Chapter 4: Environmental attitudes and actions

Overview

In this chapter, you will learn how environmental awareness is theoretically conceptualised and how it can be empirically measured. In addition, you will learn about the current state of research on the topic of environmental awareness. You will also learn why environmental awareness does not necessarily lead to environmentally friendly actions and which factors are responsible for this so-called "attitude-behaviour gap". Finally, the chapter sheds light on the extent to which ideas of a good and just social order go hand in hand with corresponding images of nature.

Expressions of concern for the environment seem to be increasing worldwide, both among the population and among political decision-makers, yet at the same time ecological crisis symptoms such as species loss and climate change are intensifying (Richardson et al. 2023). This suggests that awareness about the critical state of the environment has not yet been sufficiently translated into appropriate action. For decades, environmental sociology—often in conjunction with social psychology—has been addressing the questions of how environmental awareness can be conceptualized on a theoretical level, how it can be measured empirically, how different (population) groups perceive and interpret the environment, how environmental awareness and environmental action are connected, and what consequences are produced by the social discourse on environmental awareness. There are two different approaches to the social perception of the environment, which have both been widely used in environmental sociology. Attitudinal and behavioural research, which is committed to methodological individualism, understands the perception of the environment and thus environmental awareness as an individual phenomenon. This means that the central unit of analysis is the individual with their specific attitudes and actions, which are mainly investigated in the context of surveys. Cultural Theory, on the other hand, derives group-related patterns of perception from different modes of social practice. According to cultural theory, the social perception of the environment results not from the aggregation of individual environment-related attitudes, as it does in attitudinal and behavioural research, but from group-specific interaction structures.

In the following two sections, we will look at the social perception of the environment from the perspectives of attitudinal and behavioural research as well as Cultural Theory. In the third section, we will critically reflect on the discourse around environmental awareness and action. To do so, we will adopt a socio-diagnostic perspective to question the function performed by public debates about environmental problems and environmentally friendly behaviour and the consequences they produce.

1. Environmental awareness in attitudinal and behavioural research

Attitudinal and behavioural research assumes that societal interpretations of the environment can be reconstructed entirely from individual, environment-related

attitudes, and that structured surveys of individuals therefore represent the best empirical approach to researching such interpretations. The knowledge thus gained about individual attitudes or actions can then be aggregated into group-related characteristics on the basis of statistical similarities. This results in different environmental awareness and action profiles for different social milieus or population groups. In the following, we will explain the theoretical understanding of environmental awareness found in attitudinal and behavioural research, and present two common instruments for the empirical assessment of environmental awareness. This is followed by a brief overview of the empirical findings from attitudinal and behavioural research about environmental awareness and the relationship between environmental awareness and environmental action.

1.1. The conceptual basis of environmental awareness

A large number of empirical studies have been conducted to assess environmental awareness and the relationship between environmental awareness and environmentally responsible actions. However, the theoretical conceptualisation of environmental awareness in these studies is very heterogeneous and so too is their empirical operationalisation (Best 2011: 241). The lack of a clear conceptual basis means that the results of individual studies can hardly be compared with one another and they often use the term environmental awareness to mean very different things. Thus, environmental awareness is partly conceived and understood as a value system, and partly as an attitude or worldview (Schultz et al. 2005). The following sections provide an overview of the common theoretical conceptualisation of environmental awareness as an attitude and elaborate on the theoretical relationship between attitudes and values.

Values are generally defined as person- or group-specific conceptions of what is desirable (Kluckhohn 1951: 395) or, more specifically, as an enduring belief that a particular course of action or state of affairs is preferable to an opposite course of action or state of affairs (Rokeach 1973: 5). Freedom, equality, safety, independence, cleanliness, helpfulness, love, etc. are examples of values (Rokeach 1973: 28). Values are mostly considered as antecedents of attitudes. This means that it is assumed that certain attitudes regarding an object are derived from and influenced by values. The idea that environmental awareness is based in values has also become widely accepted in environmental sociology (Stern & Dietz 1994; Best & Mayerl 2013). Individual attitudes toward environment-related issues or phenomena are accordingly derived from their (positive or negative) relationship to individual value orientations. So, for example, environmental awareness is associated with a post-material value orientation (Inglehart 1971, 1995).

The term attitude is understood as a psychological tendency to react approvingly or disapprovingly to an object, person, institution, or event (Ajzen 1988: 4; Eagly & Chaiken 1993: 1). In attitudinal research, a three-component model has gained acceptance, according to which attitudes are composed of affective concern (affective component), knowledge about the object (cognitive component),

and intentions to act (conative component) (Eagly & Chaiken 1993)[18]. Environmental awareness as an attitude accordingly comprises affective concern about environmental problems (e.g., anger, fear, helplessness, or hope), knowledge and information about environmental problems (e.g., climate change is caused by humans), and a general willingness to act to remedy environmental problems (e.g., willingness to save energy) (Best 2011: 245).

