Chapter 7
Attitudes and Environmental Citizenship

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7.1 Discourses on Environmental Citizenship

Environmental Citizenship (EC) is usually defined as a citizenship driven by green ideas which result in environmentally friendly actions (see, e.g. Dobson and Bell 2006:23–24). Green political theory sees Environmental Citizenship as an important element in transition to sustainability (Barry 2002). In this context, an expanded view on citizenship is needed to achieve positive outcomes for the environment by way of personal lifestyle changes and/or citizen participation in environmental decision-making (Schild 2016), and some researchers see environmental education (EE) as a way to cultivate Environmental Citizenship.

The personal duty approach or lifestyle approach argues that each individual has the responsibility to take actions that protect the environment while also claiming rights to environmental goods (Schild 2016). Another approach claims that both individual and collective actions are needed to achieve Environmental Citizenship

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A. Ch. Hadjichambis et al. (eds.), *Conceptualizing Environmental Citizenship for 21st Century Education*, Environmental Discourses in Science Education 4,
https://doi.org/10.1007/978-3-030-20249-1_7

and recommends community building within local context and place-based education as a means towards cultivating Environmental Citizenship (Lubell 2002; Sverker and Matti 2010).

This means that the individual-level analysis of Environmental Citizenship has to be complemented by a more context-related view on the concept. In the following, we will define our key concept (environmental attitudes (EA)), analyse the relationship of environmental attitudes and values, present empirical research on environmental attitudes with special focus on measurement methods and finally summarise on how attitudes can develop.

7.2 Environmental Attitudes

A first definition of the concept of attitude was proposed by Allport in 1935 in the *Handbook of Social Psychology* (Murchinson 1935: 798–844). In his opinion, attitudes represent 'the predispositions learned to react with consistency to an object or class of objects in a favourable or unfavourable manner'. From this unanimously accepted definition, it is important to emphasise that attitudes are not instinctive but learned. Also, attitudes are predispositions for manifestations of a certain behaviour, and the answers are oriented positively or negatively and are also lasting or (according to newer research as) at least stable (van Harreveld and van der Pligt 2004; Betsch 2011). A general and common definition of attitude is from Breckler (1984). According to him, an attitude is a latent mental construct towards an abstract or concrete object and has three components: (1) the affective component indicating a person's feelings about the attitude object; (2) the behavioural or conative component describing the way the attitude influences a person's behaviour; and (3) the cognitive component, a person's belief/knowledge about an attitude object. Although some attitudes may arise partly from genetic sources, most attitudes are primarily learned (Baron and Byrne 1994), and attitudes formed through direct experiences are stronger than those formed from listening to or observing others (Fazio et al. 1982).

Other characteristics of attitudes that have been discussed in literature are the intensity (Eagly and Chaiken 1993), the centrality of the attitudes, the degree of differentiation (also called strength of the attitude) and the specificity of the attitudes.

- Intensity is the power of the affective component. The more an attitude approaches one of the extreme poles of a 'favourable–unfavourable' or 'positive–negative' bipolar scale, the greater its intensity.
- Centrality refers to the position of an attitude in the whole of the elements that characterise an individual: social belonging, values, aptitudes, etc.
- The degree of differentiation of beliefs is the number of beliefs that are present in the attitude. The lower the number of convictions, the more attitudes can be changed.

- Specificity or generality is the way in which an attitude towards an object or a whole category of objects is oriented. For example, we can develop a negative attitude towards a particular brand of soft drinks or all brands of soft drinks.

Milfont and Duckitt (2010) define environmental attitudes (EA) as a psychological tendency expressed by evaluating the natural environment with some degree of favour or disfavour. There are hundreds of EA measures available based on different conceptual and theoretical frameworks. The most popular ones are addressed later in this chapter.

A report on the development of civic attitudes across Europe found that there are two well-definable factors influencing students' civic outcomes: an open classroom climate and students' active classroom participation in democratic activities. Along with a personal and social background, civic and citizenship knowledge has influence on civic attitudes (Blaskó et al. 2018: 11–15).

