

Climate Change Beliefs and Climate-relevant Behaviour at the Northern US West Coast— A Practice Theoretical Analysis

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Abstract

It is common to attribute a person's environmentally and climate-friendly behaviour to corresponding beliefs and attitudes. According to this assumption, green behaviour results from green thinking and can be fostered through education. Although many people have a sound knowledge about the causes of climate change as well as other environmental issues and express climate and environmentally-friendly beliefs and attitudes, their actions still speak a different language. It seems plausible to suppose, therefore, that the relation between beliefs, attitudes and behaviour is more complex than assumed commonly.

This article aims to help understand the relationship between environmental and climate-relevant beliefs and behaviour by offering a different perspective. Instead of adhering to a causal relationship between thinking and acting the following study is based on the assumption that human activities strongly depend on the logic of social practices. The paper will give a short introduction to the theory of social practices. Based on these practice theoretical foundations, the second part of the paper will be dedicated to an empirical analysis of climate change beliefs and the practice of mobility as it is carried out in the everyday life of 21 interviewees living in selected urban centres on the Northern US West Coast.

1 Introduction

With growing scientific certainty about the existence and progression of climate change as well as its consequences,¹ the question of what can be done to tackle this challenge becomes increasingly relevant. The answers given very often resemble the ones expressed in connection to environmental problems

1 Cf. Intergovernmental Panel on Climate Change (IPCC), *Climate Change 2007: Synthesis Report* (Geneva: IPCC, 2007).

in general: A transformation of the Western way of life towards sustainability is inevitable and this goal requires fundamental changes of individual behaviour.²

As James Blake has shown, policy makers often tend to base their hopes for more environmentally-friendly behaviour on education and the distribution of information.³ Anja Kollmuss and Julian Agyeman add that the same applies for “most environmental Non-governmental Organisations”,⁴ too. What becomes obvious thereby is the fact that actors working professionally for the spreading of environmentally-friendly behaviour stick to scientifically outdated rationalist models that—according to Kollmuss and Agyeman—“were based on a linear progression of environmental knowledge leading to environmental awareness and concern (environmental attitudes), which in turn was thought to lead to pro-environmental behavior. These rationalist models assumed that educating people about environmental issues would automatically result in more pro-environmental behavior”.⁵

It is plausible to assume that information on the most pressing environmental issues in general and climate change in particular is highly available for the American people and that they will be educated on them at school or confronted with them when watching TV, reading a newspaper or surfing on the internet.⁶ Additionally, Willet Kempton, James S. Boster, and Jennifer A. Hartley stated already in 1995 that environmental concern and pro-environmental attitudes have been widely common in the US for several decades.⁷ However, many aspects of the so-called American way of life as they are performed by

2 Cf. e.g. Shove, Elisabeth, “Beyond the ABC: Climate Change Policy and Theories of Social Change,” *Environment and Planning A* 42.6 (2010): 1274.

3 Cf. Blake, James, “Overcoming the ‘Value-Action Gap’ in Environmental Policy: Tensions between National Policy and Local Experience,” *Local Environment* 4.3 (1999): 258–261.

4 Kollmuss, Anja, and Julian Agyeman, “Mind the Gap: Why do People Act Environmentally and what are the Barriers to Pro-Environmental Behavior?” *Environmental Education Research* 8.3 (2002): 241.

5 Loc. cit.

6 The causes of climate change and even its existence have been more a matter of debate in the US than e.g. in Europe. While portraying the issue of climate change, some parts of the US media have not seldom provided a forum for climate sceptics. However, as this paper is concerned with the relation between climate-friendly attitudes and climate-friendly behaviour, there is no need to consider this peculiarity here. For a detailed discussion of the significance of media coverage with respect to the issue of climate change, please consult the article by Maxwell Boykoff and Michael Goodman in this volume.

7 Cf. Kempton, Willet, James S. Boster, and Jennifer A. Hartley, *Environmental Values in American Culture* (Cambridge, MA, London: The MIT Press, 1995), 3–5.

individuals in their everyday life are still far from being environmentally and climate-friendly.

The fact that people often act in contradiction to their knowledge about environmental problems and their environmentally-friendly attitudes is a widely acknowledged phenomenon referred to by scientists as the 'value-action gap'⁸ or 'attitude-behaviour gap'.⁹ According to Kollmuss and Agyeman, a huge number of attempts have been undertaken "to explain the gap between the possession of environmental knowledge and environmental awareness, and displaying pro-environmental behaviour. Although many hundreds of studies have been done, no definitive answers have been found".¹⁰ The only thing contemporary researchers agree on is the refusal of the early rationalist models. Blake, for example, objects that many psychological approaches "share common roots in a rationalistic model where reasoned human agency is viewed as the key determinant of action, and where social and institutional constraints, if included at all, are considered only for their effects on individual attitudes."¹¹ He therefore welcomes a more recent school of social science research which also considers the "relations between individuals and social institutions".¹² Blake's own investigations can also be assigned to this school of research. By empirically disclosing three types of barriers to environmentally-friendly behaviour—individuality, responsibility, and practicality—his considerations strive to prove that "both psychological and institutional factors affect individual action"¹³.

Kollmuss and Agyeman, as another example, try to illuminate the gap between knowledge, attitudes, and action by presenting a collection of factors that have been identified to influence environmentally-friendly behaviour. Their strategy is to portray "a few of the most influential and commonly used frameworks for analyzing pro-environmental behavior"¹⁴—including Blake's—and to specify all behaviour-relevant factors they could extract from these different frameworks. Kollmuss and Agyeman assign them to three different groups: "demographic factors, external factors (e.g. institutional, economic, social, and cultural factors) and internal factors (e.g. motivation, environmental knowledge, awareness, values, attitudes, emotion, locus of control,

8 Cf. Blake, "Overcoming the 'Value-Action Gap,'" 257.

9 Cf. Kollmuss and Agyeman, "Mind the Gap," 246. Kollmuss and Agyeman also use the term "attitude-action gap" (248).

10 *Ibid.*, 240.

11 Blake, "Overcoming the 'Value-Action Gap,'" 264.

12 *Ibid.*, 265.

13 *Ibid.*, 266.