In most empirical studies on environmental awareness, there is no precise definition of the term "environmental awareness". The same applies to theoretical discussions about the concept (Dunlap & Jones 2002). This is probably due to the fact that the meaning of the term seems clear at first and thus a pragmatic use of the term has prevailed. The following definition by Robert Jones and Riley Dunlap, one of the sociological masterminds of environmental awareness research, has been widely used internationally: "[...] environmental concern refers to the degree to which people are aware of problems regarding the environment and support efforts to solve them and/or indicate a willingness to contribute personally to their solution" (Dunlap & Jones 2002: 485). In the German context, for instance, reference is often made to the classic description provided by the German Advisory Council on the Environment (SRU), which defines environmental awareness as the "realisation that the natural foundations of human life are endangered by humans themselves, combined with the willingness to take remedial action" (Der Rat von Sachverständigen für Umweltfragen 1978: 445). In principle, both definitions are compatible with the understanding of environmental awareness as an attitude. However, if we take the three-component model as our foundation, it is clear that neither of these definitions mention the affective component (Diekmann & Preisendörfer 2001: 102).

1.2. The empirical assessment of environmental awareness

To assess individual attitudes (and value orientations), quantitative empirical social research uses "items", which are often combined to form scales. The term "item" refers to a question or statement on which respondents are asked to state their position. The following statement is an example of an item that is repeatedly used in surveys related to the environment, technology or risk: "Humans have the right to modify the natural environment to suit their needs." Individual attitudes are regarded as latent variables that are not directly observable. Accordingly, they are assessed via items, the answers to which can be assumed to provide information about the respondent's attitude. In order to capture a specific latent variable such as environmental awareness in its different facets, various items can be combined to form a so-called scale. In this process, the different measurements for the individual items are aggregated into one measurement, which is then interpreted as an indicator for the person's attitude.

In the German-speaking world, the general environmental awareness scale by Andreas Diekmann and Peter Preisendörfer (Diekmann & Preisendörfer 2001: 104)

18 While the three-component model views emotions, cognitions, and conation as equally important, recent attitude research emphasises the dominant importance of emotions (Banaji & Heiphetz 2010: 358).

are of particular importance[19]. Internationally, the *new ecological paradigm scale* (NEP scale) created by Riley Dunlap and Kent van Liere is particularly widely used (original version of the scale: Dunlap & van Liere 1978; revised version of the scale: Dunlap et al. 2000). In the following, we will briefly discuss Diekmann and Preisendörfer's general environmental awareness scale and Dunlap and van Liere's NEP scale, as these are common instruments for national and international assessments of environmental awareness.

The NEP scale is not an attitude scale in a strict sense, as it does not take into account the affective and conative dimensions of attitudes, i.e., those related to intentions to act. According to Dunlap et al. (Dunlap et al. 2000), the NEP scale is intended to capture an ecological worldview rather than environmental awareness as an attitude. The items of the NEP scale therefore exhibit a high degree of abstraction. Both Thomas Dietz et al. (Stern & Dietz 1994) and Henning Best and Jochen Mayerl (Best & Mayerl 2013) place the NEP scale in a hierarchy of mental constructs as a mediator between abstract values (e.g., post/-material value orientations) and specific environmental attitudes. The NEP scale is criticised in particular for lacking a clear theoretical basis and thus its role in the interaction of attitudes and values remains vague on a conceptual level. The items of the current version of the NEP scale can be found in Table 1. The respondent's agreement with the individual items is recorded on a five-point response scale (strongly agree, mildly agree, unsure, mildly disagree, strongly disagree) (Dunlap et al. 2000: 433).

Table 1: The NEP scale; source: The NEP statements (items) from Dunlap et al. 2000: 433

The wording of the NEP statements (items)
We are approaching the limit of the number of people the Earth can support.
Humans have the right to modify the natural environment to suit their needs.
When humans interfere with nature it often produces disastrous consequences.
Human ingenuity will ensure that we do NOT make the Earth unliveable.
Humans are seriously abusing the environment.
The Earth has plenty of natural resources if we just learn how to develop them.
Plants and animals have as much right as humans to exist.
The balance of nature is strong enough to cope with the impacts of modern industrial nations.
Despite our special abilities, humans are still subject to the laws of nature.
The so-called "ecological crisis" facing humankind has been greatly exaggerated.
The Earth is like a spaceship with very limited room and resources.

19 Comprehensive information about both scales can also be found in the open access repository for measurement instruments provided by the Leibniz Institute for the Social Sciences (GESIS): https://zis.gesis.org/en.

The wording of the NEP statements (items)
Humans were meant to rule over the rest of nature.
The balance of nature is very delicate and easily upset.
Humans will eventually learn enough about how nature works to be able to control it.
If things continue on their present course, we will soon experience a major ecological catastrophe.

In contrast to the NEP scale, the general environmental awareness scale is an attitude scale in a narrower sense. This means that the individual items assess cognitive as well as affective and conative attitude components. The individual items and their assignment to the attitude components are shown in the following table:

Table 2: General environmental awareness scale; source: Diekmann & Preisendörfer (2001: 104), own translation

Dimension	The wording of the items
Affective	It worries me to think about the environmental conditions, under which our children and grandchildren would probably have to live.
	If things continue on their present course, we will soon experience a major ecological catastrophe.
	When I read newspaper reports or watch TV broadcasts on environmental problems, I get frustrated and angry.
Cognitive	There is a limit to the economic growth that our industrialized world has already crossed or will reach very soon.
	At present, the majority of the population still behaves in a way that is not very environmentally friendly.
	In my assessment, the so-called "ecological crisis" facing humankind has been greatly exaggerated by many environmentalists.
Conative	It is still the case that politicians are doing far too little for environmental protection.
	For the benefit of the environment, we should all be prepared to restrict our current standard of living.
	Measures to protect the environment should be enforced even if this results in lost jobs.

