

and vulnerability, but are also a function of interaction between material impacts and their cultural interpretations” (Norgaard, 2018, p. 3).

Therefore, this type of socially organised denial manifests differently in different societal circles. Using the concept of *climate cultures*, this study thus captures varying constellations of how responsibility, efficacy and knowing are handled, which is outlined next.

2.6 Divergent cultures of climate action and denial

Although fundamental to public opinion and political (in)action regarding climate change, culture remains a marginal concept in climate change research. Each climate culture will transport its own idiosyncratic norms regarding attributed or experienced responsibility, its individual or collective expressions, its efficacy expectations and its actual contribution to climate action. This occurs in the carrying-out of particular practices.

This overall ignorance of cultural phenomena partly relates to their ubiquity, as well as the relative resistance of culture to conventional scientific definition and measurement. As Mike Hulme (2016) puts it, “culture, just like climate, is hard to see and harder to measure” (p. 6). Thus, most media coverage and public debates concerning climate change tend to be ‘culturally blind’, too, in addition to ignoring pressing social problems arising from a changing climate such as resource scarcity, poverty and forced migration. Culture is thus conceptualised as an inherently social phenomenon that shapes and reflects social interaction within groups and communities: “Rather than being idiosyncratic, cultures of emotion are structured by social norms and expectations” (Ford and Norgaard, 2019, p. 221).

Given this inherent difficulty in investigating culture, continued cultural blindness in research on climate action coincides with profound neglect of people’s everyday experiences and daily practices that characterises debates on environmental challenges more generally, and climate change in particular. This reluctance to ‘mind the mundane’ (Rau, 2018) means that much climate change communication actually serves to disengage citizens (Fox and Rau, 2017). This includes fear-inducing catastrophic and apocalyptic messages that incorporate a rather limited view of human agency and that may thus prevent public climate action (cf. Kundzewicz et al., 2020 for a recent discussion of this particular issue). Importantly for the present argument, such a perspective completely ignores lived experiences of climate responsibility and of individual and collective efficacy.

In the tradition of Bourdieu and leaning heavily on Norgaard, conventional linear concepts of knowing are replaced with a conception that explicitly recognises the multi-directionality of knowledge creation and –transfer that manifests through culture. “Cultural frames, selective interpretative schema that simplify and

condense information, filter out information that is incompatible with familiar ways of seeing the world” (Ford and Norgaard, 2019, p. 220). This, in turn, highlights the necessity of responsibility discourses and practices amongst the whole of society and of paying attention to the actual potential of different societal actors to make a difference in relation to climate action. “With sociological analyses the question becomes [...] under what circumstances are people able to move beyond a sense of helplessness, guilt or fear of the future and take actions that are in their collective, long term survival interest?” (Norgaard, 2018, p. 4). Therefore, such an analysis is uniquely suited to shed light on diverging cultural tendencies that prompt agents to look at climate change or turn their head, to not be discouraged by one’s own individual insignificance and take responsibility for one’s own marginal contribution or instead to resign and blend it all out. “The power of culture to shape the way we act arises from the way it makes us feel” (Ford and Norgaard, 2019, p. 224). In this study’s conception of climate cultures, therefore, the three central concepts – responsibility, efficacy and knowing – and whether or not they cumulate in collective denial embody the demarcation lines between the different climate cultures that were identified when undertaking the research.

This said, an emerging body of literature deals explicitly with linkages between culture and climate change. Thorsten Heimann, a leading contributor to this research, links the origin of the idea of climate cultures in German-speaking research to Claus Leggewie’s work on climate change-related questions of “social responsibility, cultural memory and intercultural differences” (2009, p. 176, cited in Heimann, 2016). Similarly, Welzer et al. (2010) argue that social-scientific inquiries into climate change need to concern themselves with:

... the cultural practices and contexts of meaning that have caused climate change, thereby challenging human interpreting and sense-making and the philosophical consideration of aspects of justice and responsibility [...] as well as the knowledge-sociological analysis of collective interpretative patterns.