14 Kollmuss and Agyeman, "Mind the Gap," 240.

responsibilities, and priorities)”¹⁵ and finally combine them into a very complex model of pro-environmental behaviour.¹⁶ Kollmuss and Agyeman’s considerations equal Blake’s approach insofar as both admit the role of external factors but nevertheless focus on the individual and the question what keeps him or her from acting more environmentally-friendly.

Elisabeth Shove pleads for a change in perspective. In her paper “Beyond the ABC: Climate Change Policy and Theories of Social Change,” she criticises the tendency of climate change policy makers to disregard scientific research which deviates from models focussing on the individual as the key to more societal climate-friendliness. For Shove, research offers promising new approaches, yet “social change is thought to depend upon values and attitudes (the A), which are believed to drive the kinds of behaviour (the B) that individuals choose (the C) to adopt. The ABC model [...] resonates with widely shared, commonsense ideas about media influence and individual agency.”¹⁷ After describing several scientific approaches which differ from what she calls the ‘ABC model’,¹⁸ Shove turns to theories of practice¹⁹ and illustrates the methodological consequences which follow from this change in perspective, namely that practices “represent more than a ‘domain of study’: in effect they constitute the *unit of enquiry*”²⁰. To put it differently, from a practice theoretical point of view, the spotlight lies no longer on individuals, internal motives and external constraints but on the actual doings themselves, that is, the very practices individuals participate in. While Shove expresses her doubts that studies which rely on the ‘ABC-model’ could be of any help to explain issues like the ‘value-action gap’,²¹ she implies that practice theoretical research projects could offer fruitful results—“if the task was one of analysing the emergence and disappearance of more and less sustainable ways of life.”²²

Adopting Shove’s assumption that research based on practice theory could help to find new answers to old but still unsolved environmental problems like the so-called ‘value-action gap’, the following study uses this approach to investigate the relation between climate change beliefs and the climate-relevant practice of mobility as it is carried out by 21 individuals living on the Northern US West Coast. As the Pacific Northwest has a reputation for being *greener*

15 Kollmuss and Agyeman, “Mind the Gap,” 240 and 248.

16 Cf. *Ibid.*, 256–257.

17 Shove, “Beyond the ABC,” 1274.

18 Cf. *ibid.*, 1277–1278.

19 Cf. *ibid.*, 1279.

20 *Loc. cit.*

21 Cf. *ibid.*, 1276.

22 *Ibid.*, 1280.

than the rest of the country, this region recommends itself for an investigation of the relation between climate-relevant beliefs and behaviour. Before turning to the empirical analysis, it is necessary to explain the theoretical approach as it is used in this study. The next section will therefore be dedicated to a short introduction to practice theory. Afterwards, some information on the acquisition of the empirical data will be provided. The empirical analysis itself will then consist of two parts: While the first part provides a description of the climate change beliefs as they are expressed by the members of the interview sample, the second part will be focused on the practice of mobility. Here, the question of why the corresponding interviewees carry out this particular practice the way they do will be answered. The conclusion—despite of summing up all relevant findings—will offer a discreet proposal for making use of the practice theoretical findings regarding the goal of more societal climate-friendliness.

2 Practice Theory

The practice theoretical approach as it is used in the following study is based on the theoretical considerations of Andreas Reckwitz and Theodore R. Schatzki. Reckwitz's scientific work is a good starting point for an introduction to the theory of social practices because his considerations rely on a comparison of the approaches of several practice theorists, for example Pierre Bourdieu, Michel Foucault, Anthony Giddens, Bruno Latour, and Charles Taylor, to name just a few.²³ His work tries to synthesise these different approaches, or, as he puts it himself, it forms "an idealised model of practice theory".²⁴

So, what is practice theory? According to Reckwitz, practice theory is a special form of cultural theory²⁵ which gives in comparison to other social theories a different answer to the question of where 'the social' can be located.²⁶ For cultural theorists, 'the social' can be based neither on personal intentions nor on social norms as the source for actions carried out by individuals;²⁷ rather it leans, so to speak, on other basic elements, namely the "symbolic and

23 Cf. Reckwitz, Andreas, "Toward a Theory of Social Practices: A Development in Culturalist Theorising," *European Journal of Social Theory* 5.2 (2002): 243–263; Reckwitz, Andreas, "Grundelemente einer Theorie sozialer Praktiken: Eine sozialtheoretische Perspektive," *Zeitschrift für Soziologie* 32.4 (2003): 282–301.

24 Reckwitz, "Toward a Theory of Social Practices," 244.

25 Cf. *ibid.*, 245–246.

26 Cf. Reckwitz, "Grundelemente einer Theorie sozialer Praktiken," 286.

27 Cf. *ibid.*, 287.

cognitive structures of knowledge.”²⁸ From this it follows that all cultural theories are concerned with the question of how individuals perceive the world as meaningful and take culture as the answer. As Reckwitz puts it, culture, in the sense of symbolic structures or ‘systems of knowledge’,²⁹ provides everything in the world with meaning and thus enables individuals to act appropriately.³⁰ Practice theory is a special form of cultural theory which regards social practices as the basis of ‘the social’ and thinks about the social world as an entanglement of certain practices.³¹ According to Reckwitz, practice theory is also interested in the ‘systems of knowledge’ that enable individuals to act meaningfully in the social world; however, practice theorists envision these ‘systems of knowledge’ as practical knowledge, as a special form of know-how, so to speak.³² Practical knowledge has to be understood as a crucial part of any social practice which becomes incorporated into the bodies of the individuals carrying out the corresponding practice.³³ Simply put, practical knowledge can be envisioned as a special type of know-how which implicitly structures what individuals do in a certain area of life because it fixes and reflects routinised activities.