Agreement with the individual items is assessed using a five-point response scale. While the NEP scale focuses on more abstract attitudes toward human-environment relations, the general environmental awareness scale is more specifically tailored towards environmental problems. This is a key advantage for the empirical analysis of the relationship between environmental awareness and environmental action: Since, from a theoretical point of view, values tend to be "action remote" constructs, measuring instruments that focus on abstract values have less

empirical explanatory power with regard to concrete environmental action than more specific attitude scales, such as the general environmental awareness scale (Homburg & Matthies 1998: 126).

1.3. Empirical findings on environmental awareness and environmental action

Environmental attitudes are not uniformly structured in the population, but instead take on group-specific forms. For example, while for some people the protection of rare animal species is paramount, others are more concerned about the effects of climate change. Both represent different variants of environmental awareness. In addition, the significance of different aspects of environmental awareness also changes over time in line with discourses in society as a whole (Radkau 2014). The various instruments used to empirically assess environmental awareness, two of which were presented in the previous section, are each selective, however, as they (can) only cover certain aspects of environmental attitudes. Empirical studies that have measured environmental awareness using different instruments are therefore only comparable to a limited extent. Accordingly, the current state of research is inconsistent and partly contradictory. Internationally, there is an almost unmanageable number of empirical studies, mostly of a quantitative nature, on the topic of environmental awareness and action. Nevertheless, a brief overview of the state of research in different fields of investigation is still worthwhile, as it reveals the central empirical findings as well as the questions that remain unanswered. The following overview, which must necessarily remain cursory due to the large number of studies, focuses on two fields of investigation: a) environmental awareness and group-specific differences in attitudes within Germany and b) international comparisons of environmental awareness and the relationship between environmental awareness, post-materialistic value orientation and economic prosperity.

Although different studies are difficult to compare due to their diverging methodologies and operationalisation of the term environmental awareness, it can be said that environmental awareness has been at a relatively high level within the German population since the 1980s, however with considerable fluctuations over time (Hartmann & Preisendörfer 2021). Also, attitudes toward ecological issues and domain-specific environmental actions vary—sometimes considerably—between social milieus, i.e., population groups characterised by similar value orientations, patterns of action, and social situation (education, income, occupational status, marital status, etc.). The middle-class mainstream, for example, is characterised by below-average environmental awareness and action, while critical-creative milieus are more environmentally aware than average and also prove to be particularly sustainable in their actions (Rubik et al. 2019). In addition to the milieu-specific differences, women also exhibit a higher average level of environmental awareness than men (Kuckartz & Rheingans-Heintze 2006). Furthermore, a positive correlation between formal education and environmental awareness can be seen time and again (Kuckartz & Rheingans-Heintze 2006;). However, it should be noted that the actual carbon footprint in social milieus that are characterised by a high level of education, high income and a high

degree of environmental awareness is usually particularly large (Moser & Kleinhückelkotten 2018). In particular this is caused by the fact that, due to their high level of income, people in those social milieus (can) travel more for pleasure, the amount/quality of technical devices in their households is generally higher and, on average, they have more living space per person.

With regard to international comparisons of environmental awareness, two different theories have been developed that relate to the connection between a country's level of economic prosperity and its population's environmental awareness. The "prosperity hypothesis" (Franzen & Meyer 2010) assumes that the populations in countries with a high level of economic prosperity have higher average environmental awareness, since more people in those countries have a post-material value orientation, which is causally related to environmental awareness. This connection has been empirically demonstrated several times (see, for example, Inglehart 1995; Franzen 2003). Then again, Riley Dunlap and Richard York analysed data from the World Values Survey and found no correlation between prosperity level and environmental awareness. They conclude that environmental awareness has become a global phenomenon that is just as widespread in poorer countries as in richer ones, and interpret this as evidence that disproves the prosperity hypothesis (Dunlap & York 2008). The current state of research does not make it possible to draw any clear conclusions about the global relationship between prosperity level and environmental awareness, so the question of whether the phenomenon of environmental awareness is independent of prosperity cannot be answered conclusively on an international scale.

As we have already seen, there are differences in environmental awareness between different population groups in Germany. The question now arises to what extent this also applies on an international scale. In a comparison of various European countries and the USA, Angela Mertig and Riley Dunlap find only very slight correlations between socio-demographic variables (age, income and gender) and environmental awareness. This suggests that environmental awareness is widespread in all strata of the societies studied and is therefore not a group-specific phenomenon (Mertig & Dunlap 2001). Jochen Mayerl and Henning Best, however, were able to show on the basis of data from the World Value Survey that in poorer countries there is no connection between a post-materialistic value orientation and environmental awareness, but that such a correlation does exist in richer countries. In more affluent countries the level of environmental awareness varies between materialistically and post-materialistically oriented population groups (Mayerl & Best 2018). Thus, again, it remains unclear to what extent population groups within countries differ in terms of their environmental awareness or whether concern for the environment is a generalisable phenomenon.