7.3 Environmental Values

Research on the way people relate to the environment uses different concepts: 'value orientations', 'human–nature relationships' and 'visions of nature' are the words most often encountered in the literature focusing on the relation between humans and the environment. These concepts inform and influence more specific attitudes towards nature and/or the environment. Nevertheless, the concepts used in attitudinal research are not to be used synonymously with each other as they address different perspectives on the ways people relate to the environment. Some of these concepts are derived from theory, while others have an empirical basis or have been refined by large-scale surveys (Bauer 2016).

Civic attitudes are mainly discussed in the context of civic knowledge, attitudes towards democracy and equality, sense of identity, interest in public and political issues and in and out of school engagement. The International Civic and Citizenship Education Study collected data and gave an in-depth analysis of the factors influencing civic attitudes (see, e.g. Blaskó et al. 2018).

7.3.1 Values

Values can be defined as the criteria people use to justify actions and to evaluate people and events (Schwartz 2006). Values are more general than attitudes and are known to influence attitudes and actions in different domains. The theory of basic human values postulates that in all societies a distinction can be drawn between 10 basic values (power, achievement, hedonism, stimulation, self-direction, universalism, benevolence, tradition, conformity and security; Schwartz 1992). Within the basic human value of 'universalism', Schwartz and Boehnke (2004) identified the

subtypes ‘nature concern’ and ‘social concern’ (Bauer 2016). The subtype ‘nature concern’ can be described as including ideas concerning ‘unity with nature’, ‘protecting the environment’ and a ‘world of beauty’ and can be seen as a basic human value with different dimensions. In the empirical literature on protected areas, ‘human–nature relationship’ is used as a term for this value. The human–nature relationship, with its different dimensions (e.g. biocentric, ecocentric, biophobic), influences the more concrete attitudes.

7.3.2 Basic Environmental Value Orientations

There are some studies that address the relationship between the general public and nature, and many of these result in typologies of value orientations that differ in respect of types, focus (e.g. the feeling towards nature or the quality of the relationship) and content. Wilson (1993) defines two elementary value orientations that focus on the feelings of humans towards nature: biophilia, the love of all that lives and its antithesis and biophobia, the tendency for people to be afraid of nature.

Stern and Dietz (1994) define three basic environmental value sets that describe the relationship: the egoistic, the altruistic and the biospheric value orientations. And Thompson and Barton (1994) proposed an anthropocentric attitude type, an ecocentric attitude type and an environmentally apathetic type. Kaltenborn and Bjerke (2002) found that the anthropocentric value orientation correlated positively with a preference for farmlands, while the ecocentric orientation correlated with a preference for wild lands (Schultz et al. 2004; Swart and Van Der Windt 2005; Stenmark 2002).

In the empirical literature, ‘human–nature relationship’ is often used as a synonym for ‘nature concern’ or other environmental values (Bauer 2016). Especially relevant within our context is the typology of Kellert (1980, 1993). On the basis of a survey concerning attitudes towards wildlife, Kellert makes assumptions concerning the general human–nature relationship with nine dimensions: (1) the utilitarian dimension, (2) the naturalistic dimension, (3) the ecological scientific dimension, (4) the aesthetic dimension, (5) the symbolic dimension, (6) the humanistic dimension, (7) the moralistic dimension, (8) the dominating dimension and (9) the negative dimension.

In these dimensions, the concepts of biophilia and its converse, biophobia, are clearly apparent, although not all of Kellert’s dimensions can be assigned to the two concepts. The dimensions reflect the tendency to consider specific values as being especially relevant, and the human–nature relationship of a person can be described by more than one of the dimensions. Further exploration of human–nature relationship types (e.g. Flint et al. 2013) has led to an impressive variety of different typologies within the last 15 years.