If practice theory regards social practices as the foundation of ‘the social’, and consequently locates the ‘systems of knowledge’ that structure what individuals do in social practices, this raises the question: what social phenomena in particular are described by the term ‘social practices’? For Reckwitz a practice is “a routinised type of behaviour which consists of several elements, interconnected to one other: forms of bodily activities, forms of mental activities, ‘things’ and their use, a background knowledge in the form of understanding, know-how, states of emotion and motivational knowledge”.³⁴ Take, for example, the practice of driving a car. In order to carry out this practice the driver performs several bodily activities like moving the steering wheel in a certain direction with his or her hands or stepping on the brake or the accelerator with his or her foot. These bodily activities cannot take place, however, without corresponding mental activities. The driver must, for instance, know how to interpret the colours red and green when he or she is approaching the traffic lights. Additionally, after having learned how to drive, the driver knows how to use

28 Reckwitz, “Toward a Theory of Social Practices,” 247.

29 Reckwitz uses the German term “Wissensordnungen”.

30 Cf. Reckwitz, “Grundelemente einer Theorie sozialer Praktiken,” 288.

31 Cf. *ibid.*, 289.

32 Cf. *loc. cit.*

33 Cf. *loc. cit.*

34 Reckwitz, “Toward a Theory of Social Practices,” 249.

the vehicle, for example, how to handle the clutch. As Reckwitz has pointed out, all these different aspects that become relevant when carrying out the practice of driving a car are interconnected and it would be difficult for an experienced driver to explain bit by bit what bodily and mental activities he or she executes while driving; he or she just knows implicitly what to do and does it. Or, to put it differently, he or she has incorporated the practical knowledge of driving.

In his definition of social practices, Reckwitz also mentions the elements 'states of emotion' and 'motivational knowledge' which have not been explained yet. In order to illustrate what he means by these terms it seems useful to first introduce the definition of social practices as it was coined by Theodore R. Schatzki.

Schatzki defines a "practice as a temporally unfolding and spatially dispersed nexus of doings and sayings".³⁵ By using the expressions 'temporally unfolding' and 'spatially dispersed', Schatzki refers to the fact that practices must not be envisioned as universal phenomena but have to be understood as routinised activities as they have developed in particular regions at particular points in time. Just as noteworthy is Schatzki's statement that any practice forms a 'nexus of doings and sayings'. Thus, social practices comprise a set of different basic actions that are organised in a certain manner.

But what is it that according to Schatzki organises the doings and sayings that form a social practice? Schatzki ascribes the organisation of a practice's elements to three "avenues of linkage [...]": (1) through understandings, for example, of what to say and do; (2) through explicit rules, principles, precepts, and instructions; and (3) through what I will call 'teleoaffective' structures embracing ends, projects, tasks, purposes, beliefs, emotions, and moods"³⁶. Particularly relevant for the exposition at hand is what Schatzki calls 'teleoaffective structures'; a term he coins through merging the concepts of teleology and affectivity.³⁷ Simply put, this term is supposed to refer to what individuals carrying out a practice aim for and how they feel about it. It is important, however, not to understand Schatzki's considerations on 'teleoaffective structures' as a reference to independently planned activities. What individuals aim for and how they feel about it is rather dependent on what practices allow them to do

35 Schatzki, Theodore R., *Social Practices: A Wittgensteinian Approach to Human Activity and the Social* (Cambridge, New York, Melbourne: Cambridge University Press, 1996), 89.

36 Schatzki, *Social Practices*, 89.

37 Cf. Schatzki, Theodore R., "Practice Mind-ed Orders," in *The Practice Turn in Contemporary Theory*, ed. Theodore R. Schatzki, Karin Knorr Cetina and Eike von Savigny (Abingdon, New York: Routledge, 2001), 52.

and feel. According to Schatzki, a practice's teleoaffective structure must be envisioned as "a range of acceptable or correct ends, acceptable or correct tasks to carry out for those ends, acceptable or correct beliefs (etc.) given which specific tasks are carried out for the sake of these ends, and even acceptable or correct emotions out of which to do so".³⁸ It seems more than likely that Reckwitz refers to Schatzki's concept of 'teleoaffective structures' when he defines 'states of emotion' and 'motivational knowledge' as crucial elements of social practices.

Before leaving the theoretical framework for this study and moving on to the empirical analysis one final remark in regard to social practices needs to be made. From the aforementioned considerations it should have become clear that one has to differentiate between a particular practice understood as a social phenomenon and the events of this practice as they are actually carried out by individuals.³⁹ Thus, one can conclude that an individual carrying out a practice may be taken as a clue to the practice as a social phenomenon, but he or she must not be mistaken for reflecting the practice as a whole. From this it follows that the constitutive elements, which Reckwitz and Schatzki ascribe to social practices, must not be mistaken as attributes of acting individuals;⁴⁰ they have to be understood as integral parts of practices that will never be absorbed completely by individuals carrying out the practice. Schatzki exemplifies this interrelation for the organising parameter of 'teleoaffective structures'. According to him, a 'teleoaffective structure' is "the property of a practice: a set of ends, projects, and affectivities that, as a collection, is (1) expressed in the open-ended set of doings and sayings that compose the practice and (2) unevenly incorporated into different participants' mind and actions."⁴¹ This definition of the relation between a practice as a whole and the events of it being performed by individuals should be kept in mind when it comes to the empirical analysis.

38 Cf. Schatzki, "Practice Mind-ed Orders," 53.

39 Cf. Schatzki, *Social Practices*, 89–90.

40 Ibid., 105; Reckwitz, "Toward a Theory of Social Practices," 250.

41 Schatzki, Theodore R., *The Site of the Social: A Philosophical Account of the Constitution of Social Life and Change* (University Park: The Pennsylvania State University Press, 2002), 80.

3 Data and Method

The following empirical analysis makes use of 21 narrative-based interviews that were conducted in 2009 in Tacoma, Washington, and in the metropolitan area of Portland, Oregon.⁴² The interviews were based on the so-called environmental-biographical interview which was developed in order to investigate the perception and non-perception of environmental change.⁴³ The environmental-biographical interview has to be understood as a qualitative interview