1.4. The gap between environmental awareness and environmental action

The extent to which a high degree of environmental awareness actually results in environmentally conscious actions is a highly relevant question, both from a sustainable development perspective and from a scientific perspective. First of all, it is safe to assume that a person's mindset has an influence on their actions.

After all, this is one of the central assumptions of attitudinal and behavioural research: Attitudes have an action-guiding and motivating character for planned and deliberately controlled behaviours (Ajzen 1991).

In empirical studies, there is often only a slight correlation between attitudes and corresponding actions. This phenomenon is usually referred to as the *attitude-behaviour gap*. In the environmental field, the gap between environmental awareness and environmental action is particularly pronounced (Kollmuss & Agyeman 2002). The fact that in many cases people do not act according to their environmental attitudes has found its way into many public environmental debates. In such debates references are repeatedly made, mostly in a sarcastic way, to allegorical Green Party voter(s) who take long-distance trips. The empirically observed gap between environmental awareness and environmental action raises the question: To what extent can moral appeals and measures for increasing environmental awareness have corresponding effects on people's actions? In order to be able to answer this question meaningfully, it is worth taking a closer look at the causes for this discrepancy between environmental awareness and environmental action in empirical studies. These are both methodological and conceptual in nature. While the methodological causes are due to problems in the empirical recording of environmental awareness and environmental action, the conceptual causes relate to the theoretical understanding of how action ultimately comes about. The following sections provide an overview of the methodological and conceptual causes of the *attitude-behaviour gap* between environmental awareness and environmental action (Homburg & Matthies 1998: 127f.).

One methodological reason for the weak correlation between environmental attitudes and environmental actions is that in empirical studies attitudes and actions are often assessed at different levels of abstraction. Attitudes are mostly surveyed at a relatively general level, while actions are assessed more specifically. While this makes sense in terms of trying to avoid tautological explanations (e.g., people who intend to purchase a fuel-efficient car in the near future actually do so), when the measurement of attitudes becomes more abstract, the number of possible intervening, situational and moderating variables increases – and the direct relationship between general attitude and specific action becomes more and more lost. So, for instance, a large number of factors play a role in everyday car use (e.g., place of residence, car availability, accessibility and knowledge of alternative means of transportation, motives such as convenience, freedom or safety, etc.), whereby environmental awareness becomes one of many influencing variables.

Another methodological cause is the assessment of patterns of action instead of area-specific actions. In some cases, different types of action are combined into an action index for the empirical analysis. However, in different fields of action people have different (perceived) levels of freedom to act and they view different motives for action to be relevant. This means that for a certain person, separating rubbish may be easy, but saving heating energy may be difficult or not a primary objective because of the presence of small children in the household or because of an automated heating system.

A third methodological reason for the *attitude-behaviour gap* between environmental awareness and environmentally responsible action can be found in the different perceptions that scientists and actors have regarding what "environmentally responsible action" actually means. Actions that scientists classify as sustainable may not be classified as sustainable by survey respondents due to different evaluation standards or information. Of course, the reverse is also true. For example, many people classify regionally produced food as particularly sustainable, although this is not necessarily always the case.

In addition to these three methodological causes, there are three other conceptual difficulties that influence the relationship between attitude and action on environmental issues. First, there is the low significance of environmental awareness for everyday actions. In everyday life, environmentally friendly action plays a subordinate role for many people, since a) other motives for action enjoy higher priority (e.g., convenience) and b) a multitude of (perceived) structural constraints limit their scope for action. In addition, actions in everyday life often occur as bundles, so that the execution of a particular action is linked to a large number of other actions and thus influences them (→ chap. 7 on sustainable consumption). For example, the use of a car for commuting to work often means that trips taken in one's free time (e.g., shopping, sports, childcare, meeting friends) are also carried out by car.

The relevance of routines represents another reason for the low influence of even very pronounced environmental awareness on everyday actions, since routines determine the majority of our everyday actions. The reasons for establishing routines and the purpose of maintaining them are by definition not open to conscious reflection. Accordingly, attitudes and changes in attitudes have no direct influence on these routines. (Not) turning off the light when leaving the room is such a routine, which largely escapes conscious behavioural control in everyday life. Only when such routines are put to the test due to drastic events or profound irritations can they be questioned and re-evaluated in light of individual attitudes. For example, the birth of children often leads to dietary routines being disrupted and changed (Schäfer et al. 2012).

The so-called low-cost hypothesis (detailed presentation → chap. 7 on sustainable consumption) represents a third and final conceptual cause of the gap between attitudes and behaviour. According to the low-cost hypothesis, people only act in accordance with their (environmental) attitudes if those actions do not entail excessively high action costs (money, time, convenience, etc.) compared to other action options (Diekmann & Preisendörfer 2003). Otherwise, their actions are and remain driven by subjective cost-benefit calculations. The low-cost hypothesis can thus explain why environmentally aware people recycle their waste but are much less willing to give up their private cars.

