shift towards more sustainable diets	<ul style="list-style-type: none"> • Eat less meat • Veganism • Plant-based diets • Food choices must be 	13

		more related to issues of the climate	
Educate and inform	Make people (of all groups and ages) more aware of climate change and its processes, causes and responses	<ul style="list-style-type: none"> • Educate the citizens • Inform [about climate change] more in schools • Producing evidence to convert the sceptics • More environmental science in schools 	25
(Urban) Green spaces	More green spaces in cities	<ul style="list-style-type: none"> • Restoration of parkland • Build away hard surfaces and replace them with green areas • Prioritize parks over car infrastructure 	7
Empowerment & individual responsibility	Encouraging a sense of personal (individual) sense of responsibility	<ul style="list-style-type: none"> • Help create a positive belief in the future • That everyone's voice and acts contribute to a better climate • Make it easier for people to make the right choices • Education, transparency and guidance to make it easier to make good decisions 	25
International cooperation	More robust cooperative measures and agreements between states which can, for example, pressure other countries to act along with aid and development initiatives for vulnerable and poorer nations	<ul style="list-style-type: none"> • That the world acts together • More development-aid initiatives • International agreements to strengthen people's knowledge and environmental awareness • Global perspectives and less focus on the individual level 	48
Local solutions initiatives	Local initiatives and measures, often emphasising local food small-scale food production	<ul style="list-style-type: none"> • More civic and municipal initiatives to create a more sustainable society • Small-scale local involvement • More opportunities for self-cultivation • Eat locally produced 	23

The natural world	Preservation of natural eco-systems	<ul style="list-style-type: none"> • The rights of animals in nature • Clean up the oceans • Biodiversity loss • Protect the rainforest 	39
Nature reconnection	Foster a more interconnected collective relationship to nature	<ul style="list-style-type: none"> • Invest in parks (both national and urban) • Nurture people's personal contact with nature • Relation of human-nature disconnect 	6
Phase-out fossil fuels	Rapid reduction and elimination of fossil fuels use and dependence	<ul style="list-style-type: none"> • Begin the decommissioning fossil-based energy • Stop using fossil fuels 	7
Population	Issues of (Malthusian) overpopulation	<ul style="list-style-type: none"> • Birth control – our globe will not be able to support any number of people • Limit population growth 	11
Private & productive sector transitions	Support sustainable business and industry transitions	<ul style="list-style-type: none"> • The relationship between the economy and the environment • Green jobs in all of Sweden • Support companies that make a difference (e.g. via subsidies) 	21
Reduction of material & energy output	Reduce the resources and energy required to run and maintain the current system	<ul style="list-style-type: none"> • Phase-out plastic • Radically reduce resource use, not just increasing efficiency 	6
Responsibility of private actors	Demanding more responsibility on (often large) private actors (e.g. business, industry, corporations)	<ul style="list-style-type: none"> • Place more responsibility on businesses • Restricting companies from contributing to the overproduction and overconsumption that prevails • Targeting companies who are responsible for much of the co2 production 	24
Role of government and strengthened democracy	Laws, regulations, and decisions aimed at addressing climate change	<ul style="list-style-type: none"> • Remove subsidies for the fossil fuel industry • All political decisions must consider its negative 	55

	More and bolder decisions from government informed by the current science on climate change	<ul style="list-style-type: none"> • or positive impacts on the climate • Enact more laws to save the environment, earth and us • Strengthen the representative democracy • Address political polarisation 	
Science & research	Invest and allow science to guide decisions more	<ul style="list-style-type: none"> • Listen to the scientists • Let scientists have a more prominent role within politics 	6
Security & resilience	Plan and put in place measures to adapt to a changing climate	<ul style="list-style-type: none"> • Safeguard society from coming natural disasters, such as flooding and storms • Plan for rising sea levels 	6
Systemic change	<p>Calls for more fundamental societal change with new goals and measurement of (societal and economic) success</p> <p>Moving away from an economic model based on growth, materialism and consumerism</p>	<ul style="list-style-type: none"> • Develop a new measure of prosperity (beyond GDP) • Economic growth and sustainability cannot coexist • Learning to live more simply, not taking for granted that we will constantly get richer 	44
Technical solutions	Developing and implementing technological solutions, such as 'greener' forms of energy	<ul style="list-style-type: none"> • Finding technical solutions that enable both a good climate and high welfare • Nuclear power • Technical development • Hydrogen as fuel 	56
Travel & transportation	More sustainable ways to travel and commute Sustainable transport systems	<ul style="list-style-type: none"> • Better and safer bike roads • Cheaper and better public transportation • Car-free city-centres • Less travelling 	51
Waste & pollution	Reduce and manage waste and pollution produced by industries and consumption and instead embrace circular ways to produce and	<ul style="list-style-type: none"> • Clean up nature and the oceans from plastic • Food waste • Recycling • Reduction in harmful pollution 	44

