Preventing knowable risk at the cost of long-term thinking

– A critical analysis of the discursive construction of adaptation in Icelandic policies

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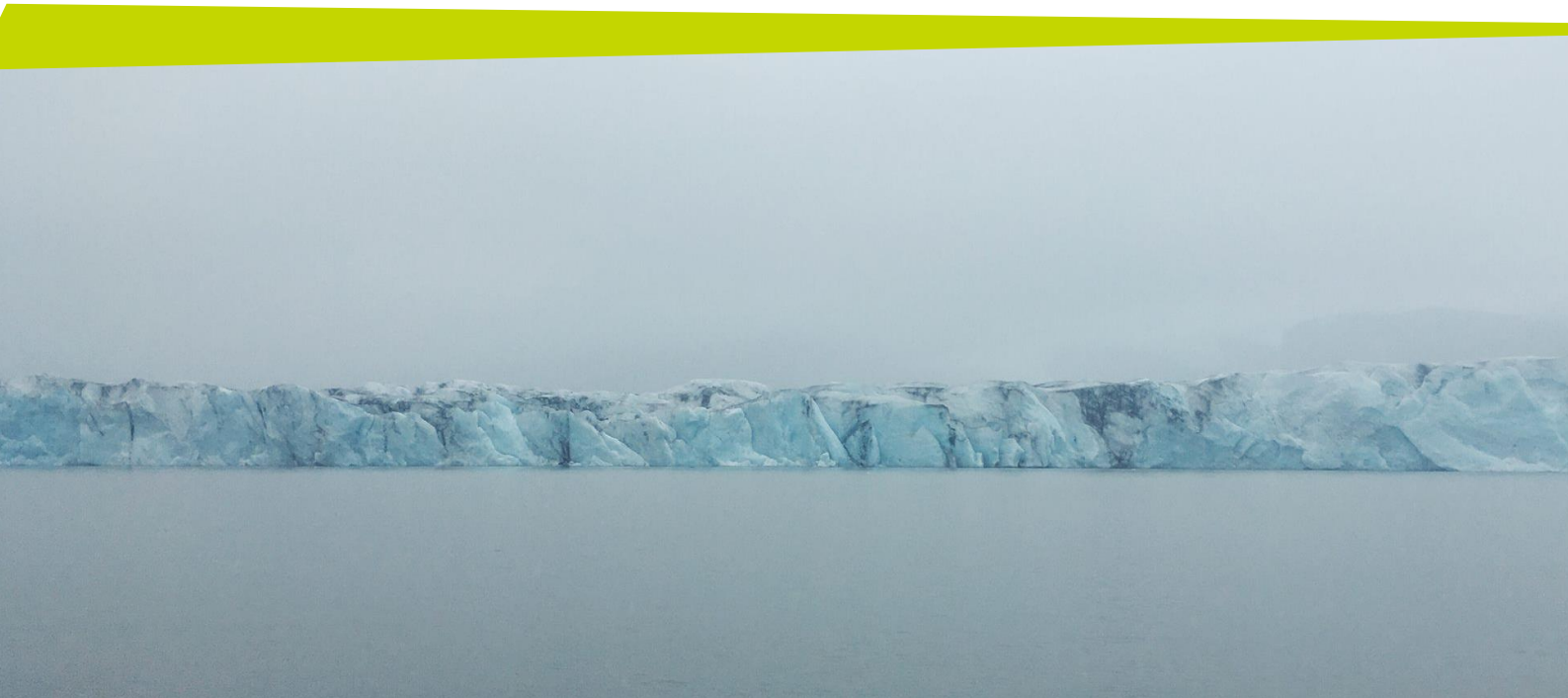

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Abstract

The discursive construction of climate change adaptation as a policy issue gives rise to material practices that have real effects on people‘s lives, and should thus be critically interrogated. In the realm of adaptation policies, the Nordic countries have been at the forefront, but for Icelandic decision-makers the topic remains relevantly novel. This study aimed to reveal how Reykjavík municipality and the Government of Iceland represent adaptation as a problem and where their policies and policy suggestions lead to. This was achieved through the use of Bacchi‘s „What‘s the Problem Represented to be?“ approach to discourse analysis, where policy documents and interviews were collected and scrutinized. The results show that Icelandic policymakers are leaning towards technocratic adaptation pathways that privilege experts, prioritize responses to biophysical risk, safeguard neoliberal values, and suggest that adaptive capacity can be achieved through modifications to the status quo. This is highly problematic given that such approaches ignore the societal dimensions of climate change, give rise to short-term thinking, and downplay the need for more transformative change. Furthermore, they have been shown to exasperate existing vulnerabilities, reinforce social inequalities, and lead to maladaptive outcomes. However, the presence of a supplementary sociosystemic conceptualization of adaptation in Icelandic policy discourses suggests the possibility to reframe the issue as a matter of social transformation, which is what numerous scholars are now calling for.

Keywords: Climate change adaptation, policy discourse, risk, problematization, What’s the Problem Represented to be?, Reykjavík municipality, Government of Iceland.

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1. Introduction

At the onset of 2020, devastating effects of climate change are unfolding before our very eyes. The list of alarming events and warning signs can hardly be ignored; with reports of recent bushfires in Australia at a massive scale (McGrath, 2020), broken heat records in the Arctic (Watts, 2020), and a global health crisis in the light of a new coronavirus pandemic. Research has firmly established by now that climate change inflicts more severe weather (Shi et al., 2016). Iceland, a small island nation in the North Atlantic, is no exception to this trend. Several extreme weather events have struck the country in recent times, as reported in local newspapers (Daðason, 2020; Morgunblaðið, 2020), with coastal cyclones and floods that have caused extensive damage and distress.

As the once projected ramifications of climate change begin to materialize, the need for adaptive measures grows ever more apparent. Policymakers around the world are waking up to the reality that a multitude of severe effects caused by climate change, both current and projected, will not be mitigated, even if all emissions were to stop today (IPCC, 2018). Climate change adaptation has, accordingly, acquired an increased presence in the policy agendas of wealthier countries; but in its infancy, the issue was mostly understood as a concern for less developed countries, which were expected to experience more severe impacts of climate change (Pelling, 2011), and was widely seen as a „defeatist“ option (Persson, 2019, p. 2). As a term, climate change adaptation is quite broad and is yet to acquire a widely recognized definition (Remling, 2018). However, it is generally seen as „the process of adjustment to actual or expected climate and its effects“ (IPCC 2014, p. 5).

In conjunction with these developments, the need arises to critically address how political decision-makers conceptualize adaptation and develop policies to tackle the issue accordingly. From the viewpoint of constructivist inquiry, social problems, and issues that reach the political agenda do not exist independently „out there“ but are discursively constituted (Bacchi, 1999). As such, it must be recognized that how a problem is represented as a policy issue is not untinged by relations of power and competing forms of rationalities. The discursive constructions of matters such as adaptation to climate change should be understood as productive since they lead to a range of material practices that exclude alternative ways of knowing and doing.

Proponents of discourse analysis have firmly established the necessity of investigating how words and ideas manifest real practices (Jørgensen and Phillips, 2002). For instance, Goodwin (2011) argues that „discourse within a public policy framework provides legitimacy for government ideology." (p. 23). If this is true, then policies can become tools of social control and system maintenance, when the meanings that support them remain unquestioned. The way forward then, and the path to more socially just outcomes, must be to critically scrutinize policy discourses, reveal what they ignore and show what effects they have on people's lives (Bacchi, 1999).