As we have just seen, there are plausible reasons for the seemingly paradoxical *attitude-behaviour gap*. However, although a gap exists in everyday life between environmental awareness and environmental action, this does not mean that environmental awareness and environmental education are irrelevant. That said, the

empirically weak correlation shows that environmental education alone is not sufficient to increase environmentally friendly behaviour among a population. Additional structural barriers that hinder action must also be removed and contexts for action must be organised in such a way that sustainable action becomes the easiest option, regardless of individual motivations. Even if environmental awareness is only one motive among many, it is an additional stabiliser of action. It provides a legitimate reason for environmentally friendly decisions that is comprehensible to many other people, and contributes to the maintenance of sustainable routines. Furthermore, a high level of environmental awareness in the population and the associated sensitivity to environmental problems creates a public climate of opinion in which certain ideas, demands, expectations, visions of the future, etc. can be expressed and are compatible, and this generates public pressure on political decision-makers and companies. Demands that people travel less or not at all by air or that vegetarian days be introduced in canteens would certainly have found hardly any public or political resonance in the 1990s, and not even widespread public outrage.

2. Social order and myths of nature – The Cultural Theory perspective

Whereas attitudinal and behavioural research considers group-specific perceptions of the environment to be the result of the aggregation of individual attitudes, Cultural Theory (Douglas & Wildavsky 1982; Thompson et al. 1990; Douglas 2003 [1970], 2010 [1966], 2011 [1982]) has developed a different approach to the "myths of nature" (as it is called in the language of Cultural Theory). Cultural Theory assumes that group-specific myths of nature originate from the interaction structures of social groups. Thus, it is not individual attitudes that are decisive for the form and characteristics of social perceptions of the environment, but rather the interaction structures in which individuals are embedded and which shape their attitudes.

Cultural Theory has become prominent, especially in the field of social science research that investigates the perception and assessment of ecological risks. The prominence of this approach was boosted in particular by the 1982 essay "Risk and culture: An essay on the selection of technological and environmental dangers" by Mary Douglas and Aaron Wildavsky (Douglas & Wildavsky 1982). In their essay, Douglas and Wildavsky summarise the basic ideas behind Cultural Theory as it relates to (environmental) risks as follows: "[...] the choice of risks to worry about depends on the social forms selected. The choice of risks and the choice of how to live are taken together. Each form of social life has its own typical risk portfolio. Common values lead to common fears (and, by implication, to a common agreement not to fear other things)" (Douglas & Wildavsky 1982: 8).

In the following, we explain the theoretical basis of Cultural Theory: the grid-group scheme. In addition, we will go into more detail about the different myths of nature postulated by Cultural Theory and finally we will summarise the various critiques of Cultural Theory.

2.1. The grid-group scheme

At its core, Cultural Theory assumes that a certain social order ("social environment"), i.e., the structure of social relations within a certain group (e.g., family, organisation, society, etc.), corresponds to certain patterns of orientation ("cultural biases") (Thompson et al. 1990: 1). These cultural biases filter people's attention by structuring perception in such a way that certain situations, events, or developments are framed as problematic and certain solutions appear as legitimate or rational. Social environments and cultural biases constitute each other, or as Thompson et al. put it: "social relations generate preferences and perceptions that in turn sustain those relations" (Thompson et al. 1990: 2)[20]. According to Cultural Theory there are four different types of social environments[21], which are based on two dimensions: "group" and "grid". The term grid describes the degree of social regulation ("individuation"), while group refers to the strength of group ties or degree of social integration ("social incorporation") (Thompson et al. 1990: 5f.; Schwarz & Thompson 1990: 6; Douglas 2003 [1970]: 62f., 2011 [1982]: 190). One pole of the grid dimension describes a social environment in which clearly articulated and distinct classification systems exist and, accordingly, the behaviour of individuals is constrained by strict and explicit rules. The other pole of the grid dimension describes a social environment in which, at best, abstract and thus open-to-interpretation classification systems and rules of behaviour exist. The group dimension describes the degree of group loyalty, i.e., the strength of group ties. One pole represents a social environment in which clear group boundaries are drawn between the group and others, where a high degree of group identification and social control exists within the group and correspondingly strong group bonds prevail. The other pole is characterised by, at best, weak group boundaries and the most extensive absence of social control and group identification, and correspondingly weaker group bonds.

The intersection of the group and grid dimensions creates a scheme with four fields, which is usually used to graphically illustrate the four different types of social environments, which, according to Cultural Theory, are the only forms of social order that can exist in the long term (see Figure 6). Mixtures of these four types of social environments can exist temporarily, but in the long run, it is assumed, they will cease to exist due to their internal contradictions (Douglas 1999: 411). This strict theory that there are only a certain number of different social environments has attracted much critique, since it does not seem very plausible that only four forms of social environments can exist permanently, especially in late modern, pluralistic societies (Johnson 1987). It therefore seems reasonable to conceive of the four types not as real but as ideal types. These ideal types influence cultural biases but are not capable of being completely responsible for their real-world manifestation.