42 Originally, the interviews were part of a larger pool of interviews that was conducted for the research project “Shifting Baselines” which belongs to the research area “Climate and Culture” at the Institute for Advanced Study in the Humanities in Essen, Germany. In total, 55 US residents were interviewed for this research project. The sample (fourteen women and seven men aged 28 to 81) used for the study at hand was selected because these 21 interviews were conducted in a row within 16 days. This selection ensures that the corresponding participants were interviewed under similar external conditions and not influenced by differing events (e.g. news coverage on new scientific findings), which might have an influence on particular climate change beliefs. The research project “Shifting Baselines” is concerned with the question to what extent environmental changes can be and actually are perceived by individuals. The inspiration for this research project derives from the work of marine biologist Daniel Pauly who diagnosed the so-called “shifting baseline syndrome” for the scientific community in fisheries science (cf. Pauly, Daniel, “Anecdotes and the Shifting Baseline Syndrome of Fisheries,” *Trends in Ecology and Evolution* 10 (1995): 430). As Pauly has revealed, humans tend to be unimpressed by environmental changes simply because they do not perceive long-term changes in their entirety but only in regard to conditions they have witnessed themselves earlier on in their (professional) life. Founded on Pauly’s findings, the social psychologist Harald Welzer has shown that the “shifting baseline syndrome” is not only a phenomenon that can be witnessed in regard to changes of the natural environment but also in regard to changes taking place in the social environment. (cf. Welzer, Harald, *Klimakriege: Wofür im 21. Jahrhundert getötet wird* (Frankfurt a. M.: Fischer, 2007, 212–218). The research project “Shifting Baselines” is based on the assumption that the “shifting baseline syndrome” is a noteworthy phenomenon in regard to huge environmental challenges like climate change, for it can be assumed that the parallel between environmental changes and the human perception or rather non-perception of these changes might lead to situations in which individuals as well as societies in general might not recognise changes until it is too late to face them. Therefore, the research project “Shifting Baselines” aims at finding empirical evidence for the existence of the “shifting baseline syndrome” in climate-relevant aspects of everyday life in four different countries (China, Germany, Switzerland, and the US) in order to provide a foundation for the development of strategies to face this phenomenon and foster a broader awareness of significant environmental changes.

43 The environmental-biographical interview as it was used for the interviews at hand was exclusively designed for the purposes of the research project “Shifting Baselines”.

combining a narrative and a guided part. The first part of the interview was introduced by asking the interviewees to describe the environment they grew up in and to talk about places and events they themselves regarded as relevant. Without restricting this request explicitly to memories of the natural environment, the stories that were told in the narrative part of the interview thus comprised discussions of the natural as well as of the cultural and social environment surrounding the interviewees in the course of their biographies. The second part of the interview consisted in additional questions about climate-relevant practices of everyday life as well as a discussion of personal hopes, dreams, and concerns. In this phase of the interview the participants were also asked whether they considered climate change to be a threat. The majority of the 21 interviewees replied not only by giving a direct answer to that question but also by elaborating on climate change beliefs and climate-relevant behaviour. The empirical data derived from the interviews conducted in Tacoma and Greater Portland is therefore very suitable for an analysis that aims at investigating the relation between environmental and climate-relevant beliefs and behaviour.

4 Empirical Findings

4.1 *Climate Change Beliefs*

In order to analyse the relation between climate-relevant beliefs and behaviour from a practice theoretical point of view, it seems advisable to start with a separate discussion of the corresponding beliefs of the interviewees. All interviewees participating in the study take climate change as a fact. Whether they express that they felt personally threatened by climate change or not, all of them reveal their certainty that climate change is actually happening.⁴⁴ Take, for example, 39-year-old Victor⁴⁵ who expresses this belief explicitly:

Does it directly impact us right now, today? I mean, not really. But if you really do the research and you look at what's going on, it's like, it's

44 Two of the eldest interviewees (72 and 81 years old respectively) replied to the question whether they considered climate change to be a threat by referring to general climatic conditions in Oregon. It seems likely that both interviewees were not familiar with the term 'climate change' or misunderstood the question. Whether their answers would have been different if the term 'global warming' had been used instead of 'climate change' remains uncertain. Their answers will therefore not be considered for the following analysis.

45 All names used in connection to interview excerpts are pseudonyms.

happening. And it's not a question of if, you know, it's here, it's now, it's occurring.⁴⁶

Most interviewees, however, do not express the belief that climate change is a fact as explicitly as Victor does, but affirm it implicitly by describing changes in the natural environment they themselves have witnessed⁴⁷ or by discussing climate-relevant actions they perform as a personal reaction to climate change⁴⁸.

With regard to the causes of climate change the picture is not as clear-cut, but still two major types of beliefs can be generated. According to the first type, which the vast majority of interviewees has to be assigned to, climate change results from the energy-consuming and emission-intensive way of life of modern humankind. Simply put, for interviewees belonging to this first type climate change is 'man-made'. A typical statement for this type is given by 42-year-old Tom:

You know, even if there was no climate change I wouldn't be happy with the way things are done, obviously. [...] But I also happen to know that there is climate change and I truly believe it. It's a human; human activity is the primary cause of this and so, yeah, it's a big concern, big concern.⁴⁹

According to the second type, climate change is a mixture of natural cycles and a human contribution. Although the interviewees assigned to the second type agree on the 'mixture-theory', they disagree on the question to what extent humans contribute to the phenomenon of climate change. Their statements

46 Interview 44, paragraph 68.

47 For example Wilson, 78 years old: "Because in my life time I've seen the climate go from those World War II years that I mentioned to you which were really quite cold and quite snowy in the wintertime here to hardly any now. And from where the large glaciers, to see how far they've receded in the last 50 years. Yeah, that's bothering." (Interview 45, paragraph 64)

48 For example Mary, 40 years old: "I try to do everything I can, we try to do everything we can, by composting, by having one car, by not having kids, by not, you know, like there's a lot of things we do to keep our carbon footprint smaller" (Interview 27, paragraph 37).

49 Interview 42, paragraphs 61–63.

range from assuming a minimal impact of human activity⁵⁰ to regarding human activity as the driving force that is dangerously alternating natural cycles.⁵¹

For what can also be observed by analysing the empirical data is the fact that most interviewees—nearly all participants who are convinced that climate change is ‘man-made’ as well as the majority of the ones expressing the ‘mixture theory’—discuss climate change by referring to the role of the individual. However, the question of what the individual is able to do when it comes to tackling the issue of climate change is a matter of disagreement. Again, two types of beliefs can be generated from the participants’ statements. According to the first type, climate change can and must be addressed on the individual level because every individual is able to make a difference by acting in a climate-friendly way. A good example for this type can be found in the answer 43-year-old Nicole gives when being asked whether she personally regards climate change to be an issue:

I do the best I can with it, you know. I ride mass transportation. I try to do the local, buying local. And, yes, I do composting and recycling and try to throw away as little as possible. The button pops off my shirt, I’m gonna sew it back on, I’m not gonna toss the shirt out. But, you know, it does concern me, you know, it does concern me and I do the best I can and that’s all you can do and try to help others figure out that they can do a little bit, too.⁵²

Although Nicole talks about herself and refers to some climate-relevant practices she performs in her everyday life, it becomes clear from what she says that she also refers to the power of the individual in general. Moreover, she mentions the aim to “try to help others figure out that they can do a little bit, too.” According to Nicole’s statement, it is not only the single individual that makes a difference, but individuals inspiring other individuals. This assumption could be rephrased as a belief according to which some individuals function as starting points for climate-friendly changes in behaviour and—through the means of communication and exemplification—others will follow.