7.4 Environmental Citizenship in Empirical Research

Environmental Citizenship has been conceptualised as part of pro-environmental behaviour (PEB) in some empirical studies: Larson, Stedman, Cooper, Decker (2015) examined the multidimensional structure of pro-environmental behaviour (PEB) and developed a 13-item PEB scale. Confirmatory factor analysis identified four key PEB domains: conservation lifestyle behaviours (e.g. household actions in the private sphere), social environmentalism (e.g. peer interactions and group membership), EC (e.g. civic engagement in the policy arena) and land stewardship (e.g. support for wildlife and habitat conservation).

Another topic that has generated interest is the civic engagement from non-activists and activists. Terms like Environmental Citizenship have been used to refer to pro-environmental actions in the sociopolitical arena, including actions such as signing petitions, writing letters, donating money to conservation causes or conscientiously voting to support pro-environmental causes (Cottrell 2003; Oreg and Katz-Gerro 2006; Schultz et al. 2004; Sia et al. 1986; Stern 2000). Social behaviours such as involvement in an environmental group or participation in a demonstration/protest related to environmental issues are also frequently associated with environmental activism (Fielding et al. 2008; Schultz et al. 2004; Stern et al. 1999). Less intensive forms of social interaction, including various forms of pro-environmental persuasion (Schultz et al. 2004; Sia et al. 1986) and, in some cases, simply talking to or educating others about environmental issues (Vaske and Kobrin 2001; Kaiser 1998) can also be found in literature. Collectively, through their influence on formal policy and decision-making and informal social norms, these actions may have a powerful influence on the trajectory of human–environment interactions. Effective measures of PEB should therefore account for these various forms of civic engagement (Larson et al. 2015).

7.5 Research on Link Between Environmental Values, Attitudes and Behaviour

There is usually a weak correlation between attitudes and behaviour (also true for environmental attitudes, see Kormos and Gifford 2014), but specific attitudes are known to be much better predictors of behaviour than general ones. In contrast to these findings, recent research shows a strong connection between individuals' relationship with nature and their environmental behaviour (EB) and decision-making (Braito et al. 2017; Muhar et al. 2017). Similarly, van der Werff, Steg and Keizer (2013) analysed the biospheric values and environmental self-identities that are considered to be important antecedents of environmental preferences, intentions and behaviour. Results show that biospheric values are related to environmental self-identity, even when measured months before. Moreover, the results indicated that biospheric values are related to preferences, intentions and behaviour via one's

environmental self-identity. This suggests that values need to be linked to the self in order to be influential in choices made. Similarly, research by Martin and Czellar (2017) proposed that individual environmental identity could play a role in the formation of a biospheric value orientation. Their findings showed that stronger (vs. weaker) self-nature connections in individuals are related to stronger (vs. weaker) biospheric value orientations, which in turn are associated with various forms of sustainable behaviour.

Schild (2018) analysed the motivations and outcomes of civic recreation – recreation-based volunteering on the human–nature relationship. She found six dimensions of volunteer motivation: civic engagement, environmental values, identity/enduring involvement, social/career networking, personal learning and obligation. Individuals were most motivated by civic engagement and environmental values, and those individuals who were motivated by identity/enduring involvement were more likely to have a higher level of volunteer engagement, whereas individuals motivated out of obligation had the lowest volunteer engagement. The results suggest civic recreation has the potential to create advocates for the environment, Environmental Citizens, as the individuals report developing a stronger connection to nature, enhanced self-efficacy, self-enhancement, social connections, improved management and increased civic engagement.

In research on children's EA and environmental behaviour (EB), Evans et al. (2007) did not find a significant relationship between EA and EB in children aged 6–8 years from the United States, Austria, Mexico and Spain, when using a reliable instrument developed to assess these constructs in young children. Difficulties in assessing environmental behaviours were hypothesised to explain the non-significant EB findings, and the authors suggest that a stronger link between EA and EB might be found in more mature children.

