

14 Values and pro-environmental behaviour

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14.1 INTRODUCTION

How important is protecting the environment for you? Most of you would probably respond that environmental protection is very important. Now, consider the following question: What actions do you take to protect the environment? You probably engage in many actions that threaten environmental quality. You may be a member of an environmental organisation, but you may not have chosen to take a cold or short shower this morning to save energy and water or to commute by bus or bicycle instead of by car to reduce carbon dioxide emissions. What actions reflect your true environmental values? When and how do you act or fail to act upon your values? In this chapter we try to answer these important questions. We provide a definition and discuss features of values and value theories. We also explain which values are important for environmental attitudes and behaviours, and how people can be stimulated to act upon their 'pro-environmental' values. Finally, we describe how values differ from related concepts that are used in environmental psychological research and how value research can be used in an applied context.

14.2 VALUES

Values, such as freedom, equality and protecting the environment, are desirable trans-situational goals that vary in importance and serve as guiding principles in the life of a person or other social entities (Schwartz, 1992). This definition includes three key features of values. First, values include beliefs about the desirability or undesirability of certain end-states. Second, values are rather abstract constructs and therefore transcend specific situations. This is the main difference from the definition of 'over-arching goals' as explained in Chapter 12. A goal refers to a target that an individual strives hard to reach in his or her life. It is thus understood that goals remain a target until they are reached or achieved, while values are there to be adhered to on a longer term. Third, values serve as guiding principles for the evaluation of people and events and for behaviours. Values are ordered in a system of value priorities (i.e. they vary in importance), which implies that when competing values are activated in a situation, choices are based on the value that is considered most important.

There are important advantages to using values in environmental behaviour research. First, the total number of values is relatively small compared with the countless behaviour-specific beliefs, attitudes and norms. Consequently, values provide an economically efficient instrument for describing and explaining

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similarities and differences among persons, groups, nations and cultures. Second, the abstractness of values allows for predictions in almost all contexts. Values influence more specific attitudes and behaviours (Seligman & Katz, 1996). In the context of new or emergent attitude objects, which is very common in the environmental field, values are assumed to be even more important to predict attitudes and behaviours because they provide a stable and relatively enduring basis for attitudes and behaviours (Stern, Dietz, Kalof, & Guagnano, 1995). Furthermore, the causal influence of pro-environmental values on environmental behaviours has been reliably documented (Thøgersen & Ölander, 2002). Hence, values are a relevant starting point for changing behaviours. Through influencing or activating certain values, it is possible to influence a range of environmental behaviour-specific beliefs, norms, intentions and behaviours (Thøgersen & Ölander, 2006).

14.3 VALUE THEORIES

Below, we first discuss two common value theories: the theory on **social value orientations** (Messick & McClintock, 1968) and **Schwartz's value theory** (Schwartz, 1992). We then give a brief overview of emerging insights on biospheric values.

Social value orientations

Social value orientations (SVO), originating from social dilemma research (see Chapter 17), reflect the extent to which individuals care about their own and others' payoffs in a social dilemma (Messick & McClintock, 1968). An often made distinction is between 'cooperatives', 'individualists' and 'competitors'. People with a cooperative SVO are motivated by a desire to maximise joint outcomes, people with an individualistic SVO by a desire to maximise their own outcome with no concern for that of others, and people with a competitive SVO by a desire to maximise their own outcome relative to that of others. Most studies only distinguish between a pro-self value orientation, in which case people are particularly concerned with their own outcomes, and a pro-social value orientation, in which people particularly care about the outcomes for other people or the community. A person's SVO is usually assessed by means of the **decomposed game technique** (Liebrand, 1984) in which participants choose between options that offer points to themselves and another person (see Box 14.1).

Empirical evidence on relationships between SVO and environmental beliefs, norms, and behaviour is mixed. Some studies found that pro-social values are positively and pro-self values are negatively related to pro-environmental intentions (e.g. Joireman, Lasane, Bennett, Richards, & Solaimani, 2001), while SVO appeared not to be significantly related to preferences related to pro-environmental behaviours (e.g. Joireman, Van Lange & Van Vugt, 2004).

BOX 14.1 DECOMPOSED GAME TECHNIQUE

In a decomposed game, participants choose between options that offer points to themselves and another person. Each option corresponds with a different social value orientation (SVO). In our example, we try to distinct a cooperative SVO from an individualistic and competitive one.