50 For example Oliver, 68 years old: “I think it’s just a natural cycle. [...] I’m not convinced that humans have that much to do with it. I think it’s a bigger thing than what humans are doing. [...] But there are more people in the world with more automobiles and smoke stacks and, I don’t know.” (Interview 31, paragraphs 64–66)

51 For example Becky, 67 years old: “I understand from a point, a science point, that this is just one of the cycles but I really think mankind has added to increasing the speed of changing the cycles.” (Interview 46, paragraph 50)

52 Interview 29, paragraph 58.

While Nicole refers more or less implicitly to the importance of the diffusion of climate-friendly behaviour and the assumption that mitigation measures rely on many individuals acting accordingly, this belief is expressed more explicitly by 67-year-old Becky:

Definitely, climate change is a concern. You know, we do our tiny little part and if each person does their tiny little part then it all adds together. We recycle, buy green, we try and eat green and I don't know that there is much else we can do except educating people into it.⁵³

Like Nicole, Becky also combines the portrayal of individual climate-friendly doings with a pronouncement of a general belief. According to her statement, individuals can have an influence on the progression of climate change because they do not exist in isolation. While the climate-relevance of one individual's doings may be marginal, it becomes crucial when individuals as a group act similarly. Becky also mentions the widely accepted assumption that climate change education will result in an increase of climate-friendly behaviour.

28-year-old Zoe expresses a belief that is close to the one Becky revealed in her statement, namely the assumption that although one individual's climate-friendly doings hardly have an affect on the progression of climate change, individuals together as a group acting in a climate-friendly way do have the power to make a difference. However, in the case of Becky this assumption was phrased as a hopeful and optimistic prospect; Zoe describes it as the biggest obstacle when it comes to tackle the issue of climate change:

Personally, it's hard. I think people have a hard time worrying about climate change on a personal level because it's something that you can't; I mean if everybody were working towards the same goal you could affect it but you can't, on a personal level. So, I think it's very hard to see that, you know, to have that community minded effort when your community is so many billions of people. [...] It's hard to know, it's hard to feel as one individual like you can make a big difference. Of course, though, you can. I mean, of course, that's all that can be done in a lot of ways but it's also frustrating to think.⁵⁴

53 Interview 46, paragraph 50.

54 Interview 41, paragraph 70.

Zoe's statement reveals a belief according to which climate change is in fact an issue that can and must be addressed on the level of the individual whilst the motivation for individuals to act in a climate-friendly way is slowed down by the fact that individual actions will only have an affect on climate change if everybody acts accordingly. By having this pessimistic undertone, Zoe's statement constitutes a binding position between the first and the second type of individual-related beliefs.

According to the second type of individual-related beliefs, the individual is not able to do anything against the issue of climate change. This belief, which can be found by far less often in the empirical material, is for instance expressed in the following excerpt taken from the interview with 69-year-old Paula:

I don't worry about it too much because; no; it's different every year. There is nothing we can really do about it, is there? Nothing I can do about it. At least when, you know, I worry about the people that try to scare us I can vote. I can't do anything about climate change except trying to be more careful about stuff.⁵⁵

For Paula, neither a single individual nor individuals together as a group have the power to do anything against climate change. And being as it is according to Paula, there is no use of worrying about climate change because it cannot be influenced anyway. This belief of powerlessness becomes particularly apparent when she compares it to the significance of the individual vote in the course of political elections.⁵⁶ However, she does not explain what she means by "trying to be more careful about stuff" so one can only speculate on what she refers to. Regarding the scepticism she expresses about individual and collective actions against climate change it seems possible that this phrase might also be an indication of what she thinks is expected of her to say in a famously environmentally conscious region like the Pacific Northwest.

The aforementioned climate change beliefs will be further analysed with regard to social practices in the following. First, however, it seems necessary to comment on another empirical finding that has not been mentioned yet but that has already surfaced in some of the excerpts illustrated so far: The fact that

⁵⁵ Interview 32, paragraph 112.

⁵⁶ As she has explained earlier on in the interview, Paula is concerned about "certain elements in our country that are trying to scare Americans. [...] For some reason the people in charge like to keep Americans afraid and I find that very disturbing." (Interview 32, paragraph 96).

the majority of the interviewees who express the belief that individuals have the power to affect the progression of climate change tend to talk about climate change as one environmental problem among others. Take, for example, Nicole who does not only refer to climate-relevant practices like mobility and food consumption, but also to the practices of recycling, composting and repairing. For sure, some sort of climate-relevance can be ascribed to the latter practices as well, but what they mainly stand for is classic environmentally-friendly behaviour.

The tendency to mingle climate-friendly behaviour with environmentally-friendly behaviour while discussing climate change becomes even more apparent in the answers 70-year-old Tina gives to the question whether she considers climate change to be an issue:

Yes, it is. Yes, and I think of all the pollution that we create. Are we going to wake up in time to do something about it? So, I think, personally, I can just do one little bit at the time so I try my best. I don't pollute any more than I have to. I don't use chemicals, I don't use cleaning fluids. I polish, what little polishing I do, with mayonnaise. I use vinegar to clean. I don't buy all the chemicals. I just don't believe in them.⁵⁷

By introducing the aspect of pollution and presenting the actions she carries out in order not to contribute to this environmental problem any more than she has to, Tina perfectly illustrates with her answer the widely common tendency to discuss climate change as just another environmental problem.⁵⁸ The question of why many statements reveal a tendency to refer to individually performed environment-friendly actions when it comes to discussing climate change cannot be discussed in detail here. However, it seems plausible to assume that the interviewees who express the belief that every individual or individuals together as a group have the power to affect the progression of climate change also want to perceive themselves as individuals who in fact make a difference. And while one cannot see or feel the direct consequences of riding public transportation or reducing one's energy-consumption at home, one can actually see and feel the results of composting, repairing, collecting plastic and paper in a recycling bin, or refraining from chemicals when cleaning.