In the study at hand I first aim to examine how Reykjavík Municipality and the Government of Iceland discursively construct adaptation as a problem. Secondly, I aim to unveil and interrogate the implicit trade-offs and unspoken issues that follow these problem representations. To my best knowledge, Icelandic policies and policy suggestions that consider climate change adaptation have never been critically scrutinized before; and I intend to address this gap in the literature. Prior studies that deal with the discursive construction of adaptation in policy agendas, both in local and national contexts, have revealed a range of problematic assumptions and taken-for-granted knowledges which delimit conceptions of how adaptation is to be governed (Remling, 2018), who's knowledge and expertise counts (Ensor et al., 2019), which groups are most vulnerable to climate change (Löf, 2013) and what spatio-temporal limitations adaptation presents (Solan et al., 2020).

1.1. Background of study

The Nordic countries have been at the forefront of adaptation, with Finland introducing a national adaptation policy in 2005, and Norway and Denmark following suit in 2008 (Björnsson et al., 2018; The Danish Government, 2008). Iceland is, by contrast, lagging behind its Nordic neighbors when it comes to the formulation of policies regarding climate adaptation (Björnsson et al., 2018). The issue has not featured strongly in the political agenda of Iceland and the government is yet to present any official policies that deal with it (ibid.). However, following a scientific report published in 2018, which strongly urged policymakers to take adaptation into consideration (ibid.), the Minister of Environment and Natural Resources announced that the process of planning for climate adaptation had commenced (Alþingi, 2020).

The Icelandic Climate Council, which brings together actors from the scientific community, government, and businesses, has been tasked with doing the groundwork and preparing policy suggestions (Sigurðsson, 2020). Its first steps

were to host workshops and conferences on climate adaptation where relevant actors - representatives of NGOs, state agencies, municipalities, and universities - were brought together in order to generate knowledge and insights that might inform future policy decisions (Icelandic Association of Local Authorities, 2019). Subsequently, the Climate Council published a discussion paper in January 2020, listing out suggestions to be reviewed and considered (Sigurðsson, 2020). However, the question remains how long it will take before an official adaptation policy is put forth. In the present political vacuum, where roles and responsibilities concerning the prevention of and responses to potentially harmful effects of climate change are left undefined, Reykjavík Municipality remains the only local authority that has introduced its own adaptation policy (Reykjavík Municipality, 2016).

The present state of adaptation as a policy issue in Iceland underscores the need to address it at the discursive level, especially given that a national policy for adaptation is underway. There are a few reasons why both Reykjavík Municipality and the Icelandic Government are under investigation in this study. First off, the responsibilities between local and national authorities have not been defined, but there is reason to believe that the government will establish and oversee an overarching framework for adaptation that municipalities have the autonomy to implement in a way they see best fit (Sigurðsson, 2020). Also, given the fact that Reykjavík has spearheaded the agenda of adaptation in Iceland, the Government seems somewhat informed by the municipality‘s policies, with the Climate Council repeatedly referring to them in its work on adaptation (ibid.).

1.2. Research questions

The following research questions draw upon Bacchi‘s What‘s the Problem Represented to be? approach to discourse analysis, which is further elaborated upon in the theory chapter.

How is adaptation discursively constructed by Icelandic policymakers at both the municipal and national levels?

1. How is adaptation problematized? Which are the solutions proposed? What is presented as the correct, desirable, or logical way to adapt?
2. What underlying assumptions underpin policy and policy recommendations? Which conceptual logics are operationalized in order to support claims?
3. What silences can be detected? What remains unproblematized in the representation?

2. Research design

2.1. Theory

2.1.1. What's the Problem Represented to be?

Discourse analysis emerged from the constructivist research paradigm and is therefore underscored by the view that meaning and understanding are constructed through social interaction; contesting the realist perspective that an objective comprehension of our world can be reached through empirical examination (Creswell and Creswell, 2018). Through the constructivist understanding of meaning-making, science is not a value-free domain, since what we consider as "facts" and common sense is seen as socially constructed within given cultural and historical settings; and can thus work in the favor of certain groups. From this epistemological viewpoint, one of the main endeavors of research becomes to question and challenge what is presented as self-evident through the analysis of discourse. However, it should be noted that there is no single definition of discourse, but Jørgensen and Phillips (2002, p. 2) describe it as "a particular way of talking about and understanding the world (or as aspect of the world)." In this study, I follow Bacchi's (1999) definition of discourse as „the language, concepts and categories employed to frame an issue." (p. 2). Discourse analysis has materialized as a family of critical approaches, which are not always in agreement, but Feindt and Oels (2005) argue that they are all; 1) highly skeptical towards objective truths and perceive all knowledge as contestable, 2) recognize that language has a role in constituting policies and procedures, and 3) understand that knowledge and language play a role in shaping power relations.

One such approach, which is particularly adept at the analysis of policy, is Bacchi's "What's the Problem Represented to Be?" (WPR), which places the process of problematization into view. According to Bacchi (1999), who draws her ideas from Foucauldian discourse theory and Derrida's method of deconstruction, we are not actually governed through policies but rather through problematizations; since the way social problems are constructed will narrow the scope down to certain solutions and leave other potential avenues of action undiscovered. Bacchi (1999) stresses

that the social problems that policies intend to remedy need to be scrutinized, since their representation can work in the favour of more powerful actors and often produces material and "lived" effects, such as the constitution of subjects and reproduction of practices, that are potentially harmful and could be avoided. This way, problem representations presented as "common sense" can become tools in the service of power; which is problematic given the near-hegemonic position of problem-solving, as opposed to problem-questioning, in today's society (ibid.).

To facilitate the interrogation of policy discourses, Bacchi (2009, p. 2) has formulated six questions to ask of the material that has been chosen for analysis:

1. What's the 'problem' (e.g. of 'problem gamblers', 'drug use/abuse', domestic violence, global warming, health inequalities, terrorism, etc.) represented to be in a specific policy?
2. What presuppositions or assumptions underlie this representation of the 'problem'?
3. How has this representation of the 'problem' come about?
4. What is left unproblematic in this problem representation? Where are the silences? Can the 'problem' be thought of differently?
5. What effects are produced by this representation of the 'problem'?
6. How/where has this representation of the 'problem' been produced, disseminated and defended? How could it be questioned, disrupted and replaced?

With these questions, Bacchi provides researchers with a tangible method; something which is left out of many approaches to discourse analysis, such as Laclau and Mouffe's discourse theory which is also rooted in Foucauldian philosophy (Jørgensen and Phillips, 2002). She describes WPR as, essentially, a Derridian method of deconstruction, where the analyst works backwards through three steps described as „(1) reflect upon the shape of claims made about social problems; (2) consider the implications which flow from the shape of these claims; and (3) reflect upon what is missing from the shape of some claims and what implications follow from this" (Bacchi 1999, p. 59). Through such efforts, one goes beyond the level of mere description. In the words of Kriznik (2015), it allows „the researcher to actively question how the problem under investigation contributes to the particular "mentality of government" present at specific points in time" (p. 63). From this, it can be understood that what, in fact, proves the overarching goal of Bacchi's form of discourse analysis is to interrogate the complex and often layered motivations that lie behind policy. In this context, government is seen as a

privileged actor that presents certain problem representations in order to safeguard self-interests which go beyond simply preserving authority (Bacchi, 1999). However, Bacchi also acknowledges that discourses often work at the unconscious level, and therefore such efforts are not always intentional. This treatment of intentionality should be considered a pivotal element of her reasoning since it opens up the possibility for transformation. If conditions are created where decision-makers, and society at large, are able to reflect better upon their own understanding, as opposed to passively accepting ideas that have been stripped of their political value and cast as objective truths, more transformative and just policies might follow.