Example of a game:

	<i>Option A</i>	<i>Option B</i>	<i>Option C</i>
Points to self	500	600	500
Points to other	500	200	0
	<i>Cooperator</i>	<i>Individualist</i>	<i>Competitor</i>

A cooperator would choose Option A, as it maximises joint gain. An individualist would choose Option B, as it maximises own interests, and a competitor would choose Option C, as it maximises one's relative gain.

Schwartz's value theory

In Schwartz's value theory (Schwartz, 1992, 1994), a general and comprehensive taxonomy of 56 values is proposed. Respondents taking Schwartz's value survey are requested to rate each value item on a 9-point scale measuring their importance as 'a guiding principle in their life'. Based on survey data from 44 countries, Schwartz identified ten motivational types of values (see Table 14.1 for a description of some examples of the motivational types). The 56 values could be plotted in a two-dimensional space in which the different motivational value types could be identified as separate clusters of values, which together form a **circumplex** structure (see Figure 14.1). The closer value types and individual values are to each other in the circumplex structure, the more compatible they are. The further away values are from each other, the more incompatible they are. For example, universalism values (e.g. broad-minded, equality, a world of beauty) are closely related to benevolence values, such as helpful, forgiving or honest, but are more likely to conflict with values that express achievement values (e.g. successful, capable, ambitious). Thus, in Schwartz's theory scores on the importance of values have little meaning on their own, but reflect the relative priorities of values compared to other values, and their motivational content is revealed more clearly when forming value clusters or value orientations (Schwartz, 1992).

Table 14.1 Definitions of four of the motivational types expressed in Schwartz's (1994) value theory.

Motivational type	Definition	Examples of values
Power	Social status and prestige, control or dominance over people and resources	<ul style="list-style-type: none"> - Social power - Wealth - Authority
Universalism	Understanding, appreciation, tolerance and protection for the welfare of all people and for nature	<ul style="list-style-type: none"> - Social justice - Broadminded - Protecting the environment - Equality
Benevolence	Preservation and enhancement of the welfare of people with whom one is in frequent personal contact	<ul style="list-style-type: none"> - Helpful - Forgiving - Honest
Tradition	Respect, commitment and acceptance of the customs and ideas that traditional culture or religion impose on the self	<ul style="list-style-type: none"> - Accepting my portion in life - Devout - Respect for tradition