On the other hand, many other studies support the predictive role of EA when explaining EB (e.g. Collado and Corraliza 2015; Cheng and Monroe 2012; Grønhøj and Thøgersen 2017). These studies report that other factors such as 'fascination' (Kaplan 1995), knowledge of the environment or perceived self-efficacy/locus of control (Cheng and Monroe 2012; Blackwell, undated) play a role when predicting EB through EA. In the study of Cheng and Monroe (2012), children's previous experience in nature had a direct and indirect positive effect on their EB through EA. Other variables to consider seem to be frequency of contact with nature (FCN) (Hinds and Sparks 2008; Thompson et al. 2008; Wells and Lekies 2006), the type of daily experience in nature (Gifford and Nilsson 2014) and parents' values towards nature (Cheng and Monroe 2012; Grønhøj and Thøgersen 2017; Evans et al. 2018) as well as gender differences (Corraliza et al. 2013).

7.6 Measuring Environmental Attitudes

Although there is a large number of different EA measures, the one that is most used is the New Environmental Paradigm (NEP) Scale (Dunlap and Van Liere 1978; Dunlap et al. 2000). It examines multiple expressions of concern, such as beliefs, attitudes, intentions and behaviours and also examines concerns about various environmental topics, such as pollution and natural resources. The NEP Scale is used to measure general beliefs about the relationship of human beings to the environment. The universal nature of the beliefs measured by the NEP Scale may explain why it has become the most widely used measure of EA since its publication in 1978 (Dunlap and Jones 2002, 2003; Stern et al. 1995).

The development of the NEP Scale was the authors' recognition that it was possible to identify an emerging ecocentric system of beliefs (i.e. humans are seen as being part of natural systems and constrained by that fact) that challenged the dominant anthropocentric system of beliefs current in Western societies (i.e. humans are seen as being independent from, and superior to, other organisms in nature) (see also Sect. 7.2 above). These two systems were, respectively, named the New Environmental Paradigm (NEP) and the Dominant Social Paradigm (DSP). It is worth noting that the NEP and DSP are theoretically related to Schwartz's (1999) harmony–mastery cultural value dimension. This issue leaves societies with two solutions in order to regulate human activity: either to fit harmoniously into the world and try to preserve it (harmony values or the NEP worldview) or to exploit and change the world (mastery values or the DSP worldview). There are several different versions of the NEP Scale. The revised NEP Scale is currently the most used scale for assessing EA and consists of 15 items.

Milfont and Duckitt (2010) developed the Environmental Attitudes Inventory (EAI) in which the multidimensional and hierarchical nature of EA is considered. The EAI has 12 specific scales that capture the main facets measured by previous research. The 12 factors were established through confirmatory factor analyses, and the EAI scales are shown to be unidimensional scales with high internal consistency, homogeneity and high test–retest reliability and also to be largely free from social desirability.

Bogner prepared the two-factor Model of Environmental Values (2-MEV) using the data of a survey conducted among German secondary school pupils (Bogner and Wiseman 2006: 247). The model, developed in earlier papers, is based on two independent factors: utilisation (anthropocentric view) and preservation (biocentric view). They argue that their scale may help to measure the outcomes of EE (Bogner and Wiseman 2006: 253).

7.7 How Do Environmental Attitudes Develop? What Are the Factors Influencing EA?

There are many studies analysing the formation of EA. Some of the studies focus on children, and some are retrospective and focus on adults asking them about their nature contact during childhood.

7.7.1 Studies Focusing on Children

Collado et al. (2013) reported on a study in Spain comparing two types of nature camps, one with EE and one without EE, and their influence on emotional affinity towards nature (EAN), ecological beliefs and willingness to show ecological behaviour including Environmental Citizenship behaviour. The study found no differences between nature camps with and without EE but a difference between camps in a natural environment and in an urban environment: the intention for Environmental Citizenship behaviour increased in those children at the nature camp compared to those at the urban camp. This increase was mediated by the increases in EAN and in ecological beliefs. In the United Kingdom, Turtle, Convery and Convery (2015) compared the EA of children aged 8–11 years who participated in forest school programmes and those who did not. The results indicate that those taking part in the programme had more pronounced EA (see also Kamber 1999).