57 Interview 36, paragraph 56.

58 Cf. e.g. Kempton, Boster, and Hartley, *Environmental Values*, 64–66.

4.2 *Climate-relevant Practices*

So far, the portrayal of climate change beliefs has revealed a strong tendency among the interviewees to combine the issue with the discussion of the role of the individual. What has also become apparent is the fact that interviewees assigned to the first type of individual-related beliefs—the ones expressing the conviction that every individual is able to make a difference—often illustrate this belief by referring to climate-friendly and environmentally-friendly actions they perform themselves. Excerpts like the ones taken from the interviews with Nicole and Becky, for instance, suggest that the climate and environmentally-friendly actions they describe constitute a causal consequence of their climate change beliefs. But does the empirical material really lead to the conclusion that green thinking causes green behaviour?⁵⁹ A first hint to the fact that the relation between climate change beliefs and climate-friendly behaviour is much more complicated can be found in what 46-year-old Susan replies when being asked whether climate change is an issue for her personally:

No, I mean, I suppose it should be but no. I think that we do need to do a lot to curtail how we interact with our environments but then, here I am, driving a car to work on a daily basis and not doing anything on that because that would require moving. But in the process of moving my husband will be farther away from work, so, at the moment we're probably a mile from his place of work and two miles from my daughter's school. So, I'm not doing a whole lot of my part of decreasing my carbon emissions.⁶⁰

It is obvious that Susan also considers climate change to be a challenge which could be tackled on the level of the individual. However, as she admits herself, despite of having enough knowledge of the climate-relevant consequences of her actions in the field of mobility—she talks about not “decreasing” her “carbon emissions”—she does not change her behaviour. Of course, the dilemma of her and her husband's workplace being located in different cities cannot be resolved easily, so things being as they are, one of them has to face a longer

59 The definition of green behaviour in the field of mobility can be a matter of debate. With regard to greenhouse gas emissions and the consumption of natural resources, the study at hand considers the use of public transportation as well as riding a bicycle or walking as the most climate and environmentally-friendly forms of mobility. Driving a car by oneself, on the other hand, is regarded as the mode of transportation with the highest negative impact on climate and the environment. Carpooling is considered less harmful and therefore more climate and environmentally-friendly than driving alone.

60 Interview 34, paragraph 40.

commute. The question is, though, if climate-friendly alternatives are available for her for getting to and from work. When Susan is asked in the interview whether she usually uses the car as a means of transportation in her everyday life she replies:

Yes. Our town is not in the transit system. Washington County, Multnomah County, Clackamas County all have a really good bus and train, the MAX⁶¹, the light rail train, but it's only for those counties. [...] There is no, well, excuse me, there is this little tiny bus that'll do our county but it's not convenient so yes, I am a driver. I do not commute with anybody to work. I drive by myself.⁶²

As this statement shows, there are in fact alternatives to commuting by car by herself, but the use of public transportation does not offer itself as a real alternative for Susan because it would complicate getting to work for her. In other words, the climate change beliefs Susan carries do not seem to be the factors that determine what she tends to do in the area of mobility in her everyday life.

To better understand why individuals act the way they do it seems helpful to change the perspective of the empirical analysis at hand and switch over to the practice theoretical approach introduced in chapter 2. As this paper does not allow a comprehensive analysis of all the climate-relevant practices that were mentioned in the interview excerpts so far, the following remarks will continue to focus on the practice of mobility. It goes without saying that the following analysis will necessarily simplify the complexity of the relation between beliefs and behaviour and some factors that may also be of significance in this context may be ignored. However, in order to highlight the advantages of practice theory for the purpose of analysing barriers to climate and environmentally-friendly behaviour, this approach seems to be appropriate.

What practice theoretical conclusions can be drawn from the excerpts of the interview with Susan? First of all it is necessary to remember the practice theoretical assumption that one has to differentiate between the practice as a

61 'MAX' is an acronym for 'Metropolitan Area Express' denoting the region's light rail system which did not reach as far as Clackamas County until 2009 because of a failed ballot initiative. Cf. Abbott, Carl, *Greater Portland: Urban Life and Landscape in the Pacific Northwest* (Philadelphia: University of Pennsylvania Press, 2001), 164–165. In 2009, the goal to integrate Clackamas County into the area served by the 'MAX' was accomplished and additional plans for a second line serving Clackamas County are supposed to be realised in the near future. Cf. Abbott, Carl, *Portland in Three Centuries: The Place and the People* (Corvallis: Oregon State University Press, 2011), 166–167.

62 Interview 34, paragraph 24.

social phenomenon and the practice in form of a particular realisation as it is carried out by individuals. Susan's individual way of carrying out the practice of mobility—as far as it can be reconstructed from her statements—relies on using the car exclusively. According to her, alternative ways at least in regard to commuting to and from work exist but do not present themselves as real options because they are inconvenient to use. From this it follows that the activities which Susan performs in the area of mobility follow the logic of practicality and convenience. From a practice theoretical point of view it would therefore be inadequate to say that Susan does not act climate-friendly in the area of mobility despite of better knowledge. Instead, aspects of climate change simply do not matter when she carries out the practice of mobility because other factors—namely practicality and convenience—are responsible for what she actually does. Of course, one has to be careful when inferring from one particular way of carrying out the practice of mobility to the practice as a social phenomenon. Whether the aspects of practicality and convenience are part of the teleoaffective structure of the practice of mobility as a social phenomenon will be the subject of the analysis of the excerpts to come.

In comparison to Susan, who acknowledges that she drives the car “to work on a daily basis” although she knows about the climate-relevant consequences of these actions, Nicole presents herself as an individual whose climate-friendly actions are a direct consequence of her knowledge about climate change. However, the relation between beliefs and actions does not appear to be as causal as it seems to be at first sight. When being asked about the means of transportation she uses in her everyday life Nicole replies:

I do have a car but I take the bus to work a lot. And I just mostly have my car on the weekends or for whenever I need to run errands. So, I prefer to take the bus. It's so much easier and, you know, even though this isn't necessarily a high-density city, it's just a lot easier. I can catch the bus to get to work immediately.”