Welzer et al., 2010, p. 13

A culturally-sensitive analytical framework is urgently needed because “actors try to achieve different things, such as raise awareness, persuade people to vote for a political party, support government policies, *save the planet*, *greenwash* a business, expand a business into new and more profitable arenas, and many more” (Nerlich et al., 2010, p. 6, orig. emph.). Building on these considerations, this study advances a comprehensive analysis of people’s reactions to climate change that explicitly acknowledges their inherently social nature and that closes some of the gaps left behind by conventional behavioural explanations that dominate current climate debates.

Embodied information practices

Responding to the limits of information deficit thinking in explaining climate inaction, there is an additional body of literature that explicitly underscores the importance of culture in the creation of (climate) knowledge. In their seminal work on climate cultures, Heimann and Mallick criticise that “factors to explain differences in perceiving and handling climate change *besides shared knowledge* remain blind spots” (Heimann and Mallick, 2016, p. 1, orig. emph.). Importantly, these authors challenge conventional understandings of knowledge as inherently cognitive, arguing that it instead needs to be understood as comprising “shared cognitive and normative framings (e.g., shared problem framings for climate change, general values, beliefs, and identities) as well as shared practices at the level of action” (ibid.). Incorporating this broadened concept of knowledge, Heimann and Mallick develop their model of *climate adaptation cultures*.

Building on this existing work on climate cultures, this study highlights the inherently collective and frequently tacit nature of knowing that is practiced within each climate culture. Yet, current literature (even on climate culture) “tends to privilege cognitive processes. Even variables like values and concern, which are infused with affect, may be reduced to their role in producing deliberative, rational responses to climate change” (Ford and Norgaard, 2019, p. 222). Therefore, moving beyond a purely cognitivist view of knowledge, it is built on Olsson and Lloyd’s notion of knowledge as “embodied information practices” (2017) that recognises the centrality of non-linguistic, experiential types of knowledge:

Knowledge is not what resides in a person’s head or in books or in data banks. To know is to be capable of participating with the requisite knowledge competence in the complex web of relationships among people, material artefacts and activities.

Gherardi, 2008, p. 517, cited in ibid, p. 3

Focusing on embodied knowledge in situ also emphasises the centrality of the body for knowing, whereby “information landscapes are not only shaped and represented socially and dialogically but also reflected corporeally” (Olsson and Lloyd, 2017, p. 8). Olsson and Lloyd’s concept upgrades this study’s understanding of knowing in that it allows to make visible knowledges that fail to be acquired by the Enlightenment’s understanding of employing certain instructions for use from a *manual*. There are in fact forms of knowledge that “cannot be effectively expressed in written form” (ibid., p. 3) such as learning how to be a good parent, for example. These “rich sites of knowledge [...] are local/nuanced, drawing from expertise in situ and may be contingent and only available at the ‘moment of practice’” (ibid.).

Therefore, in this analysis the conception of knowledge is substantially broadened to crucially include the everyday embodied information practices of societal actors, which are neither conceptualised as external to the system nor simply as an add-on, but instead seen “as dynamic entities in their own right” (Reckwitz, 2002, cited in Shove, 2010, p. 1279). Considering social practices elucidates to the dynamic “meanings of normal and the patterns of consumption associated with them [that] require constant reproduction” (Shove, 2010, p. 1279). Regarding affective and emotional aspects of knowing and their manifestations in practice, this study explicitly recognises shared forms of ‘not knowing’ that serve to protect people from unpleasant facts that may threaten their livelihoods and ways of life.