	recycle		
Mindsets	Nurturing new worldviews, beliefs and motivations in relation informed by sustainability	<ul style="list-style-type: none"> • Shifting people's worldviews and values from egocentric to ecocentric • That we should find awareness, agency and empathy together • Making people more aware of their part in the whole 	22
Total number of entries coded and analysed: 619			

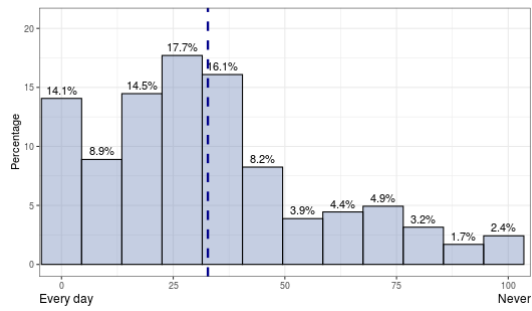
Open codes categories	Axial codes	Selective code
Consumption Collective mobilisation (also under regulatory, structural & political measures) Diet Educate and inform Empowerment and individual responsibility Local solutions initiatives Nature reconnection Mindsets Strengthen democracy	Individual change and empowerment	A citizen-led pathway embedded within non-materialistic and communal social relations
Collective mobilisation (also under individual change) (Urban) Green Spaces International cooperation Phase-out fossil-fuels Private & productive sector transitions Responsibility of private actors Role of government Science and research Security and resilience Systemic change Technical solutions Travel & transportation	Regulatory, structural & political measures	
Climate justice The natural world Reduction in material & energy output Waste & pollution	Outcomes for sustainability	

Appendix 3: Results of each triad, dyad and MCQ

<p style="text-align: center;">Triad 1</p> <p><i>In my story, the decision or experience was influenced by considerations of:</i></p> <p style="text-align: center;">Other people's wellbeing / societal wellbeing</p> <p style="text-align: center;">My own wellbeing / an individual's wellbeing The environment / planetary wellbeing</p>	<p style="text-align: center;">Triad 2</p> <p><i>In my story, the following is/was valued:</i></p> <p style="text-align: center;">The lives of future generations</p> <p style="text-align: center;">A better life for me and those close to me Nature/ the natural environment</p>
<p style="text-align: center;">Triad 3</p> <p><i>My story indicates that in a context of climate change:</i></p> <p style="text-align: center;">I / people can trust other actors (people or organisations) to act</p> <p style="text-align: center;">I / people can influence and act Things are out of control</p>	<p style="text-align: center;">Triad 4</p> <p><i>My example provides potential for positive change because it influences:</i></p> <p style="text-align: center;">How the city is regulated and structured</p> <p style="text-align: center;">What individuals believe and value The way different actors work</p>
<p style="text-align: center;">Triad 5</p> <p><i>I believe that the following actors should be responsible for addressing climate change:</i></p> <p style="text-align: center;">Governmental organisations/ politicians</p> <p style="text-align: center;">Citizens/ communities Private organisations/ businesses</p>	<p style="text-align: center;">Triad 6</p> <p><i>I will judge the work of the local and national government by whether they:</i></p> <p style="text-align: center;">Improve the wellbeing of people</p> <p style="text-align: center;">Deliver economic growth Give people the freedom to do what</p>
<p style="text-align: center;">Triad 7</p> <p><i>The following capacities are relevant for addressing climate change and supporting change:</i></p> <p style="text-align: center;">Technical capacities – ability to apply particular professional skills</p> <p style="text-align: center;">Cognitive capacities – e.g., ability for self-reflection, -awareness and -analyses Emotional capacities – e.g., intrinsic motivation to interrelate with others/the world, with openness and compassion</p>	