20 Implicit parallels to Bourdieu's concept of habitus can be seen here.

21 Some publications on Cultural Theory assume the existence of five different types of culture (e.g., Thompson et al. 1990), but this is controversial (Mamadouh 1999: 401). For reasons of space, we will only describe the four common cultural types.

The four social environments are mostly referred to as fatalism, hierarchy, individualism, and egalitarianism, and their adherents accordingly as fatalists, hierarchists, individualists, and egalitarians (Thompson et al. 1990: 6f.; Douglas 2011 [1982]: 205ff.).

Hierarchy describes a social environment characterised by strong group ties (+ group) and strict rules regarding behaviour (+ grid). Individuals living in a hierarchical social environment see themselves as subject to strict behavioural control, which is justified by the fact that the stability and well-being of the community can be ensured by adherence to role patterns and the accompanying division of labour. The emergence of problems is attributed to deviant behaviour or external influences. Examples of hierarchical communities are bureaucracies or traditional, patriarchally structured families.

Egalitarianism as a social environment is characterised by a strong group bond (+ group) but unspecific rules regarding behaviour (- grid). Accordingly, there is a high degree of solidarity between egalitarians and at the same time a low degree of behavioural control, since there are hardly any firmly defined role patterns or possibilities for control. In this social environment blame for problems is placed on institutions or the "system", which corrupts individuals. Social movements are an example of egalitarian communities.

Individualism refers to a social environment with weak group ties (-group) and unspecific rules regarding behaviour (-grid). Here, social relationships are organised competitively and the rules of behaviour are negotiable and open to interpretation. In such a competitive social environment, individuals are encouraged to pursue their own benefit in a selfish manner. For individualists, the cause of problems lies in personal misconduct or bad personal qualities or incompetence. Communities organised according to market principles and structures can serve as an example here, even if individualists do show some degree of group identification.

Fatalism is a social environment that is characterised by low group loyalty (-group) but strict rules regarding behaviour (+ grid). Accordingly, fatalists do not see themselves as belonging to any particular group, but are thus also excluded from the groups that determine the rules regarding behaviour. Such rules are therefore perceived as given and unchangeable. If problems occur within this social environment, they are attributed to fate and are accordingly located outside the realm of human influence. By definition, fatalists do not form communities and are therefore largely isolated, so no example of a fatalist community can be provided here.

	- group	**+ group**
+ grid	Fatalism	Hierarchy
- grid	Individualism	Egalitarianism

Figure 6: The grid-group scheme; source: own illustration based on Schwarz & Thompson (1990: 7)

Adherents of these different social environments fight within society for the hegemony of interpretation on how to deal with risks (e.g., air pollution) and which solutions should be considered legitimate and rational (e.g., setting limits for air pollution and monitoring their compliance vs. banning car traffic in inner cities). Within a society, there is a specific mix of egalitarians, hierarchists, individualists and fatalists, which can change over time. The more strongly an individual is attached to a certain social environment, the more strongly they internalise the cultural biases that apply there[22]. The social environments and their adherents exist in parallel because, despite their antagonistic relationship, they each depend on one another in order to legitimise their existence (as separate from the other types), to compensate for their respective weaknesses, or to instrumentalise the other types for their own ends (Thompson et al. 1990: 4).

2.2. Myths of nature

According to Cultural Theory, the social environments described above correspond to certain ways of perceiving nature or "myths of nature", which are shaped by the specifics of the corresponding social environments (Schwarz & Thompson 1990: 8ff.; Thompson et al. 1990: 26ff.). This means that the individual's perception and evaluation of environmental problems is determined by the social environment in which they are embedded. Each individual's perception is to be considered biased in that it tends to justify the preferred social environment or warn against risks to the preferred social environment. Basic assumptions about what is risky, dangerous, sustainable or unsustainable are accordingly always related to social, group-specific patterns of interpretation. For example, for individualists, environmental problems are only relevant if they limit the functioning and the "self-healing powers" of the free market; market-based instruments (e.g., emissions trading) are preferred as solutions to environmental problems. Egalitarians, on the other hand, perceive environmental problems as generally threatening even if they affect only a few members of their group, and typically call for a fundamental change of the "system". A myth of nature from one social environment thus appears irrational to members of other social environments. By linking social order to the perception and evaluation of problems, Cultural Theory takes a social constructivist perspective on nature, according to which society cannot have an infinite number of different myths of nature, but it can have (at least) four different, mutually exclusive variants. The myths of nature are ultimately partial representations of reality.

According to Cultural Theory, individualism corresponds to the myth of a resilient nature ("nature benign"), hierarchy to the myth of a nature that is tolerant within limits ("nature perverse/tolerant"), egalitarianism to the myth of a fragile nature ("nature ephemeral"), and fatalism to the myth of an unpredictable nature ("nature capricious") (Schwarz & Thompson 1990: 4ff.; Thompson et al. 1990:

22 Here, there is disagreement about the extent to which the assignment of an individual to a particular type of social environment is an invariant, permanent characteristic of that person, or whether this assignment is instead context-specific, quasi role-dependent, and also changes over time (Thompson et al. 1990: 265ff.; Mamadouh 1999: 404).