Another set of studies is looking at different living conditions or long-lasting interventions (e.g. long-term forest school programmes, green vs. grey schoolyard, rural vs. urban surroundings). Collado et al. (2014) analysed the association between FCN and EA and EB in three different settings providing different daily experiences of nature: (a) work-related experience in a rural area, (b) non-work-related experience in a rural area and (c) non-work-related experience in an urban area. The study found a negative direct relation between FCN and EB for the work-related experiences in the rural area. The results suggest that the valuation of the experience might be relevant for the effect on pro-environmental attitudes and behaviour. Similar results were reported by other authors, suggesting that unsatisfactory experiences could have a negative impact on the formation of EB (e.g. Wells and Lekies 2006) (see also Collado and Corraliza (2015).

In their study with approximately 1500 children in the fourth grade of public schools in Florida, USA, Cheng and Monroe (2012) found that the children's previous experiences in nature influenced their interest in performing EB. Other factors contributing to the EB were the family values towards nature and the perceived control of the children/their feeling of self-efficacy. Additionally, the results of the study found a significant correlation between children's connection to nature and the amount of nature near their homes, leading to hypothesise that nearby nature could help develop a strong relation to the environment. Similarly, Davis et al.

(2006) found that time spent outdoors was associated with the development of positive values about nature (see also Evans et al. 2018).

7.7.2 Retrospective Studies

We analysed studies focused on adults that asked them about their nature contact during childhood. Wells and Lekies (2006) surveyed 2000 adults aged 18–90 years in the United States and asked them about their experiences in nature before the age of 11. Activities in wild nature (e.g. hunting, camping) and in domestic nature (e.g. gardening) were related to EA and EB. The more nature experiences people reported, the more likely it was that they had a positive attitude towards nature and the environment, which could further influence pro-environmental behaviour. Interestingly, the study revealed that frequency of exposure to nature had both a direct effect on EB and an indirect one, mediated by EA.

The findings of retrospective studies lead to the hypothesis that significant life experiences during childhood could be relevant for adults' career decisions. In review articles and studies with environmentalists in Norway and the United States (Chawla 1999, 2007), the role of the time spent outdoors, the positive experiences in natural environments, the family values and role models (e.g. family members) were all found to be important for the career choices. Attari et al. (2009) analysed three different methods of reaching energy-related behaviour: (1) voluntary actions vs. regulations, (2) the reason for the restrictions: environmental or national security and (3) sociodemographic characteristics. They conducted a non-representative survey among US citizens about what tools would encourage them to change from a SUV to a smaller car and asked them to reason their choice.

Their results show that participants preferred either voluntary actions or soft regulations over hard regulations to reach the more environmentally friendly behaviour but had no significant preference between voluntary actions and soft regulations. It also turned out that the framing of the problems had no significant effect on the participants' openness towards voluntary actions or regulations. Environmental attitudes (measured by the NEP Scale) had a strong positive relationship with support for regulatory strategies intended to change the behaviours in question. They also found a gender effect as women were more likely to support voluntary actions. The loss of personal freedom was frequently mentioned as a reason for saying no to hard regulations (Attari et al. 2009:1).

7.8 How Can Attitudes Be Changed?

Quite a lot of research analysed what influences behavioural change, as we have shown above. Some authors, for example, Dobson (2007), argue that long-lasting behavioural change can be reached by attitude change, but the core of it would be

'environmental or ecological citizenship' (Dobson 2007: 297). According to the referred paper, Environmental Citizenship and EA both have a long-term effect on pro-environmental behaviour. There are many partly contradicting research results on different ways to influence environmental attitudes.