2.1.2. Central concepts

The Foucauldian concepts of problematization and governmentality are central to a WPR analysis and will, therefore, be elaborated upon here. Foucault, in the latter part of his career, described his work as, essentially, studies of "forms of problematizations" (Frederiksen et al., 2015). Problematization is a term that encompasses how problems are conceptualized, discussed, and resolved in society (Foucault, 1984), and Foucault considered it to be one of the primary instruments used to implement and sustain liberal rationality (Bacchi, 1999). This way, and as Bacchi (1999) argues, there is a direct link between problematization and governmentality, in that governmentality is a term that denotes "government rationality" or the structures of thought that government relies upon.

Bacchi's ideas also correlate with Stanley Deetz's concepts of systematically distorted communication and discursive closure. Deetz (1992) considers communication to be systematically distorted when ways of doing, thinking, and even being, are steadily reproduced without the possibility to present critique. He regards systematic distortion as rarely, if ever, premeditated by individuals and rather sees it as structural inertia (ibid.); which is similar to how Bacchi (1999) treats discourses. Furthermore, the ideas of Deetz (1992) relate to Bacchi's notion of silences, since he contends that systematically distorted communication leads to the exclusion of alternative forms of knowledges, arguing that "When discussion is thwarted, a particular view of reality is maintained at the expense of equally plausible ones, usually to someone's advantage" (p. 188). Systematic distortion gives rise to what Deetz (1992) calls discursive closure, which "exists whenever potential conflict is suppressed" (187). Such discursive closures occlude alternative views but, on the contrary, moments of discursive openings, which present the opportunity for transformation, can also appear at any given time (Christensen et al., 2015).

2.2. Methodology

2.2.1. Data selection criteria

When analyzing policy, the width of relevant material should first be established. Goodwin's (2011) definition of policy analysis sets a broad scope; it can include the investigation of political text, decisions, statements, speeches, process, interviews, and other interactions. The WPR approach (Bacchi, 2012) has a wide field of application but "specific pieces of legislation or policy pronouncements provide the most obvious starting points for analysis" (p. 23). This view is presumably founded on the idea that such documents provide clear clues of how the problem is constructed and represented in official policy. However, Bacchi (2012) also acknowledges that "more general government documents also contain implicit problem representations" (p. 23) and that material from the science community, such as "theoretical and postulated solutions" (p. 23), is also relevant within the WPR approach.

Bacchi has made several "updates" and modifications to her approach since it was first introduced in 1999. In 2012, she stated that the WPR approach should, in fact, be viewed as a more "openended mode of critical engagement, rather than as a formula" (Bacchi, p. 23). This presents researchers with the opportunity to adjust the approach to better suit their inquiry; which could help enable a heightened sensitivity towards the political, cultural, and historical aspects of the specific research settings. Other scholars also endorse such refinements to discourse analytical approaches; Jørgensen and Phillips's (2002) account of discourse analysis stresses that "it is possible to create one's own package by combining elements from different discourse analytical perspectives and, if appropriate, non-discourse analytical perspectives" (p. 4). Furthermore, they argue that such multi-perspectival work is "positively valued in most forms of discourse analysis" (ibid., p. 4).

My study built upon Bacchi's suggested material selection and relied mostly upon the analysis of selected policy documents, reports, and speeches that deal with climate change adaptation and are produced by governance actors at either the municipal or national level. In addition, I collected two interviews with key actors; Reykjavík Municipality's Climate Change Commissioner, who led the process of formulating Reykjavíks Climate Policy, and the Chairman of the Icelandic Climate Council, who is currently leading the process of formulating suggestions for Iceland's first adaptation policy. At a later stage in the analytical process, I added a third interview where I spoke to the politician who is currently leading the process of formulating Iceland's first food policy, in order to further explore a preliminary insight.

The data collection followed the following selection criteria:

1. Documents must reflect the official discourse. As such, they should be produced by actors who are, or were at the time, involved in the process of formulating policy or policy suggestions for Reykjavík Municipality or the Government of Iceland. This is due to the fact that the WPR approach considers everyone directly involved in the policy process as actors that partake in shaping the problem representation (Bacchi, 1999). The same goes for the selection of interview informants, but they should, preferably, be key actors in the policy process – who can provide a more in-depth understanding of the rationale behind the policies.
2. The document selection must span from the point in which adaptation was first featured on the policy agendas of Reykjavík Municipality and the Icelandic Government to the most recent material in which it is discussed.

In relation to data selection, it should also be mentioned that the interview respondents, who were all addressed in their capacity as civil servants, are seen as reflecting the official discourse of Reykjavík Municipality and the Government of Iceland. However, it was also acknowledged that there might be moments of discursive opening where the respondents speak from an individual standpoint, and not as civil servants, thereby reflecting their own personal opinions.

2.2.2. Documents

The following tables describe the documents which were selected and analyzed in this study. The range of policy material on adaptation in Iceland is relatively scarce since the issue reached the political agenda relatively late in comparison to other Nordic countries. They were obtained through the use of online search engines, the websites of Icelandic authorities, and email correspondences with civil servants, where I asked for textual documents that involve climate adaptation.

Reykjavík Municipality				
Title	*Taskforce report on adaptation to climate change.*	*Reykjavík's Climate Policy.*	*Overview of the biggest risk factors due to climate change in Reykjavík, ways to adapt and the current situation.*	*Measures for the adaptation to climate change.*
Type	Report	Policy pronouncement	Report	Proposal of adaptation measures to be signed by the City Council
Date	November 24th, 2015.	June 30th, 2016	September 28th, 2017	December 20th, 2017
Code	DOC 1	DOC 2	DOC 3	DOC 4
Author	Reykavík Municipality's climate adaptation taskforce	Reykjavík Municipality	Reykjavík Municipality and Alta Consultancy	The Mayor of Reykjavík
No. of pages	31	11	32	3

Table 1: Documents from Reykjavík municipality

The Icelandic Government				
Title	Opening speech at the Climate Council's conference on adaptation.	*Workshop on adaptation. Summary of the Icelandic Climate Council's workshop on adaptation to climate change.*	Parliamentary speech on adaptation.	*Preparing for a changed world. Adaptation to climate risk through policy and governance.*
Type	Speech	Report, summary of workshop	Parliamentary speech	Discussion paper
Date	May 16th, 2019	May 29th, 2019	November 25th, 2019	January, 2020
Code	DOC 6	DOC 7	DOC 8	DOC 9
Author	The Minister of Environment and Natural Resources	The Climate Council and Alta Consultancy	The Minister of Environment and Natural Resources	The Climate Council
No. of pages	3	14	2	68

Table 2: Documents from the Government of Iceland

2.2.3. Interviews

I conducted three interviews with the following respondents: 1) Reykjavík's Climate Change Commissioner (DOC 5), 2) The Chairman of the Climate Council (DOC 10), and 3) the politician who is currently leading the process of formulating Iceland's first food policy (DOC 11). They were performed after a preliminary analysis of the gathered documents had been made. This allowed me to pay particular attention to whether any categories or themes detected in the documents reappeared in the interviews. In this sense, the interviews were conducted in order to explore and better understand these themes and the forms of knowledge which governance officials rely upon when describing adaptation. The first two interviews were conducted in a semi-structured manner and followed a predefined interview guide (see appendix 1). The semi-structured method entails some level of protocol but also a degree of flexibility and space for improvisation (Silverman, 2014), which allowed me to explore what I set out to investigate but also to be open to new discoveries and insights. The third interview, also conducted in a semi-structured manner, was added at a later stage, in order to follow up on a preliminary insight and explore whether and how adaptation is considered in the formulation of a national food policy.

During all interviews, I avoided bringing up the insights that I had achieved from the preliminary analysis of the documents but rather sought to pose questions that revealed how the informants defined problems, solutions, and what they consider as „givens" in relation to adaptation.