26ff.). Figure 7 shows the location of the myths of nature in the grid-group scheme: The inherent logic of the myths of nature is mostly illustrated with corresponding graphical illustrations.

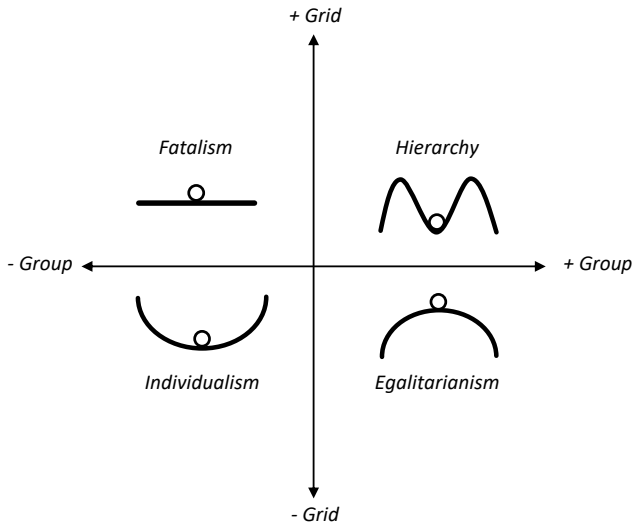

Figure 7: Location of the myths of nature in the grid-group scheme; source: own illustration based on Schwarz & Thompson (1990: 9)

The individualists' myth of nature – **"nature benign"** – frames nature as an unlimited resource that can't really be thrown out of balance by human activities because it is fundamentally stable and robust. Far-reaching human interventions in nature are therefore unproblematic, as these are generally well tolerated and any side effects can be easily remedied with the help of technological progress. This myth corresponds with the market-based, competitive social environment preferred by individualists.

In the egalitarians' myth of nature – **"nature ephemeral"** – nature is perceived as extremely vulnerable and easily thrown out of balance. Their preference for a social environment based on solidarity and free of exploitative relationships is thereby transferred onto how they view humans' relationship with nature. Accordingly, egalitarians seek to avoid significant human interference with nature, especially interference caused by technical progress and economic growth, and to adapt human activity to the limits of nature. If this does not happen, they believe the ecosystem will collapse sooner or later.

The hierarchists' myth of nature – **"nature perverse/tolerant"** – describes nature as a basically robust system that can, however, become unbalanced when overexploited. Accordingly, nature can certainly be used as a resource, but care must be taken to ensure that the stress limits identified by experts are observed. With the help of the right management strategies, nature can be used for human purposes

without any problems. This is in line with the hierarchists' belief that clear structures and control are the best means of stabilising the social fabric.

The fatalists' myth of nature – **"nature capricious"** – ultimately characterises nature as a system that functions according to randomness and chance, or at least according to principles that are not completely accessible to humans. Accordingly, people are at the mercy of nature's whims and cannot consciously influence them either positively or negatively through their actions. This corresponds to the fatalists' belief in fate and their general feeling of powerlessness (Schwarz & Thompson 1990: 4ff.; Thompson et al. 1990: 26ff.).

2.3. Criticism of Cultural Theory

Cultural Theory and its proponents have been exposed to a variety of criticisms over the years, directed against different aspects of the theoretical framework (see, for example, Johnson 1987; Boholm 1996). The most important points will be summarised here very briefly.

On the one hand, critics argue that the theory ultimately does not provide a compelling explanation for why human interaction and social order should be differentiated solely in terms of the group and grid dimensions. They also suggest that these two dimensions are not clearly defined and therefore their meaning remains unclear and vague. Also, the premise that there are only these four types of social environments does not seem to be very tenable, especially since some Cultural Theory researchers later added a fifth type (autonomy) (see, for example, Thompson et al. 1990), while Mary Douglas, the founding figure of Cultural Theory, maintains that there are only four types (Douglas 1999). Moreover, the idea of exactly four types appears to be an oversimplification of social realities, particularly against the background of late modern, pluralistic and functionally differentiated societies.

Criticism is also directed against the assumption that every person is an adherent of a particular social environment. This seems implausible, since individuals are embedded in very different contexts, groups, and organisations and are therefore never consistent in their perceptions and actions across different spheres of life. Thompson et al. emphasise that people only show tendencies towards a certain social environment and the associated cultural biases (Thompson et al. 1990: 265f.), but it remains unclear how these tendencies are supposed to come about.

Another point worthy of criticism is the lack of clear separation between the individual types of social environments. Empirically, it is always possible to find social groups that combine elements from different social environments. For example, there are environmental associations organised according to strict hierarchies that are committed to an egalitarian myth of nature.

Nevertheless, Cultural Theory provides a plausible distinction between different patterns of orientation ("*cultural biases*")—including a theoretical explanation for their occurrence—which has proven itself time and again as a heuristic for empirical analyses. From a pragmatic perspective, therefore, one can state that the

theoretical and argumentative vagueness of Cultural Theory does not undermine its empirical application. Cultural Theory should therefore be categorised more as a heuristic that guides empirical research rather than as a coherent theoretical structure.