The centrality of everyday life

Adopting the concept of embodied information practices does not merely mean the extension of existing definitions of knowledge. Instead, it also implies an explicit recognition of relative resistance to efforts to transform everyday behaviour (Rau, 2018; Rau et al., 2020; Sahakian and Wilhite, 2014; Spurling et al., 2013). For example, eating habits and mobility practices have been shown to be particularly difficult to change (Godin and Sahakian, 2018; Heisserer and Rau, 2017). This, in turn, is key to understanding the public’s (lack of) engagement in climate action. Cultural norms and prescriptions play a central role in this resistance to change in that they contribute to keeping alive a practice across multiple generations of ‘practitioners’ (Shove and Walker, 2010):

[...] the stubbornness of habits depends on how deeply anchored the habits are in relation to three pillars of practices: the body – including cognitive processes and physical dispositions; the material world – including technology and infrastructure; and the social world – including settings, norms, values and institutions.

Sahakian and Wilhite, 2014, p. 28

Arguably, the ‘stickiness’ of many routine practices does not always lead to inertia and stagnation. “Cultural meaning structures are malleable, but they are also durable” (Ford and Norgaard, 2019, p. 237). Instead, people’s insistence on doing things in a certain way can also be essential to dealing with the complexity and unpredictability of everyday life. By acknowledging people’s capacities to creatively solve problems in everyday life, for example by combining established routine practices to form new ones, a practice-centred perspective is uniquely suited to

advance a view of human agency as socio-materially embedded (Rau, 2018, p. 219)⁹. Adopting a practice-centred perspective more generally, and especially a focus on embodied information, thus opens up new ways of understanding people's reactions to climate change and opportunities for engaging people more effectively in climate action measures.

The concept of climate cultures with its inclusion of collectively undertaken everyday discursive and material practices such as the coming into being of all kinds of different artefacts (waste disposal, releasing of CO₂) allows deeper consideration of how to achieve more successful climate action. Moreso, the requirement to consider different societal entities has recently been acknowledged in social scientific climate research. Therefore, I propose a perspective that analyses how cultural conditions influence everyday practices and vice versa. This study's newly developed concept of climate cultures is uniquely equipped to meet this challenge.

In this way, a culturally sensitive view of climate-relevant profane everyday practices can actively challenge simplistic conceptions of a linear, unidirectional transfer of knowledge between science and society that have beset much thinking on climate science and action to date. In particular, it questions the capacity of such *knowledge transfer models* to mobilise people to accept responsibility, recognise their own capacity to act, and engage in effective climate action. Therefore, it is argued for an explicit linking of this ever so broad, multi-directional, dialogic knowledge concept with notions of responsibility and efficacy to make sense of the lack of public engagement in climate action to date.

Understanding variations in responsibility, efficacy and knowing: The concept of climate cultures

Besides embodied information, climate cultures shall be distinguished by the similarities and differences in statements made with regard to who in society (individuals, politicians, the media, private sector, scientists) holds responsibility for climate action and who is thought to be able to make a substantial difference. Thus, this study is further built on the conviction that appealing to people's sense of responsibility and demonstrating their capacity to act are central to effective climate action (Buschmann and Sulmowski, 2011, p. 283). At the same time, a focus on *variations* in how responsibility and efficacy are viewed and practiced can contribute to the identification of different climate cultures, including those that are commonly attributed to elites that dominate many public climate debates due to their large stocks of cultural capital. Charles Wright Mills "finds it to lie in the remit of social scientists and

9 See e.g., Norgaard, 2018, p. 4: "Other scholarship on cultural inertia, culturally patterned receptivity (Fox, 2014; Fox and Rau, 2017) sheds much light on the profound potential for normalization of the climate threat across society".

other intellectuals, to investigate the consequences of the actions of power elites and to publicly confront them with their respective responsibility” (2016, cited in Wendt and Gørgen, 2018, p. 60). This is the challenge that I have accepted. For this study’s conception of climate cultures, the following interpretation of responsibility is particularly apt:

Responsibility does not appear as an overarching, universal and cross-temporally valid concept, instead, time and again, it is produced afresh and in different forms as a concrete and both historically and culturally situated, practice-specific phenomenon.