Information campaigns often used by environmental NGOs could be used to strengthen positive attitudes of those in favour of environmental protection. However, from former research, we know that information campaigns would be inappropriate for influencing the attitudes of people opposed to nature protection/environmental actions, etc. (Petty and Cacioppo 1986). The attitudes of those having a negative attitude could be best changed to be more accepting by using role models (well-known politicians, actors) who communicate their dedication to environmental protection.

Other research found that individual differences in values moderated the persuasive power of the different appeals and that appeals that matched the recipients' values were more persuasive than the combined appeal (Van den Broek et al. 2017). These findings also suggest that environmental campaigns aimed to induce behavioural change could benefit from tailoring persuasive messages rather than employing a one-size-fits-all message.

The research of Steg et al. (2014) showed that hedonic, egoistic, altruistic and biospheric values can be distinguished empirically and that hedonic values appeared to be significantly and negatively related to a range of environmentally relevant attitudes, preferences and behaviours. This suggests that it is indeed important to include hedonic values in environmental studies and that interventions aimed to promote pro-environmental actions should consider hedonic consequences of actions, as these may be important barriers for behaviour change.

In Klöckner's (2013) comprehensive model of determinants of individual environmentally relevant behaviour, the intentions to act, the perceived behavioural control and habits were identified as direct predictors of behaviour. Intentions are predicted by attitudes, personal and social norms and perceived behavioural control. Based on the model, interventions to change behaviour need to not only include attitude campaigns but also focus on de-habitualising behaviour, strengthening the social support and increasing self-efficacy by concrete information on how to act. Value-based interventions have only an indirect effect.

In a qualitative study, Fischer et al. (2012) analysed how attitudes, climate change perception and energy use are interrelated and found that people tend to hope that technological change will solve environmental problems, so there is no need for a change in the own energy-related behaviour. However, Manfredo et al. (2017) argue that values are not only motivational goals people hold but are also ideas that are deeply embedded in society's material culture, collective behaviours, traditions and institutions that define groups, organisations and societies and are typically stable across generations. The authors argue that value shifts for conservation are unlikely to be effective and propose that innovative conservation strategies for working within existing value structures would be more valuable.

Social influence has a medium impact on environmental behaviour according to Abrahamse and Steg (2013), who conducted a meta-analysis of several researches: the heterogeneity of the results was the effect of three groups of factors. The first type of factors was the character of social influence: block leader effect, public commitment, group feedback, comparative feedback and the use of social norms. In the second type of research, the target group changed: whether they were students, employees, households, farmers or guests of a hotel. In the third type, the analysed behaviour varied (the effect of environment of the analysed behaviour). According to them, this latter case had no significant effect of social influence on the environmental behaviour.

There is not much research on how Environmental Citizenship can be promoted; most of the papers argue that formal and non-formal education may have such a role (Dobson 2007: 283; Blaskó et al. 2018). Further research shall explore how Environmental Citizenship can be made more widespread among adults.

7.9 Concluding Remarks

In this chapter, we reviewed the most important literature on environmental attitude and analysed the relationship between environmental behaviour, environmental values and environmental attitudes. We also discussed how environmental attitudes can be changed and how they affect environmental behaviour. We found that while in general there is often a weak relationship between attitudes and behaviour, in the case of environmental attitudes and behaviour, there is a significant relationship according to the reviewed papers. Analysing the factors influencing the change of environmental attitudes and behaviour, the literature argued that experiences from childhood and early life periods and social influence and voluntary actions have a strong effect. Earlier researches also argued that the perception of environmental problems or climate change does not necessarily affect pro-environmental behaviour in a positive manner. Most of the reviewed research on factors influencing environmental attitudes and behaviour does not measure the long-term effects, especially, whether attitudes, values and behaviours changed on the longer term. Thus, future research shall focus also on the long-term effects of the different factors and also on the interrelatedness of the different influencing factors.

Acknowledgements This chapter is based on work from COST Action ENEC – European Network for Environmental Citizenship (CA16229) supported by COST (European Cooperation in Science and Technology).

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