2.2.4. Analytical framework

The following method of analysis was applied to the gathered material:

1. Revealing how adaptation to climate change is problematized by Reykjavík municipality and the Government of Iceland was the starting point for analysis. At this stage I followed Bacchi's first step of deconstruction, and reflected „upon the shape of claims made about social problems" (1999, p. 59). According to her, this can be achieved by placing a focus upon what „appears to be givens" (Bacchi, 1999, p. 35). I focused my attention towards how adaptation is described and defined, what is presented as problematic or unwanted and which solutions are proposed. Through this interrogation, my objective was to go beyond the level of description; according to Kriznik (2015), the analyst should at this stage be concerned with "the identification and examination of structures of thought and the forms of knowledge used to make an object knowable" (p. 69).

2. The second stage of analysis was to uncover and deconstruct the underlying assumptions that underpin the problem representation through the examination of the conceptual logics and political rationalities present in the material. Conceptual logic, as a term, stems from Foucault's archaeological method and can be defined as any form of assertion made in order to validify the problem representation (Bacchi, 2009). At this stage, I considered "the implications which flow from the shape of these claims" (Bacchi, 1999, p. 59). To unveil the different conceptual logics at work, I concentrated my attention on the detection and analysis of "binaries, concepts and categories" in the material; as is recommended by Bacchi (2009, p. 26).

3. At the third stage of deconstruction, I aimed to reveal and interrogate silences, or what official conceptualizations of adaptation leave unproblematized, and consider what implications they have. Here, I went through the material again and looked for issues that are downplayed or left unaddressed. According to Bacchi (1999), problem representations and the forms of knowledge which support them make certain solutions possible and preferable while making others seem frivolous or inconceivable. As such, silences can be discovered by viewing the problem representations and determine what the forms of knowledge that support them rule out or render invisible.

2.2.5. Analytical process

The process of analysis took on an iterative form, where I repeatedly revisited the data with emerging insights and understandings in mind. An iterative analysis is "key to sparking insight and developing meaning" (Srivastava and Hopwood 2009, p. 77) and the repeated processes it entails allows the analyst to be highly reflexive and should ultimately lead to more refined understandings. This is also in line with Bacchi's (1999) description of WPR as a highly layered form of analysis, which requires repeated application of the research questions in mind.

First, I read through the material and highlighted sentences according to the analytical framework previously described; looking for moments in the text which reveal the problem representation, underlying assumptions, and silences. From there I arranged the coded sentences into an Excel sheet, read through them again, and established key concepts, themes, and categories. Subsequently, I revisited the data with these emerging insights in mind to further develop them. This cycle of analysis was repeated numerous times until it stopped producing new and relevant insights and I sensed that a rigorous set of findings had been developed.

2.2.6. Positionality and limitations

A WPR analysis is a practice that goes beyond the identification of varying interpretations of the same issue; according to Bacchi (1999) it is imperative to also evaluate them. This, she argues, is essential since problem representations lead to outcomes that have real effects on people‘s lives, and these effects „need to be commented upon and assessed“ (ibid., p. 54). From Bacchi‘s (1999) perspective, constructionist researchers cannot avoid political assessment and she argues that „The view that all we have in the world of public policy are competing framings of problems is, I would argue, a species of pluralism which supports the status quo.“ (p. 57). Given this, it becomes clear that how a WPR analysis is carried out is inextricably linked with the values and world-view of the analyst. Every part of the process, down to the selection of policy texts (Goodwin, 2011), should thus be seen as interpretive acts; which is why it is essential to discuss positionality. As such, I would like to disclose my contention that adaptation pathways that aim to preserve the societal systems in place are gravely insufficient. In my view, neoliberal ideals and growth-oriented economic models are inherently incompatible with a sustainable and climate-resilient future where the planetary boundaries are not surpassed. The way forward, then, and the answer to the dire environmental crises that humanity now faces, must involve challenging the systems that sustain these values. This view is not only based in my own experiences working with environmental questions but also derives from the growing body of literature that argues for wide-reaching systemic change in the face of climate change (Pelling, 2011; O‘Brien, 2018; Remling, 2018; Nightingale et al., 2020).

Other limitations to this study include the fact that the policy texts and the interviews conducted were originally in Icelandic. I‘ve translated the data into English and this process always entails the risk that some meanings become lost or obscured. In addition to that, it should also be noted that climate change adaptation is still a relatively new and emerging policy field in Iceland, with Reykjavík‘s adaptation policy being the only concrete policy pronouncement available. The governmental data gathered, which mostly consists of reports, speeches, and policy suggestions, should, however, provide clues regarding what the upcoming national adaptation policy will entail, how the Government represents adaptation, and which courses-of-action it sees as favorable.

There are also some ethical implications to consider with regards to my study. Silverman (2014) argues that any research that fails to give interviewees enough information to base an informed consent upon is carried out under false pretenses and should thus be deemed unethical. However, this can in certain situations pose

a dilemma since full disclosure can lead participants to change or modify their responses (ibid.). From an ethical standpoint, this is quite the balancing act, but I made sure to approach my informants with a detailed account of my study without revealing that problem representation was the central object of analysis. In addition, I acquired consent before recording the interviews and made the informants aware that they would be able to retract their responses at any time. The informants did not express the overt request to remain anonymous, but in this written document I refer to them not by name but rather by professional role.

3. Results

3.1. Discursive construction of adaptation as a problem

3.1.1. Reykjavík: A problem of spatial planning

The data reveals that Reykjavík Municipality treats adaptation mainly as a problem of spatial planning and infrastructure. The city‘s Climate Policy includes two points on adaptation. It stipulates that; 1) the main risk factors are to be mapped out and implemented into spatial planning and a strategy for risk mitigation developed, and 2) nature-based drainage solutions are to be implemented and other nature-based and technical solutions employed as flood defenses (DOC 2, p. 7). Furthermore, the majority of policy suggestions developed before and after the policy was formed, revolve around solutions that can be implemented through Reykjavík‘s Municipal Plan or regulations imposed upon the building sector. Such solutions include making adaptation a prerequisite for the spatial planning of coastal and harbor areas (DOC 1), imposing a minimum floor height for buildings in close proximity to the ocean (DOC 3) and regulating the placement of electricity boards and key piping so that they are not placed below estimated flood height (DOC 4). The stated goal of such measures, and what seems to be the general objective of Reykjavík‘s adaptation activities, is to build resilience so that the city is able to withstand the threats posed by climate change (DOC 3).

In a report that summarizes the biggest risk factors linked with climate change in Reykjavík (DOC 3), it is argued that „Spatial planning is one the most effective ways to respond to the biggest risks posed by climate change.“ (p. 29), and the findings overall do support this emphasis; *spatial planning*, *Reykjavík‘s Municipal Plan* and *infrastructure* are key concepts that span across the material. Using nature-based, technical, and policy solutions in spatial planning is arguably the primary way in which Reykjavík Municipality intends to perform adaptation and manage the biggest climatic threats; which are broadly defined as sea-level rise and the increased intensity of precipitation (DOC 3, DOC 5). The account of

Reykjavík‘s Climate Change Commissioner (DOC 5) also confirm this conceptualization of adaptation;

> „Precipitation and sea-level rise are clearly the biggest factors to consider. Perhaps precipitation to a larger degree even. Those are issues that I think we are well on our way with.“

> „But the thing is, that adaptation to climate change is largely a matter of spatial planning. So it is an issue that belongs to the Council of Planning and Transportation and not just the Council of Environment and Health.“

However, it should also be mentioned that a few of the measures proposed by Reykjavík are not related to spatial planning or infrastructure. In the documents published after the Climate Policy was formed, solutions to preserve biodiversity and to deal with the potential threats posed by invasive species are introduced (DOC 3, DOC 4). Furthermore, the necessity of developing measures to monitor and estimate the effects that ocean acidification could inflict upon Icelandic fish populations is briefly addressed (DOC 4) and also the opportunities that could be seized with the increased growth of vegetation and forests which is projected in conjunction with climate change (DOC 4).