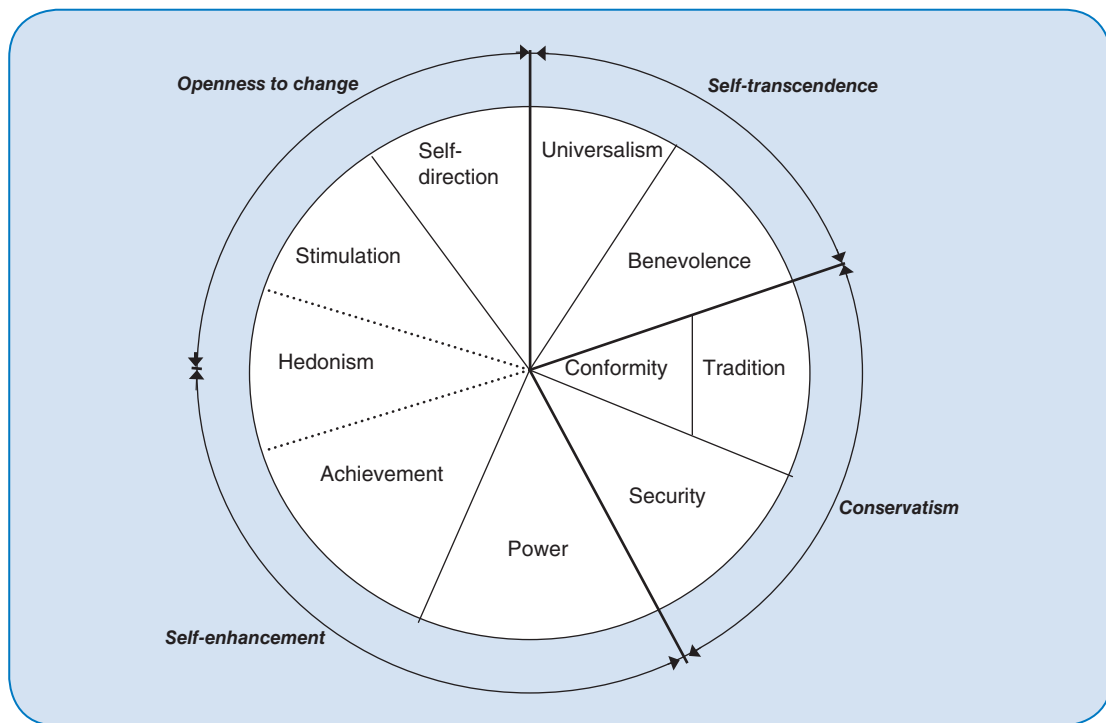


Figure 14.1 The motivational types of values placed into a two dimensional space. From Bilsky & Schwartz, 1994. Reproduced by permission of Academic Press Inc.

The first dimension in Schwartz's value structure is openness to change versus conservatism, which distinguishes values that stress openness to new things and ideas, such as self-direction and stimulation, from values that emphasise tradition and conformity. The second dimension distinguishes values that stress the interests of others, society and nature, such as universalism and benevolence, from those that emphasise self-interest, such as power and achievement. This self-transcendence versus self-enhancement dimension is comparable to the distinction between pro-social (or **altruistic**) and pro-self (or **egoistic**) values discussed in the previous section. The postulated value clusters are universally found across countries and cultures (Schwartz, 1994). The self-enhancement versus self-transcendence dimension appears to be particularly important when explaining environmental beliefs, norms and behaviours (e.g. Stern, Dietz, & Guagnano, 1998), probably because many pro-environmental behaviours require individuals to restrain egoistic tendencies (e.g. De Groot & Steg, 2008; Nordlund & Garvill, 2002).

Emergence of biospheric values

Various environmental psychologists have suggested that it is important to make a distinction between biospheric and altruistic values (De Groot & Steg, 2007). **Biospheric values** reflect a concern for the quality of nature and the environment for its own sake, and differ from altruistic values that reflect a concern with the welfare of other human beings. Both altruistic and biospheric values are likely to promote pro-environmental behaviour, because such actions generally benefit the well-being of others *and* the environment. However, altruistic and biospheric values may conflict in some situations, for example, when deciding to vote for a 'green' or a 'social' political party, or when choosing to buy fair trade or organic products.

Recent studies revealed that altruistic and biospheric values can indeed be distinguished empirically (De Groot & Steg, 2007, 2008). Altruistic and biospheric values are positively correlated, which is in line with Schwartz's value theory, as both reflect self-transcendence values. However, in most cases, biospheric values are more predictive of pro-environmental beliefs, norms and behaviours than are altruistic values (De Groot & Steg, 2007, 2008). Moreover, when pro-environmental choices affect altruistic and biospheric values differently, they may contribute to the prediction of pro-environmental behaviours in a unique way, and sometimes even in an opposite direction (see Box 14.2).

So, three types of values seem particularly relevant to understanding pro-environmental beliefs, norms and behaviours: egoistic, altruistic and biospheric values (e.g. Stern, 2000). People who strongly endorse egoistic values will especially consider costs and benefits for them personally: when the perceived benefits exceed the perceived costs they will behave in a pro-environmental way and vice versa. People with strong altruistic values will base their decision to act pro-environmentally or not on perceived costs and benefits for other people or the community, while people who strongly endorse biospheric values will base their decision to act pro-environmentally or not mostly on the perceived costs and benefits for the ecosystem



BOX 14.2 BIOSPHERIC VALUES

De Groot and Steg (2008) examined whether egoistic, altruistic and biospheric values could be distinguished empirically by using an adapted value instrument based on Schwartz's (1994) value survey. They included a selection of values that belonged to the self-transcendence versus self-enhancement dimension of Schwartz's value theory, and included extra biospheric value items because these values were underrepresented in Schwartz's original value instrument.