Interviewer: “And you can pretty much get everywhere you want to, by bus?”

Nicole: “Well, I mostly just drive it, I mean, I mostly ride it to work and home. So, I'm just going to and from work, you know, five days a week. And then, I have my car, it sits in the driveway and on the weekends I can do my stuff, you know, that I need to do like getting to the grocery store or taking the kids to doctors' appointments or things like that.”⁶³

63 Interview 29, paragraphs 32–34.

According to these remarks, the crucial factor which makes Nicole use either the car or public transportation is not the issue of climate change. For commuting she uses public transportation because it is “just a lot easier”. Thus, taking the bus is obviously the handiest way to get to and from work. However, for other purposes “like getting to the grocery store or taking the kids to doctors’ appointments” the car seems to be more convenient to use. From a practice theoretical point of view, the activities that Nicole performs in the area of mobility follow—comparably to the case of Susan—the logic of practicality and convenience.

So far, the practice-based analysis at hand has made use of statements from interviewees who expressed climate change beliefs according to which individuals alone or together as a group have the power to make a difference. But what about the practice of mobility as it is carried out by individuals who expressed doubts that the individual can do anything against the progression of climate change? Zoe, for instance, describes the usage of the means of transportation in her everyday life as follows:

I, we, so, my boyfriend and I share the car. And we use it about once or twice a week, maybe, maybe once a week. I get to work on the bus. Sometimes I walk. It’s not very far; it’s like a mile and a half to work. And so, when it’s nice outside I walk; when it’s raining I take the bus. Yeah, the bus is quick; it takes like ten minutes to get downtown, so, it’s perfect. Yeah, I mean, we were talking about this the other day that it’s actually much more of a pain to drive. Usually, we drive to go hiking. Every Saturday we go somewhere; that’s when we take the car. Otherwise it’s a car that just sits.⁶⁴

As was analysed in the previous chapter, Zoe expresses her frustration over the fact that climate change must be addressed on the level of the individual but presents itself as an issue that is so big and unswayable that it discourages the individual to act by him- or herself at all. The aforementioned excerpt illustrates, however, that this climate change belief does not matter when it comes to her individual way of carrying out the climate-relevant practice of mobility. By walking or taking the bus to and from work, Zoe really does make a difference in regard to the causing factors of climate change but the driving force for her acting that way is not based on the corresponding belief. The activities she performs in the realm of mobility follow again the logic of practicality and convenience, which becomes truly obvious in her statement that she and her

64 Interview 41, paragraph 38.

boyfriend “were talking about this the other day that it’s actually much more of a pain to drive”. In other circumstances—Zoe mentions hiking trips on the weekend—she makes use of the car because, as can be assumed, alternatives are either not convenient or simply do not exist after getting out of the urban area.

The same holds true for Paula who expresses most explicitly the belief that the individual cannot do anything against climate change. Her way of carrying out the practice of mobility does not differ much from Zoe’s usage of different means of transportation and can also be labelled as relatively climate-friendly as she tends to use public transportation a lot:

Interviewer: “Do you have a car?”

Paula: “Hm.”

Interviewer: “And is that the only means of transport you use or what kind of, or how do you get around?”

Paula: “Oh no. We have the MAX Line. The little train, you know, what do you call it? It’s the train that takes you downtown, you know. We have buses. I ride the bus a lot. Or I drive over to where the MAX Line is and park there and take the train.”⁶⁵

Paula does not give reasons why she uses the car in some and public transportation in other situations. Her statement thus differs from the ones of Susan, Nicole, and Zoe who referred explicitly to aspects of practicality and convenience. However, it does not seem to be far-fetched to assume that the reasons for Paula using either the car or means of public transportation are also based on aspects of practicality and convenience.

As the preceding practice theoretical analysis of Susan’s, Nicole’s, Zoe’s, and Paula’s individual way of carrying out the practice of mobility has revealed, all four individuals have one thing in common: their doings in the area of mobility are governed by practicality and convenience. This finding is striking because Susan, Nicole, Zoe, and Paula do not agree on the question of what the individual—or rather they themselves—can do against climate change. The comparison of Susan and Nicole is especially interesting in this regard because both indeed share the belief that the individual has the power to act against climate change but Nicole adds that she does whatever she can do—which includes riding public transportation—while Susan admits that she does not do much to lower her carbon footprint—which includes sticking to using the car on a daily basis. The comparison of the excerpts taken from the interviews

65 Interview 32, paragraphs 55–58.

with Susan and Nicole has thus shown that two individuals carrying a similar climate change belief do not necessarily perform similar actions. The analysis of Zoe's and Paula's statements on the other hand has revealed that the existence of pessimistic beliefs can easily co-exist with the performance of climate-friendly activities.

What implications derive from the aforementioned empirical findings? If one were to continue assuming a causal relation between thinking and acting or rather between beliefs and behaviour the findings of the preceding analysis would come as a surprise because no consistent behaviour could be assigned to a particular belief. By taking a practice theoretical perspective, however, the same findings perfectly make sense: when individuals carry out a practice their doings are not steered by particular beliefs, they are instead prompted by the teleoaffective structure of that practice. As could be shown by analysing the interviewees' statements, the practice of mobility as they carry it out is governed by a teleoaffective structure containing practicality and convenience. Of course, the teleoaffective structure of the practice of mobility as a social phenomenon may also comprise other factors that have not been disclosed by the empirical analysis at hand. However, the aforementioned empirical findings lead to the conclusion that practicality and convenience are not only determining factors for the way Susan, Nicole, Zoe, and Paula carry out the practice of mobility but have to be acknowledged as aspects of the teleoaffective structure of the practice of mobility in general.