3.1.2. The Icelandic Government: A problem of risk management

The analysis shows that the Icelandic Government represents climate change adaptation as, essentially, a problem of managing external risk with high levels of uncertainty and complexity attached. This problematization is revealed through discursive constructions that cast adaptation as a procedure where scientific evidence and risk calculus are skillfully applied in decision-making. The conceptualization of adaptation as risk management is well demonstrated in the following passage from the Climate Council‘s recently published discussion paper (DOC 9);

> „Measures depend upon observations on one hand, and assesment on the other. These fields form the process of adaptation which can be defined as risk management, and entails processes that either decrease, prevent or distribute the risk of damage caused by climate change.“ (p. 13).

The governmental material does indeed display a strong orientation towards processes that regard the identification of and response to risk. Most of the policy suggestions put forth address how a national framework for adaptation is to be developed (DOC 6, DOC 7, DOC 10), how risk is to be defined, assessed and

monitored (DOC 6, DOC 8, DOC 9), and how solutions are to be prioritized and procedures developed accordingly (DOC 7, DOC 9). This form of adaptation framework, which is taking shape at the national level, is justified with the promise that the inherent complexity and uncertainty of climate change can be remedied to an extent, through the detection of risk and subsequent development of responses (DOC 8, DOC 9). The posited outcome of such efforts is a climate-resilient society (DOC 6, DOC 8, DOC 9). As with Reykjavík Municipality, *resilience* was identified as a key concept across the governmental material, and the Minister of Environment and Natural Resources (DOC 6) stated in a speech that;

> „On one hand adaptation measures are about increasing research and monitoring of vulnerabilities in society, and on the other hand they are about implementing actions that increase the resilience of society and the economy."

The Climate Council's discussion paper is intended to inform the upcoming formulation of a national adaptation policy (DOC 9). It brings forth a multitude of issues, which are seen as necessary considerations in relation to adaptation. But in its concluding chapters the scope is narrowed down and the following categories of policy suggestions are directed towards the government; 1) to form a framework for national adaptation strategies, 2) to promote coordination between different fields of research, 3) to promote collaboration between different actors and stakeholders around adaptation, 4) to evaluate laws and regulations with regards to adaptation, and 5) to establish monitoring, re-evaluation and assessment of adaptation solutions (DOC 9, p. 55-57). These suggestions are founded in the representation of adaptation as a problem of identifying and managing risk; which is why it is considered essential to establish a feedback-loop of procedures in which a broad range of actors and stakeholders collaborate to minimize complexity and uncertainty. This corresponds with how adaptation is defined in the same document, where it is seen as „characterized by repeated processes, where societies evaluate the current situation, future effects, make decisions and then re-evaluate the situation according to new climate research and the outcomes of previous measures." (DOC 9, p. 10).

The Climate Council (DOC 9) considers the biggest climatic risks at stake in Iceland to be linked with sea-level rise, the increased intensity of precipitation, and ocean acidification. A range of potential solutions to adapt to these risks are discussed, such as revising spatial planning regulations (DOC 7, DOC 9), employing nature-based drainage solutions for rainwater management (DOC 7, DOC 9), and diversifying employment within sectors which depend upon fishing (DOC 9). This corresponds with Reykjavík Municipality's prioritization of identifiable risk factors that manifest themselves within distinct boundaries and the orientation towards solutions linked to spatial planning and the man-made

environment. In the accounts of both the government and Reykjavík, sea-level rise and precipitation become the focal objects of adaptive measures, while the range of conceivable solutions to deal with ocean acidification is considered to be very limited (DOC 5, DOC 6, DOC 9, DOC 10). However, the interview with Chairman of the Climate Council (DOC 10) reveals he is personally more concerned about global risk factors that could affect Iceland in the long-term, as the following quote illuminates;

> „But perhaps if you look two or three decades ahead, then I think that indirect effects of climate change, through devastation that occurs elsewhere, will have severe consequences here. If we consider this, then we must contribute more when it comes to accepting refugees and such things. I also think it's inevitable that the price of food will increase. Purely because of the strain inflicted upon global food systems. If we are really talking about facing the facts, then our local problems fade in comparison with global threats."

Such global threats, or risk factors, do not feature strongly in the data but are briefly addressed in the discussion paper (DOC 9), where it is suggested that Icelandic decision-makers consider adaptation in policies which deal with food and immigration with regards to how climate change will potentially affect global food systems and refugee migration.

3.2. Underlying assumptions

3.2.1. Adaptation invites a reformist agenda

The findings illustrate a predominant tendency towards claims that safeguard the integrity of a liberal economy and government, even though some moments in the text contradict this form of governmentality. The view that adaptation does, in fact, not require far-reaching changes is evident in Reykjavík's policies. Adaptation is described as „not a matter of creating new interventions, but to integrate what is already being done in spatial planning to prevent risk from natural phenomena" (DOC 1, p. 5), and as a matter of „improving the utilization of infrastructure and land, improving procedures, or with other words; to do better what is already being done and in a more focused manner." (DOC 3, p. 19). The government's documents on adaptation do not invite a transformational agenda either. It is argued that a basis for the governance of adaptation is already present in the current systems of natural disaster prevention and management; they have merely not been defined as adaptation measures yet (DOC 9). As such, it is mostly the laws, regulations, and procedures related to agendas such as spatial planning and infrastructure that need to be changed and modified in order for adaptation to be carried out successfully in Iceland (DOC 9). These outcomes are, in part, to be achieved through policy

mainstreaming where synergies with other agendas are explored and adaptation is integrated into the existing policies (DOC 7, DOC 9).

Several portrayals of Iceland as an expert in dealing with natural disasters were found in the material (DOC 5, DOC 6, DOC 9). It is argued that the Icelandic people „possess extensive and good experience when it comes to responding to natural disaster and the emergency it can cause“ (DOC 9, p. 8), which, supposedly, will come in handy when dealing with the local consequences of climate change. It is also posited that Iceland is likely to face less serious consequences of climate change, in comparison to other nations (DOC 6, DOC 9). These claims seem to be made to support the notion that Iceland will go a long way by simply strengthening current systems of natural disaster management. However, it should also be mentioned that some tension is present in the government‘s discourse; on the other hand, it is claimed that adaptation requires a „new way of thinking“ (DOC 6), that adaptation has the potential to reorganize, improve or even transform societal sectors (DOC 9) and that purely incremental approach to adaptation should be avoided (DOC 9).

Another assumption, which seems to support the view that not much really has to change, is the idea that adaptation practices will seep through society if people are made to understand what adaptation entails and what is at stake. Both Reykjavík Municipality and the government stress the importance of providing information in order to remedy the perceived lack of knowledge about adaptation (DOC 1, DOC 7). Furthermore, the government posits that information campaigns and education will increase the support for adaptation measures (DOC 7) and will turn adaptation into an integral part of all forms of decision-making in society (DOC 9). Furthermore, „mild“ solutions, or policy solutions aimed at modifying behavior, are presented as favorable by both Reykjavík and the government. It is posited that such solutions can facilitate and create incentives for decision-making in support of adaptation in all spheres of society (DOC 1, DOC 7, DOC 9, DOC 10). This form of thinking implies a market rationale, where economic motivation proves the most effective tool to steer change; if people are made to understand the cost of not adapting, then they will gravitate towards better decisions.