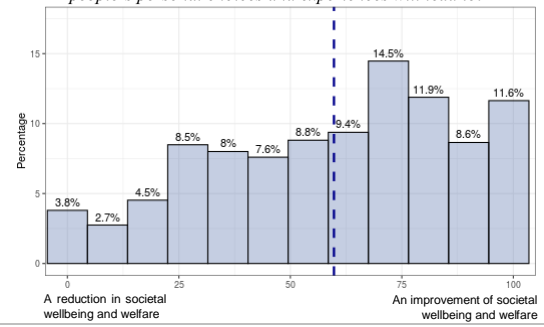
Dyad 1

Climate change influences my personal choices and experiences:



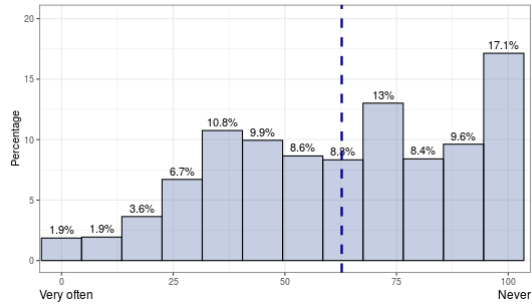
Dyad 2

In the long run, I believe that the influence that climate change has on people's personal choices and experiences will lead to:



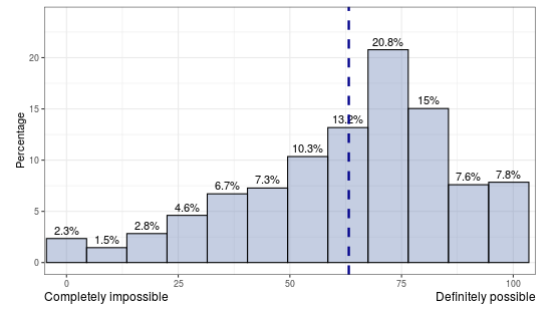
Dyad 3

In the past, I have tried to influence local and/or national work on climate change:



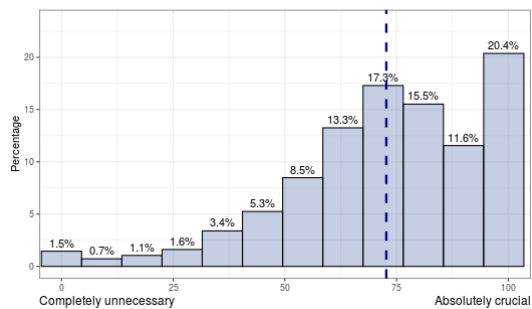
Dyad 4

Based upon my previous reflections, influencing future actions feels:



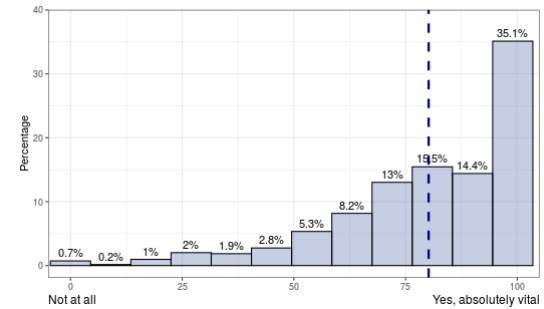
Dyad 5

Based upon my previous reflections, influencing future actions feels:



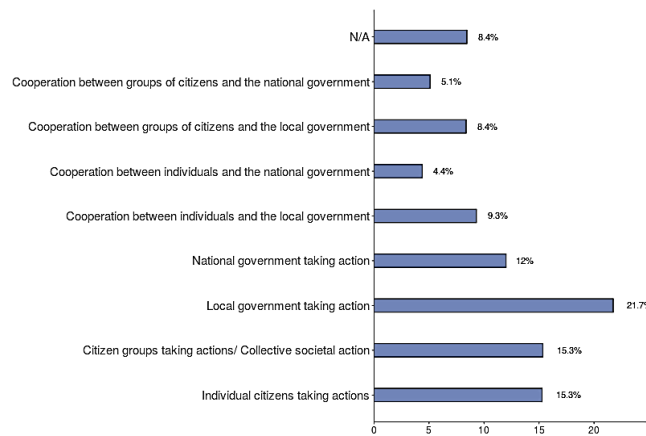
Dyad 6

Spending time in nature is important for my wellbeing



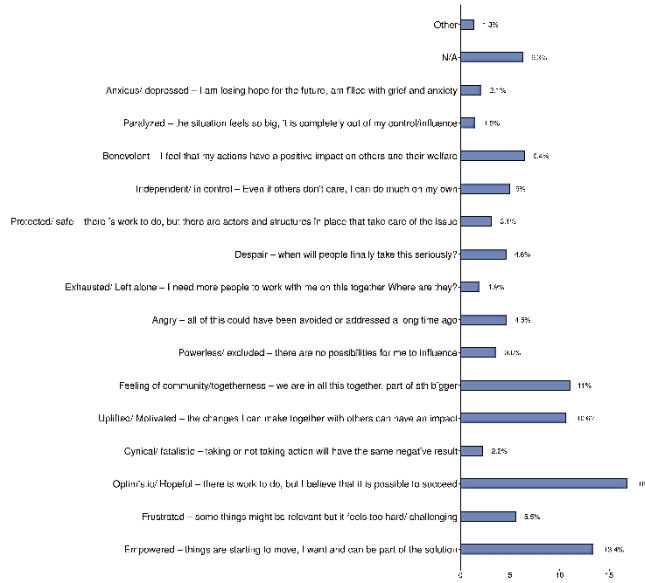
MCQ 1

My example is about (select all that apply):



MCQ 2

This is how I feel about (the lessons from) my example: (select all that apply)



MCQ 3

I have been trying to influence climate change-related work/ policies/ options by: (select all that apply)



Appendix 4: Translations of quoted entries

ⁱ ”Jag har tagit beslutet att sluta köra bil och istället cykla eller gå till jobbet. Beslutet tog jag när jag plötsligt slogs av hur korkat det var att överhuvud taget ha bil när jag både bor och arbetar i stan. Jag kom på mig själv med att ta bilen överallt, även om avståndet var litet. Det som fick mig att bestämma mig var när jag tog bilen bort till godisbutiken 200 meter hemifrån. Jag beslutade mig för att ställa av bilen i ett halvår för att se hur det skulle gå. Jag mår mycket bättre både fysiskt och psykiskt, har gått ner i vikt, gjort en insats för klimatet och planeten och dessutom sparat en massa pengar, så beslutet var lätt. Efter det halvåret gav jag bort bilen till en släkting.”

ⁱⁱ ”Det har slagit mig den senaste tiden hur mycket nytt som produceras hela tiden. Nya kläder, nya saker i form av elektronik eller något så enkelt som kökstillbehör. För de flesta människor är det naturligt att gå till en butik när de behöver något nytt till hemmet eller sig själv. Men det råder massproduktion. Allt det här produceras ju någonstans, och det tar kraft och energi och framförallt pengar. Varför är vi så benägna om att allt måste vara nytt hela tiden? [...] Vi måste sluta leva i en sådan hysteri då det tär på vår miljö att hela tiden producera och kasta, producera och kasta. Återvinn!”

ⁱⁱⁱ ”Jag har under hela mitt liv handlat ALLA mina kläder från H&M, Shein och liknande fast fashion märken. Jag köper väldigt mycket kläder, shopper kanske tre gånger i månaden. Nu har jag äntligen börjat anstränga mig mer för att hålla mig borta från såna varumärken. Jag handlar numera primärt second hand, och om jag handlar på t.ex Zara så är det för att de erbjuder ett klädesplagg jag inte kunnat hitta i en second hand butik. Dessutom ser jag till att bara handla ett visst klädesplagg som jag velat ha i mer än en månad. På så sätt dikterar jag ut mycket spontan konsumtion av kläder.”

^{iv} ”Jag förvånas ofta av att de råd och rekommendationer som jag tar del av, är rutiner och vanor som jag haft i hela mitt vuxna liv. Typ att inte slösa med vatten och att aldrig göra onödiga bilresor.”