5 Conclusion and Discussion

So, what conclusions can be drawn from the preceding empirical analysis? First of all it is once again worth mentioning that all interviews that were analysed for this paper contain statements, remarks or answers which reveal that the corresponding interviewees take climate change as a fact. Concerning the beliefs the interviewees express in regard to the causes of climate change, two types could be generated: While the majority attributes climate change to human activities and greenhouse gas emissions resulting from the energy consumption so common nowadays, a minority ascribes climate change to a mixture of natural cycles and a human contribution. Although a slight disagreement could be detected in regard to the question of how big the human contribution is, with Oliver there is just one interviewee coming close to being a sceptic concerning the human influence on climate change.⁶⁶ However, even

66 Cf. footnote 50 in this article.

Oliver acknowledges that he cannot estimate the consequences of “more people in the world with more automobiles and smoke stacks”. Consequently, the analysis of the 21 interviews conducted in Tacoma, Washington, and the Metropolitan Area of Portland, Oregon, has shown that while there remains disagreement in regard to the extent of the human contribution to climate change, the interviewees agree on the fact that climate change is happening and that humans have something to do with it. Of course, these findings cannot be generalised for the regions. However, the residents of the Pacific Northwest and of Portland in particular have a reputation for being extremely environmentally conscious⁶⁷ so that the aforementioned findings do not come as a surprise.

What the empirical analysis of the interview material in addition brought to light is the fact that the anthropogenic character of climate change is nearly exclusively discussed in regard to the question of what the individual can or cannot do. Again, two types of individual-related climate change beliefs could be generated: While a small minority expresses the belief that nothing can be done by the individual, the majority of interviewees voices the conviction that climate change can only be influenced by actions carried out on the level of the individual. The latter belief is often accompanied by statements—either optimistic or pessimistic—revealing the general idea that the success of changes on a broader or rather collective level depends on activities being started by individuals. In comparison to elaborations on the question of what the individual can or cannot do, aspects of climate change strategies on a collective or political level are hardly mentioned and in the rare cases that they are addressed, the respective interviewees express a preference for individual activities with collective measures only being second choice.⁶⁸ To sum up these findings, one could say that the corresponding interviewees express a

67 Cf. Abbott, *Portland in Three Centuries*, 171–172.

68 Take, for example, 73-year-old Clarice who discusses climate change in connection to other environmental issues: “I’d like to see the individual companies, the individual cities take care of their recycling or take care of their environmental problems so that it gets down to the individual people that they realise that we have to take care. That’s what I’d like to see, rather than to have a government from the top come down and say ‘You gotta do this, you gotta do that’. It would be better if it came through the people. Right now, I don’t know where it’s coming from. It’s probably a little of both. [...] I think that the individual people, the individual and then in groups of individuals need to take more charge of what’s happening around them. [...] I don’t like a government becoming bigger and bigger and bigger and then it’s sort of like everybody is just [unintelligible] because they think the government is gonna tell me what to do anyway. And I don’t want that. I want people to take care of themselves.” (Interview 47, paragraphs 38–42)

great confidence in the power and possibilities of every single individual. However, it seems also plausible to assume that the preceding findings confirm the predominance of a value which is commonly attributed to the United States: individualism. As Robert N. Bellah et al. in their empirically-based elaboration *Habits of the Heart* have shown, "Individualism lies at the very core of American culture".⁶⁹ The findings of the study at hand strengthen the validity of this statement and demonstrate that individualism is still a value rooted so deeply in the culture of the United States that it has the power to shape certain climate change beliefs.⁷⁰

Interestingly, the majority of interviewees who express the belief that the individual can make a difference in regard to climate change do not stick to discussing the role of the individual in general but embed this belief in elaborations on the question what they themselves can or cannot do or are already doing against climate change. By referring to the way they perform climate-relevant activities while discussing the issue of climate change many interviewees create the impression that their actions are a causal consequence of their beliefs. However, the analysis of the excerpts taken from the interview with Susan has shown that the relation between beliefs and behaviour should not be assumed to be a causal one. Susan admits that despite knowing about the climate-relevance of using the car on a daily basis, she does not change her behaviour towards more climate-friendliness. In this regard she represents the complete opposite of Nicole who states that she uses public transportation in order to act climate-friendly. Both women obviously carry the belief that individual actions can make a difference; their individual way of carrying out the climate-relevant practice of mobility, however, differs decisively. As the practice theoretical analysis has shown, this finding is no surprise because their doings in the area of mobility are not governed by their beliefs but follow the teleoaffective structure of the practice itself. Through analysing the reasons Susan and Nicole give for carrying out the practice of mobility the way they do, two factors of the teleoaffective structure could be detected: practicality and convenience. The assumption that climate change beliefs do not determine how individuals behave in the area of mobility could be supported by analysing Zoe's and Paula's corresponding statements. These interview excerpts revealed that climate-friendly behaviour is not at all precluded by beliefs doubting the climate-relevant potentials of the individual. Instead, practicality

69 Bellah, Robert N. et al., *Habits of the Heart: Individualism and Commitment in American Life* (Berkeley, Los Angeles, London: University of California Press, 1985), 142.

70 For an elaboration of the importance of individualism in American culture in general cf. Bellah et al., *Habits of the Heart*.

and convenience could again be detected as being responsible for their individual ways of carrying out the practice of mobility.

The analysis at hand has shown that climate change beliefs do not necessarily function as a trigger for climate-friendly ways of behaviour in the field of mobility. Even though it seems tempting to ascribe climate-friendly actions to corresponding beliefs—which also could be seen by some interviewees' attempts to discuss climate change by illustrating their climate-friendly behaviour—one should not pin one's hopes on this relation. What could be demonstrated for the climate-relevant practice of mobility may very likely be valid for other practices as well: The fact that the practices individuals carry out are determined by a teleoaffective structure which does not necessarily correspond to the beliefs these particular individuals might carry. If this assumption is true the key for more environmentally and climate-friendly behaviour cannot be found in education or further attempts to make individuals even more familiar with the abstract knowledge about environmental problems or climate change. As the preceding empirical analysis has shown, the knowledge about climate change and its anthropogenic anchoring already exists. To implement a more climate-friendly way of life and the corresponding forms of behaviour can only be achieved by modifying the climate-relevant practices themselves. As the empirical analysis has exemplarily shown for the practice of mobility, individual acts of carrying out this particular practice follow a teleoaffective structure comprising practicality and convenience. In order to foster climate change mitigation efforts, it would thus be a good starting point to modify the corresponding infrastructure in a way that the usage of climate-friendly means of transportation becomes more convenient and advantageous than the usage of climate-damaging means of transportation. Of course, in a country like the United States with long distances between places this is a huge challenge. But, as the examples of Nicole, Zoe and Paula have shown, at least on the city level this challenge can be tackled.