3.2.2. Adaptation policy must be evidence-based

The core problematization of adaptation as a matter of climate-proofing society through tools of risk management is founded on a technocratic mentality which places a strong focus upon predictive knowledge and evidence-based policy. Moments were also found in the text, and particularly in the work of the Climate Council, which presents a supplementary problematization of adaptation as a

sociosystemic issue. Such a problematization entails a different form of ontology, where it is not only external risk that becomes the object of knowledge and subject to change, but also society and its inherent functions and systems of governance. This form of thinking is implied through the inclusion of concepts such as emergent governance, complex systems, adaptable responses, and organizational learning (DOC 4, DOC 9). However, the sheer extent of technocratic conceptualizations of adaptation that amplify scientific risk detection found throughout the material, occlude such sociosystemic considerations. Ongoing claims and allusions frame extensive research and monitoring as the basis of all adaptation work (DOC 3, DOC 4, DOC 8, DOC 9), which, in effect, places scientists and experts at its vanguard. This is well illustrated in a speech by the Minister of Environment and Natural Resources (DOC 8) where he emphasizes; 1) the importance of ensuring solid scientific evidence about the effects of climate change in Iceland, 2) that scientific knowledge must be communicated with decision-makers working in the fields of spatial planning and construction, and 3) that the findings produced by the scientific community will, and must, form the basis of future measures. The Climate Council (DOC 9) also conceptualizes adaptation measures as the process of developing solutions according to the latest science and observations, arguing that the knowledge of risks and vulnerabilities must be in constant revision to account for the inherent uncertainty of climate change. This form of thinking gives rise to procedures informed by a feedback-loop of research, monitoring, assessment, and implementation where the more direct and physical effects of climate change become the focal point of attention.

The emphasis on physical and knowable risk becomes quite apparent when looking into what forms of adaptation solutions are highlighted by Reykjavík Municipality and the Icelandic Government. As argued earlier, the bulk of proposed solutions address damage caused by sea-level rise, precipitation, and flooding, which are considered to be the most urgent risk factors to respond to in Iceland. They are also elements that are, arguably, quite clear, accessible and can be scientifically monitored locally and presented trough scientific models. Meanwhile, more complex and multiscalar risk factors, with boundaries that are perhaps not as easily defined, fall into the background. Climatic impacts on biodiversity is seen as a less pressing issue (DOC 3) and ocean-acidification is considered to be at the limits of adaptation (DOC 5, DOC 6, DOC 9, DOC 10). The interview with Reykjavík‘s Climate Change Commissioner (DOC 5) also supports this insight; when asked how solutions are prioritized she acknowledged that factors such as the increased intensity of precipitation are simply more „clear“ at current.

Even though the dominant framing of adaptation processes involves the participation of scientists, politicians, and experts, the need to incorporate and

engage citizens is briefly mentioned in some of the material (DOC 1, DOC 9). Reykjavík Municipality argues that the city intends to adapt „mainly with nature-based solutions and with the participation of citizens along with technical solutions when needed“ (DOC 1, p. 4). However, it is not precisely elaborated how this participation should take place and the notion of citizen engagement in relation to adaptation is either vague or non-existing in the subsequent documents. The Climate Council (DOC 9) also briefly touches upon the potential value of community-based adaptation, where consultation with communities is facilitated and projects initiated by citizens are promoted. Furthermore, the Climate Council (DOC 9) argues that social cohesion, or the sense of unity in local communities, can contribute to coordinated and effective responses to climate risk among people living in the same area. But, perhaps this is more seen as something to consider at later stages. The Chairman of the Climate Council (DOC 10) argues that adaptation is currently in its infancy as a policy issue in Iceland, and at this early stage the main stakeholders to involve are politicians, civil servants, scientists, and business representatives.

Despite the strong corroboration of a pre-dominantly technocratic approach, based in risk-calculation and evaluation of cost, it should also be addressed that the Climate Council (DOC 9) does in the following passage reflect upon the limitations of such a model;

> „Cost is not always financial but also societal, and the definition of standards is therefore always a political decision even though all research and the making and interpreting of scenarios are aimed at being objective and scientific.“ (p. 16).

Here, it is acknowledged to some extent that scientific findings are not completely value-free, and therefore the political dimension of decision-making should never be denied; even if it founded in „conclusive“ scientific evidence. The act of defining and assessing cost can, indeed, be carried out from a multitude of perspectives, considering different variables. In the quote above, it is argued that cost can, for example, both be financial and societal. Interestingly, this assumption is, however, not overtly considered in relation to power. In the same paper, the Climate Council (DOC 9) suggests that both private and state-run insurance companies could take on a leading role in assessing the value of adaptation options, with regards to degrees of risk, damage and cost. If this idea materializes, insurance companies would arguably assume a powerful role as experts in the prioritization of potential adaptation pathways; and this is not reflected upon. Such financialization of adaptation has been shown to exacerbate inequalities (Bigger et al., 2019), and lead to inefficient solutions (Grove, 2012).

3.3. Silences

3.3.1. Systemic change

The prevailing tendency of Icelandic policymakers to present adaptation as a matter of revising and adjusting current societal functions in order to increase resilience towards climate change devalues and obscures the notion of whether more fundamental changes are, in fact, needed. As such, I consider systemic change as a silence in the political discourse on adaptation. One dimension of this silence, is the economic system in place; should decision-makers not ask themselves whether its fundamental functions are compatible with a climate resilient and sustainable society? As previously discussed, liberal market discourses are often relied upon when claims are made about why adaptations should be carried out in certain ways, and this reflects a disregard for alternative solutions; be it intentional or not.

3.3.2. Multiscalar and globally contingent risk factors

The prioritization of physical and knowable risk factors that affect Iceland within its spatial boundaries occludes the need to develop responses to more indirect, multiscalar, and globally contingent risk factors. Issues such as refugee migration, trade disruptions, and food security are completely ignored up until the publication of the Climate Council‘s workshop summary in 2019 (DOC 7) and discussion paper in January 2020 (DOC 9), where they are briefly addressed but no concrete solutions are suggested. The Climate Council (DOC 9) mentions that the related policy agendas should be reconsidered and perhaps revised with regards to climate change, urging decision-makers to ask themselves whether food security should be ensured and whether Iceland should accept more refugees each year. Furthermore, the importance of increasing the adaptive capacity of eco-systems through measures that safeguard biodiversity is considered by Icelandic policymakers to be less urgent than preventing damage caused by sea-level rise and flooding; as previously discussed. This also suggests that climatic threats and risk factors that entail more complex and multiscalar systems, such as the eco-systems in the ocean that surrounds Iceland, are downplayed. However, this prioritization is probably also economically motivated, since increasing the adaptive capacity of eco-systems would have consequences for the economic pursuits that depend upon their exploitation.

To further explore one dimension of this silence, I interviewed the politician who is currently leading the process of forming Iceland‘s first food policy, which was initially to be introduced by the end of 2019 (Government of Iceland, 2019) but will be ready sometime this year (DOC 11). It revealed that adaptation to the projected

effects of climate change is currently not a focal concern within this policy arena. Iceland‘s food policy, as elaborated by the interviewee, will mainly focus on promoting Icelandic produce as products of premium quality which will increase their appeal and market value both locally and abroad (DOC 11). Furthermore, the upcoming policy will not entail any major changes to agricultural subsidies, and therefore meat and dairy products will probably remain the mainstay of Icelandic food production (DOC 11). The interviewee supports this point by arguing that the demand for meat is, in fact, not decreasing even though the demand for plant-based products has seen an unprecedented rise in the last years (DOC 11). According to these findings, the formulation of the food policy is strongly informed by a liberal supply-and-demand market rationale, where the task of the government becomes to ensure that Icelandic agriculture is profitable and can respond to the current demands of the market rather than to enforce long-term solutions in response to issues such as climate change.