^v Originally in English

^{vi} ”Jag sade upp mig från en karriärbana jag haft under 15+ år för att studera hållbarhet och bygga kompetens för att skapa mening för mig och kunna hjälpa företag och organisationer att ställa om. Jag valde att läsa kurser inom många olika fält, både inom naturvetenskap och samhällsvetenskap för att få med mig många olika perspektiv, trots att detta inte kan passa in inom gängse examensformer även om omfattningen är lika stor. Jag valde att frilansa till en betydligt lägre arvodesnivå för en startup inom strategiskt hållbarhetsarbete för att det känns meningsfullt och värdefullt för båda parter. Jag har gradvis lagt om majoriteten av mina pensionsbesparingar i hållbara fonder. Detta är en mycket viktig del för mig för att kunna använda mina tillgångar för att driva en positiv förändring.”

^{vii} ”Jag har bestämt mig för att inte studera vidare på en masterutbildning efter min kandidatexamen eftersom jag inte ser en anledning till att försöka på en karriär med tanke på att samhället lär bli väldigt ostabilt inom den nära framtiden. Istället har jag börjat med aktivism för att påverka den allmänna opinionen och makthavare. Med tanke på våra många utmaningar i framtiden när det blir konflikter om resurser o.s.v. ser jag det som viktigt att arbeta med att stärka demokratin för att vi på bästa sätt ska kunna hantera dessa utmaningar.”

viii ”Människor kan göra allt om dem vill”

ix ”Att vi alla kan göra någonting”

x ”Hur jag tycker att det som sker på mikronivå faktiskt visar sig på makronivå! Individens sätt att bete sig och hur individen mår påverkar i stort!”

xi ”Hoppet lever om att planeten kan räddas i o m att Trump förlorade makten.”

xii Originally in English

xiii Originally in English

xiv ”Min kontakt med vår landsbygd och de mer konkreta insatser, som skapas där människor emellan är en tankeställare. Vi behöver dessa grupper av människor, som inte bara tänker om utan också skapar olika sammanhang att vara aktiv i. Minlängtan efter en konkret förändring blev därför att gå en helgkurs i ekologisk odling, då vi träffades på en plats, där det redan finns igång olika konkreta sätt att använda vår natur och övertygelsen att själv börja odla lär mig mycket om hur naturen fungerar och vad den behöver. Människorna som finns i dessa sammanhang går också före oss andra med att skal bort bland alla olika prylar och istället återanvända i väldigt hög grad. Bra att kunna diskutera omställningstider med några, som redan är på den vägen”

xv ”Jag har tillsammans med några andra här i kommunen, startat en Tillsammansodling. Vi har fått mark från kyrkan att använda fritt. Vi vill öka och sprida lärande om odling samt skapa lokala samarbeten och stärka lokalsamhället och gemenskap.”

xvi ”Jag har sökt mig till omställningsnätverket för att undersöka hur jag kan bidra med då jag inte orkar att dra igång eget.”

xvii Originally in English

xviii ”Sommaren 2018 var så torr att jag upplevde rent fysisk smärta av att se den förvissnade växtligheten här hemma i Skåne och under min tågsemester till Jämtland, där luften dessutom fylldes av brandrök. När det äntligen kom några droppar regn grät jag av lättnad. Därför bestämde jag mig för att ta bättre vara på vattnet i min trädgård. Vi samlar nu regnvattnet från taket i en damm, och i behållare för att använda för bevattning i vårt växthus. Dammen har gett mig mycket glädje. Att studera trollsländor, grodor och annat liv där har varit en daglig höjdpunkt under årets semester. Grannarna är också glada, de hoppas att vattnet vi nu tar vara på i trädgården ska göra risken för att de får sin källare översvämmad igen minskar.”

xix ”Att inte spendera tid till att sopsortera. Jag ser dagens hållbarhetsdiskussion som ensidig, hushållen ska spendera sin värdefulla fritid åt olika tidskrävande handlingar och aktiviteter för klimatets bästa. Samtidigt som företagen endast handlar klimatvänligt om det finns ett vinstintresse i det. Det leder i regel till att en internalisering av miljö i affärsmodellen påverkar priser så att de blir dyrare. Miljö- och klimatfrågan är idag en inkomstfråga.