In empirical applications, Cultural Theory has repeatedly proven to have explanatory power, even if its explanatory power should not be overestimated (Sjöberg 1998). For example, in line with Cultural Theory, it has been empirically shown that egalitarians are less willing to accept ecological and technological risks than fatalists, hierarchists, and individualists (see, for example, Dake 1991; Peters & Slovic 1996; Steg & Sievers 2000). Climate change scepticism also appears to be less prevalent among egalitarians than individualists (Shi et al. 2015). Cultural Theory is not only useful in empirical analyses of the perceptions and assessments of ecological and technological risks, it also provides a good basis for devising strategies to deal with such risks. Cultural Theory's four myths of nature each represent particular perspectives on risks that hide some aspects and emphasise others. A holistic approach to addressing risks should therefore seek to integrate all four cultural biases so that they complement each other with their respective strengths and weaknesses. Solutions to socio-ecological problems must therefore be developed with the participation of representatives of each of the four myths of nature, so that they are viable for society as a whole. Such solutions are then inevitably not ideal solutions, but instead what are known as "clumsy solutions". However, in view of socio-ecological problems characterised by uncertainty, ambiguity and complexity (e.g., anthropogenic climate change or loss of biodiversity), these are, from the point of view of Cultural Theory, the only viable solutions (see, for example, Thompson et al. 1998; Verweij et al. 2006; Ney & Verweij 2015).

3. Moral appeals to environmental awareness and the problem of responsibilisation

In sociology and beyond, there are voices that critically comment on public debates about environmental awareness and environmental action as well as the corresponding research on these topics. The main argument here is that calls for the population to think and act in a more environmentally friendly way leads to the responsibility for environmental protection and environmental destruction being shifted away from industry and politics and onto citizens, thus partially relieving industry and politics of the burden of this responsibility (Maniates 2001). As a consequence, the problems of unsustainable economic structures and policies become hidden. This argumentation is embedded in a larger discourse around neoliberalism as a political practice, which criticises the fact that since the 1980s the state has increasingly withdrawn from the task of providing public services, that a growing number of areas of life are being organised according to the rules of the market, and that responsibility for societal well-being is increasingly being outsourced to citizens (Harvey 2007). One example of this is the dismantling of local public transport, which is supported and financed by the state. In such cases, the resulting gap is either filled by private providers (as long as they can expect

to make a profit), or it is left to civil society in the form of community buses or neighbourhood-organised driving services to maintain the mobility of population groups such as the elderly or economically deprived families.

In the context of environmental debates, the concept of responsibilisation means that responsibility for environmental protection is (consciously or unconsciously) transferred from collective actors such as the state or companies to individuals, who then try to live up to the expectations associated with the role of environmentally aware citizens (Maniates 2001). Environmental awareness and information campaigns or calls for environmentally aware action can be seen as instruments of such responsibilisation (Shove 2010; Evans et al. 2017). At this point, it is necessary to criticise the fact that such responsibilisation efforts are based on the assumption that individuals have a great degree of freedom in their actions and could act differently (in this case more sustainably) without much effort. This largely ignores the problem that individuals are often "locked into" non-sustainable structures—this is also referred to as "*lock-in*" (Unruh 2000)—and non-sustainable action thus almost always represents the simpler, more obvious and structurally supported option for action (Hinton & Goodman 2010) (→ chap. 7 on sustainable consumption). For example, a high level of unsustainable individual motorised transport is structurally promoted and stabilised by, among other things, correspondingly designed infrastructures (e.g., shopping centres with large parking facilities on the outskirts of cities and in industrial areas) and legal regulations (e.g., rules that stipulate how many parking spaces must be provided on or near new buildings or tax deductions for commuters who use their own cars).

What students can take away from this chapter:

- Knowledge about the theoretical basis of the conceptualisation of environmental awareness
- Knowledge about the empirical assessment of environmental awareness
- An understanding of the complex empirical relationship between environmental awareness and corresponding actions
- An understanding of the connection between different conceptions of nature and social environments (Cultural Theory)

Recommended reading

Ajzen, I., 1991: The theory of planned behavior. *Basic article summarising the theory of planned behaviour as one of the central theories of modern attitudinal and behavioural research.*

Douglas, M. & A.B. Wildavsky, 1982: Risk and culture. An essay on the selection of technological and environmental dangers. *Classic essay on how environmental and risk perception is culturally influenced and a foundational text of Cultural Theory. The grid-group scheme can be seen here in its basic form – it was elaborated even more clearly in later publications.*

Dunlap, R.E. & K.D. van Liere, 1978: The New Environmental Paradigm: A proposed measuring instrument and preliminary results. *Classic article about empirically oriented*

environmental sociology with a particular focus on environmental awareness research. It presents a new empirical instrument for measuring environmental awareness, which was further developed a good two decades later in the article below.

Shove, E., 2010: Beyond the ABC: Climate change policy and theories of social change. *Pointed practical and theoretical critique of attitudinal and behavioural research that identifies the key weaknesses of this strand of research in the field of environmental action.*

Thompson, M., R.J. Ellis & A.B. Wildavsky, 1990: Cultural theory. *Comprehensive overview of Cultural Theory with a systematic presentation and explanation of the grid-group scheme.*

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