3.3.3. Ontological plurality

Technocratic and evidence-based visions of adaptation lead to a situation where it is seen as common-sense to place decision-making in the hands of scientists, experts, and politicians. This engenders the exclusion of other actors, whose knowledge and insights are considered less relevant, from decision-making processes, and as such I consider ontological plurality to be the third silence at play. This is highly problematic given that such exclusion can lead to an impoverished understanding of the issue and downplays considerations of social justice as a dimension of adaptation. Even though my results show that citizen participation in adaptation processes is somewhat addressed by Icelandic policymakers, the sheer extent of discourses that establish the superiority of experts obstructs such ideas.

4. Discussion

4.1. Responses to knowable risk at the cost of long-term thinking.

The systematic distortion of adaptation policy communication has inevitably lead to significant moments of discursive closure. First of all, the results of this study strongly suggest that local and national authorities in Iceland are, and have been, gravitating towards adaptation pathways that prioritize the biophysical causes and effects of climate change. This way of „doing adaptation“ derives from the conceptual division of nature and society (Nightingale et al., 2020), and is deeply problematic since it suggests that adaptation for the benefit of society can be achieved through the mere detection and management of external biophysical threats. This form of knowledge downplays the sociosystemic dimension of anthropocenic climate change, suggests that social and biophysical drivers can be parsed and addressed separately, and fails to challenge the economic and societal functions that sustain the problem (ibid.). I also contend that it is harmfully negligent, in that it directs attention and efforts away from the more globally contingent and indirect effects of climate change; such as threats of severe crop failure, trade disruptions, social conflict, refugee migration, and health crises. Iceland, a small island nation of roughly 364.000 people (Statistics Iceland, 2020), is heavily reliant upon imported food products and other essential goods that sustain local production and activities (Bailes et al., 2011). The degree to which Iceland is exposed to global forces should hence not be understated.

A growing number of scholars are highly concerned about the stress that climate change inflicts upon our capacity to grow and harvest food supplies (Gomez-Zavaglia et al., 2020). If we can expect an increased intensity of droughts and subsequent crop failures, fish stocks that continue declining due to ocean acidification and overfishing, and other severe shocks to the global food systems, then we can scarcely begin to imagine the social conflicts, economic repercussions and profound disruptions that will follow. Some even go as far as contending that societal collapse within this century has now become inevitable (Bendell, 2019).

The coronavirus pandemic, which is wreaking global havoc as these words are written, is also a prime example of how climatic stressors lead to far-reaching and unforeseen outcomes. Even though pandemics have threatened human lives for centuries, and will continue to do so, they become more likely in the face of climate change and the unsustainable exploitation of natural resources (Wu et al., 2016) and, perhaps, also more deadly when combined with severe air pollution (Wu et al., 2020). Considering all of these alarming projections, I question why the climatic dimensions of social issues such as food security, immigration, and health care are not given more serious thought in Iceland.

I do not wish to assert that Icelandic policy-makers themselves do not worry about the risks and effects that are mentioned here above, or consider them unimportant. For instance, The Chairman of The Climate Council identified the projected consequences for global food systems as one of the factors he is personally most concerned about. Rather, I suggest that a range of factors give rise to a certain institutional inertia. For instance, the evidence-based approaches that direct focus towards identifiable and physical risk can render the multifaceted issue of climate adaptation more governable (Nightingale et al., 2019). This pathway proposes some changes and reforms to the status quo, but only to the point that it can still be reconciled with and does not fundamentally challenge the liberal and market-oriented governmentality in place (Remling, 2018). As such, it has the potential to gain traction and support among proponents of the capitalist system, but also among those who recognize the need for change. This is both in line with Stone‘s (1988) understanding of problem representation as a strategic tool to gain the favor of as many people as possible, and Deetz‘s (1992) notion of how discursive closures serve to eliminate conflict.

The desire to render adaptation more manageable and compelling as a policy issue is also illustrated by the tendency to frame it in terms of resilience. An increasing number of policymakers prefer to describe adaptation in terms of socio-ecological resilience (Kythreotis et al., 2017), or „the ability of human communities to withstand external shocks and to recover” (p. 1532) since this kind of disposition carries the positive connotations of strength, robustness, and flexibility. Such a reframing of adaptation as resilience is indeed omnipresent in Icelandic policy discussions, as my results show. However, the term resilience is not entirely unproblematic. Kythreotis et al. (2017) argue that it poses a certain trap, in that it focuses attention towards short-term societal responses to foreseen events, such as flooding and other extreme weather events. Similarly, Walker et al. (2006) demonstrate that adaptation framed as resilience can also lead to obscure trade-offs between geographical locations and societal sectors where the building of resilience in one area erodes it elsewhere. This seems to be the case in Iceland, where

adaptation becomes a matter of identifying predictable shocks and hazardous events, prepare and strengthen local response systems and incorporate prevention through spatial planning and man-made infrastructure, while other considerations are downplayed or concealed.

What I‘ve been getting at here, is that the attempts made to push the agenda of adaptation and help it gain political traction, come at the cost of more long-term thinking. However, the tendency to frame adaptation as resilience does not merely reflect the desire to gain political traction, but also a propensity to limit the scope of conceivable change; be it intentional or unwitting. Pelling (2011) argues that „adaptation as resilience is a form that seeks to secure the continuation of desired systems functions into the future in the face of changing context“ (p. 81), which is in line with Holling‘s (1973) conception of resilience as the extent to which systems can withstand external shocks and pressure without having to shift into a fundamentally different order. If the thresholds of the current system are exceeded, a fundamental regime change becomes inevitable. Provided that adaptation, then, becomes a matter of securing resilience so that these thresholds are not put to the test, it also, essentially, becomes a matter of maintaining the status quo. My findings correspond with this notion, demonstrating that Icelandic policy-makers, at both the municipal and national level, provide overt and implicit accounts of how adaptation is a matter of refining and improving current societal functions.

4.2. Reconceptualizing adaptation as social transformation

The governmentality that underpins the policymaking of Reykjavík Municipality and the Icelandic Government bears values that are, in essence, neoliberal and capitalist. This belief-system, which paves the way for strategies that deem systemic adjustments, economic incentives, green growth, rational-choice, and behavioral change as sufficient solutions, is according to Wilhite (2016) incompatible with a sustainable future where de-carbonization has been achieved. Neoliberal adaptation pathways are not only problematic in that they downplay or ignore the social dimensions of climate change, as my findings have shown, but they have also proven particularly predisposed to maladaptive effects (Remling, 2018) and will often exacerbate social vulnerabilities and inequality (Pelling, 2011).

Furthermore, it is important to recognize that these approaches derive from a scientific world-view that is fundamentally flawed. The conceptual division of nature and society, which steers adaptation towards technical and managerial

responses, entails an ontological error since it ignores the co-emergent relationship that exists between the two spheres (Nightingale et al. 2020). This is why the demand for a reconceptualization of adaptation as social transformation is becoming more pervasive (Pelling, 2011; Opperman, 2011; O'Brien, 2018; Nightingale et al., 2020). It is clear that simply generating more and better scientific evidence is a substandard solution to the problem of climate change adaptation. What is now being called for is a model that certainly addresses the biophysical dimensions of climate change and presents technical solutions, but also accounts for sociosystemic dimensions and attends to issues such as values, power, and equity; which are not as easily monitored and assessed. Furthermore, such a model would recognize that the co-emergence of society and nature are in constant flux (Nightingale et al., 2020) and thus the stability of societal systems cannot be the primus motor for climate policy. The way adaptation is understood therefore needs to be extended beyond practices of external risk detection and management, and should rather be in line with Adger's (2003) conception of a „dynamic social process".