Paradoxalt nog är de rikaste som släpper ut mest, samtidigt som de har råd med de dyrare miljövänliga alternativen.”

^{xx} ”Omvärdera ekonomisk tillväxt - vi behöver skifta mindset - kollektivt.”

^{xxi} ”Jag tror att västvärlden har gjort största fel dem litar bara på pengar dem bryr sig inte om folk eller natur bara TILLVÄXT dem vill ha det är absolut FEL ,vi måste minska utsläpp drastisk annars kommer största katastrof som vi kommer inte att klara!”

^{xxii} ”Hur den rådande ekonomiska strukturen och kapitalistisk logik ej är en lösning till ett problem där dessa strukturer är en av de ledande rötterna till problemet.”

^{xxiii} ”Hur skuld/ansvar läggs på enskilda individen och inte på ett ekonomiskt system som är baserat på överproduktion.”

^{xxiv} ”Konsumtionssamhället - tron att vi genom teknik löser detta och fortsatt kan ha ekonomisk tillväxt. Miljöteknik flyttar ofta utsläppen till andra länder.”

^{xxv} ”Skapa tid. Bara så kan människor oavsett roll (privat, politiskt, näringsliv, civilsamhälle, forskning media...) få möjlighet att fatta hållbara beslut, snarare än att falla i filterbubblan/ekorrhjulet/det förhärskande narrativet som omringar dem.”

^{xxvi} ”För min del tror jag att vi måste omvärdera vad vi värdesätter högst, pengar/konsumtion/individualism eller mer fritid/kultur/kollektivism. Vi måste börja förstå och ta på allvar att vi är en del i ett större sammanhang och att allt hänger ihop. Att allt liv är nära sammankopplat ner till minsta cellnivå.”

^{xxvii} ”Fler medborglig och kommunala initiativ för att skapa ett mer hållbart samhälle, tex initiativ kring delning av varor och tjänster.”

^{xxviii} ”Lokalt engagemang och småskalighet.”

^{xxix} ”Minska energiförbrukningen (minska transporter av sånt som vi har tillgång till lokalt), minska läckage i energisystemen, investera i "Regenerativt lokalt jordbruk", "Koldioxidsänkande innovationer" och säkerställa "Rent dricksvatten" till alla. Skulle vi investera och prioritera i dessa tre områden så skulle omställningen gå snabbare & människor skulle må mycket bättre.”

^{xxx} ”Vi ska kunna försörja oss närapå med närproducerat. Sprid ut stöd runt i landet att kunna odla och producera miljövänligt överallt Inte allt i samma korg”

^{xxxi} ”Att begränsa företag från att bidra till den enorma överproduktion och överkonsumtion som råder. Det är även viktigt med tydligare regler kring hur de ska värna om miljön och utsatta människor, ex var företagets produkter produceras, av vem, vilka arbetsförhållanden dessa människor har samt ifall metoderna för produktionen är miljövänliga.”

^{xxxii} ”Privata aktörer måste ta mer ansvar. Större företag måste få press av regeringen. Inte bara i Sverige utan hela världen.”

^{xxxiii} ”Skarpare förslag i de globala organisationerna. Fler bindande avtal.”

^{xxxiv} ”Samarbete, på alla plan. Även internationellt.”

^{xxxv} ”Upplys medborgare så vi alla ställer krav och upplever att vi kan påverka.”

^{xxxvi} ”Hjälp oss att skapa en positivt framtidstro där alla på olika enkla sätt känner att de bidrar. Gör det lätt att göra rätt.”

^{xxxvii} ”Engagera oss medborgare, så vi kan påverka politikerna.”

^{xxxviii} ”Tala klarspråk! Jag tror att det allra viktigaste (och det som politiker och medier har misslyckats katastrofalt med) är att informera samhället om hur läget ser ut. Att vi är på väg (om inte mitt inne i) en fullständig katastrof och att vi inte ens är i närheten av att lösa den.”

^{xxxix} Att människor har empati för andra (nuvarande och kommande generationer) och förstår konsekvensen av de beslut som tas idag.