Buschmann and Sulmowski, 2011, p. 287

Although it may be true that considering responsibility is somewhat *en vogue* (cf. Heidbrink, 2003), it has hitherto only been linked to efficacy to a certain degree, and quite crudely so. Therefore, a more nuanced consideration and subsequently, a more wholesome integration of the two concepts is needed. Importantly, this goes beyond the analysis of the individual and information deficits in order to really help explain the lack of public involvement with climate action to date.

This is based on the conviction that climate action unfolds on the interface of emotion and culture. Climate cultures thus constitute shared repertoires of cognitive, emotional and behavioural responses to the threat of climate change that characterise particular segments of society and that are reflected in public climate debates. As Ford and Norgaard contend, “culture and emotion are simultaneous and co-constitutive. [...] however in practice emotional responses to cultural attachments may be fleeting, unregistered or contradictory” (2019, p. 237), which renders them so much harder to grasp that the continued reluctance to investigate them is unsurprising.

Attention is therefore paid to the unfolding of practice patterns in social circles as this indicates how people perceive their everyday lives differently. Just like in Ford and Norgaard’s concept of environmental subjectivities, this study rests on the application of practice theories that would do well (c.f. Ford, 2019; Hargreaves, 2011; Shove and Walker, 2014, cited in Ford and Norgaard, 2020, p. 47) in taking the place of approaches that look out “for researcher-defined pro-environmental behaviour” (Ford and Norgaard, 2020, p.47). Accordingly, their concept of environmental subjectivities “calls attention to situated knowledges of climate change that emerge in relation to differences of indigeneity, race, and class” (Ford and Norgaard, 2020, p. 59). This is the point where the present study parts ways with (Ford and) Norgaard’s framework and instead presents its own analytical conception of climate cultures that reconnects this work with the three key concepts of responsibility, efficacy and knowing:

Building on the conceptual considerations discussed in this chapter, **climate cultures are therefore defined as dynamic variants of social organisation that provide a framework for recognizing culturally relevant information regarding climate change and that are (re-)produced through climate-relevant everyday practices that reveal diverse forms of 'lived' responsibility and 'everyday' efficacy. The latter includes responses to more abstract attributions of responsibility and efficacy in 'official' climate change discourses that may or may not clash with people's lived experiences.**

Thus, the analysis of different climate cultures grants an insight into certain telling conventions, values and mind-sets that can differ substantially between the climate cultures that are present within one society. For example, more fatalistic cultures (that can be based on religion) may believe in some 'higher power' and therefore attribute very limited efficacy and influence to the individual (while a pastor himself may actually display large influence as multiplicatory figure). Alternatively, a climate culture may define itself by who is included in it and who is not, perceiving of its members as 'the chosen few' which again has certain implications for efficacy attributions (and respective actual power).

The approach pursued in this study responds directly to the lack of recognition of the centrality of everyday practices and their links with more abstract attributions of responsibility and efficacy vis-à-vis actual practical manifestations of responsibility and efficacy. This is particularly pertinent because divergences between abstract attributions and 'lived' experiences of responsibility and efficacy appear to be central to variations in climate culture.

2.7 Conclusion

The differing weight and priority given to each of the three concepts of embodied information, responsibility attribution and efficacy expectation in relation to specific social actors marks the distinction between the different climate cultures discussed in this study. The question of what role climate action plays in people's lives (if any) and whether official approaches to climate action fit their everyday practices serves as an apt starting point. An appropriate culture concept first includes an investigation of how responsibility for climate action is collectively attributed within a certain climate culture. Second it investigates whether the group perceives itself as being in the position to make a difference when it comes to climate action (vis-a-vis how large their actual impact is). This interpretation of efficacy as an inherently social phenomenon is central to this study. Making a clear distinction between individual and collective forms of responsibility and efficacy, and focusing on the collective level, can yield important clues as to why people do (not) act when confronted with the challenges of climate change. As Ford and Norgaard emphasise: "People who oc-