Research has shown that the neoliberal form of adaptation is generally pervasive in wealthier countries (Remling, 2018). Any hope to challenge a governmentality so omnipresent might seem forlorn, but given the climatic emergency we now face it is critical to find ways to re-imagine society. Even though neoliberal beliefs produce discursive closures that rule out alternative visions, my findings also show that there are moments of discursive opening that might catalyze change. These moments are mostly to be found within the work of the Icelandic Climate Council, which discusses the need for transformative change, addresses globally contingent social dimensions such as food security, and refugee migration and presents a supplementary sociosystemic framing of adaptation. Furthermore, the Chairman of the Climate Council acknowledges that, on a personal level, he is more concerned about social, indirect, and globally contingent risk factors and the effects they will have in Iceland rather than the external biophysical risk that current policy pathways aim to render knowable and remedy. The presence of a supplementary problematization of climate change adaptation shows that there is already some tension between different conceptualizations; and this demonstrates that spaces are opening up where the hegemony of neoliberal beliefs can be challenged (Opperman, 2011).

There are certainly cracks in the system, but how is deliberate change brought about? Eriksen et al. (2019) describe transformation in the context of climate change in terms of „altering the fundamental attributes of the system, challenging the systems and structures, economic and social relations, and beliefs and behaviors that contribute to climate change and social vulnerability." (p. 3). This kind of transformation demands a rethinking of the values that underpin the way we

organize society, which correlates with Meadows‘s (1999) notion of how the mindsets and goals that propel a given system can prove the most valuable leverage points for change. If adaptation policies are to prioritize social justice and the long-term wellbeing of the general public, and other living beings, over short-term responses to knowable risk and the maintenance of political stability, then they must address core values and not behaviors. O‘Brien (2018) argues that although beliefs and worldviews are difficult to challenge, a fundamental step in the process is to engage individuals as agents of change in the process of systemic transformation rather than seeing them as „objects to be changed“ (p. 157). This would entail opening up spaces for normative debate, where citizens and non-experts participate in the shaping of visions for the future, which correlates with what Nightingale et al. (2020) consider as vital in the reconceptualization of the relationship between society and the environment; to „make room for plurality of knowledges“ (p. 345). If the problem of climate change and adaptation is addressed from multiple viewpoints, then more opportunities to question uneven power relations and hegemonic assumptions present themselves; which could ultimately lead to a deeper understanding, more reflexive decision-making, and more just outcomes. Pelling et al. (2015) also support this notion and argue that transformative adaptation must interrogate power and render it visible. From this viewpoint, and as Dingler (2005) argues, it is more important that democratic processes facilitate open discussion and maintain the contestability of issues as opposed to generating agreement through argumentation. From this it follows that conflicts should not be downplayed and treated as roadblocks to adaptation, but rather as an essential dimension of the whole process; one which stimulates creativity (Christensen et al., 2015) and addresses groundless factual claims (Dingler, 2005).

5. Conclusions

What this study has revealed, first and foremost, is that the adaptation pathways which are taking shape in Iceland are based in neoliberal assumptions that steer strategies towards the identification of and responses to foreseen external risk, such as imminent threats of sea-level rise, intensified precipitation, and flooding. While the importance of ensuring biophysical evidence and developing technical solutions should not be undermined, the core technocratic problematizations of adaptation, presented by both Reykjavík Municipality and the Government of Iceland, downplay or ignore the societal dimensions of climate change and speculate that successful adaptation can be achieved through modifications to the status quo. This is leading to a situation where long-term thinking and the consideration of more multiscalar and globally contingent climatic risk factors, such as crop-failures, trade-disruptions, civil unrest, refugee migration, and biodiversity loss, are sacrificed at the altar of measurable results and short-term political stability. There is no reason to believe that devastation that occurs elsewhere will not have severe effects in Iceland, especially given how dependent the country is upon imported food products and other goods. It is thus essential that Icelandic decision-makers start accounting for these issues in the development of responses and expand the topic of adaptation.

The neoliberal governmentality, which paves the way for current ways of understanding and "doing" adaptation, is deeply problematic in that it leads to maladaptive effects, conceals power relations, exasperates social vulnerabilities, and fails to acknowledge how environmental and social change are entwined. It entails core values of individualization, competition, and economic growth in a time where looming climatic disaster requires that we start thinking in terms of community, collaboration, austerity, and compassion. The way forward, by many accounts, is to propel the reconceptualization of adaptation as social transformation and challenge the values which sustain societal and economic functions that are incompatible with a sustainable and climate-resilient future.

The realization that society, in its current form, can and should not be salvaged in the face of climate change must be reached. Even though core beliefs, values, and mind-sets are thought to be more difficult to address and alter, than say behavior,

there is reason to believe that deliberate change can be brought about. The findings of my study suggest that it is institutional inertia, rather than the premeditated efforts of certain actors, which leads to path-dependency and the exclusion of alternate visions. Furthermore, the policy texts and interviews I analyzed also give me reason to believe that there is already some tension present between the dominant neoliberal visions of adaptation and alternate sociosystemic framings; which should be recognized as a potential opening for transformation. One of the measures that could further catalyze change is to expand the adaptation debate to include a plurality of knowledges. This is based on the assumption that better results are achieved through the creation of situations where the interrogation of problematic factual and normative claims can take place and power relations are rendered visible. Democratic processes that allow for such contestation and facilitate reflexivity can, ultimately, lead to a deeper and more multifaceted understanding of climatic issues and pave the way for more socially just outcomes, which prioritize the well-being of present and future generations over short-term responses and political gain.

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Appendix 1

I met with the Climate Change Commissioner of Reykjavík municipality at the city offices on February 11th of 2020. The interview itself was conducted in a private meeting room and took around 46 minutes. The Chairman of the Icelandic Climate Council agreed to meet with me at a cafe on February 13th and we spoke for around 52 minutes. Both informants gave consent for the interview to be recorded and after they had been conducted, I transcribed and translated them from Icelandic into English. The third interview, with the politician who is leading the process of formulating Iceland's first food policy, was not recorded and took place in a café on February 21st.

Interview guide

For the semi-structured interviews with Reykjavík's Climate Commissioner (DOC 5) and the Chairman of the Icelandic Climate Council (DOC 11), I prepared and addressed the following interview topics:

- **Professional role**: What are your main tasks and responsibilities in relation to climate adaptation?
- **Problem representation**: How is climate adaptation best defined? What are the biggest potential threats that climate change poses to Reykjavík or Iceland? If possible at all, how are we to prepare and prevent these potential risks? Which actions and responses should be prioritized and why are they important?
- **Knowledge and information:** Where does Reykjavík municipality or the Climate Council retrieve information about climate change and adaptation?

For the semi-structured interview with the politician who is leading the formulation of Iceland's upcoming food policy (DOC 11), I prepared and addressed the following interview topics:

- **Professional role:** What are your main tasks and responsibilities in relation to Iceland's food policy?

- **Content of the upcoming food policy:** What will the upcoming food policy entail – what are the focal points and why are they important? Can you share any concrete solutions/actions that it entails?
- **Future vision for Icelandic agriculture:** Why is the government forming a food policy now (and not earlier)? What changes, if any, does the upcoming food policy seek to bring about? Will it entail changes to agricultural subsidies or other reforms?
- **Practical aspects:** When will Iceland‘s food policy be finalized?