Results of three studies provided support for the reliability and validity of the value instrument. Egoistic, altruistic and biospheric values could be distinguished empirically and the scales had sufficient internal consistency. In

most cases, egoistic values were negatively related to environmental beliefs and intentions, while biospheric and, to a lesser extent, altruistic values were positively related to environmental beliefs and intentions. As expected, altruistic and biospheric values were correlated, but predicted choices differently when participants were forced to choose between donating to an environmental or a humanitarian organisation: altruistically oriented people intended to donate more often to humanitarian organisations, while biospherically oriented people intended to donate more often to environmental organisations. Thus, altruistic and biospheric values seem to be differently related to intention when these values conflict.

as a whole. All three values may promote pro-environmental beliefs, norms and actions. For example, a person may reduce car use because she or he believes the costs are too high (i.e. egoistic), because it endangers the health of people (i.e. altruistic) or because it harms plants and animal species (i.e. biospheric). However, as with self-transcendent versus self-enhancement values, in general pro-environmental beliefs, norms and behaviours appear to be positively related to altruistic and biospheric values (i.e. self-transcendent dimension) and negatively to egoistic values (i.e. self-enhancement dimension; De Groot & Steg, 2008).

14.4 HOW VALUES AFFECT ENVIRONMENTAL BEHAVIOUR

The abstractness of values allows for a great deal of individual interpretation. What do we exactly mean by a value such as 'valuing the environment'? How should one act upon this value? A person endorsing this value may go on a holiday to the Galapagos to enjoy its magnificent nature and scenic views, but may also decide to not go on such a trip if he or she believes it will harm the local or global environment.

Thus, people can decide to do the exact opposite based on the same value. As a consequence, behaviour-specific attitudes and norms are generally better predictors of behaviour than are values (Eagly & Chaiken, 1993). Indeed, various studies showed that values mostly influence behaviour indirectly, via behaviour-specific beliefs, attitudes and norms (e.g. De Groot & Steg, 2007), although some studies have also reported direct relationships between values and behaviour.

Values are more influential when they are activated in a specific situation. It is possible to focus attention towards specific values and hereby increase their saliency, which can affect the way people prioritise their values in specific situations, and, consequently, the extent to which values influence attitudes and behaviours. One way to activate values that are central to the self is enhancing one's self-focus (Verplanken & Holland, 2002). Another way to promote value-congruent actions is by providing cognitive support for one's values, that is, by making sure that people can provide reasons for their values (Maio & Olson, 1998). Without cognitive support, people have difficulty generating counter-arguments against messages attacking an endorsed value, which may result in value-incongruent behaviour and even value change. Hence, activating biospheric values, linking these values to someone's self-concept and providing cognitive support for these values seem to be effective ways to promote pro-environmental behaviour.

14.5 RELATED CONCEPTS

In addition to values, a number of related psychological determinants of environmental behaviour have been distinguished in the environmental psychology literature, notably environmental concern, ecological worldviews and myths of nature.

Environmental concern is often described as a general attitude towards the environment (Fransson & Gärling, 1999), reflecting a personal evaluation of environmental issues. The various measures of environmental concern can be classified in terms of the number of issues covered (single versus multiple issues) and whether they capture a single or multiple expression(s) of concern (Dunlap & Jones, 2002). Some widely used instruments are multiple-topic, multiple-expression instruments based on the classical tripartite conceptualisation of attitude as consisting of affective, cognitive and conative (or instinctive) dimensions (e.g. Weigel & Weigel's [1978] environmental concern scale). Other measures aim at uncovering the salience of environmental problems in the population, often in comparison with other social problems (e.g. Dunlap, 2002). Irrespective of the measure used, environmental concern is typically found to be positively related to pro-environmental intentions and behaviour, although relationships are often weak (e.g. Thøgersen & Ölander, 2006).

Ecological worldviews reflect fundamental beliefs on the relationship between humans and the natural environment (Dunlap, Van Liere, Mertig, & Jones, 2000; see also Chapter 18). A popular measure of ecological worldviews is the new environmental (or ecological) paradigm (NEP): individuals who endorse the NEP believe

that humanity can easily upset the balance of nature, that there are limits to growth for human societies, and that humanity does not have the right to rule over the rest of nature. The NEP has been found to be positively (although weakly) related to pro-environmental intentions and behaviour (e.g. Dunlap et al., 2000).

Myths of nature reflect perceptions of environmental risks and preferred management strategies to control these risks (Steg & Vlek, 2009b). Four myths of nature are distinguished: nature benign, nature ephemeral, nature perverse/tolerant and nature capricious. Figure 14.2 provides a graphical representation of how environmental





	<p>Nature Capricious</p> <p>No particular view on nature</p> <p>Low environmental concern</p> <p>No obvious preferred management strategy</p>
	<p>Nature Tolerant</p> <p>Nature is seen as moderately vulnerable</p> <p>Average environmental concern</p> <p>Government regulation as preferred management strategy</p>
	<p>Nature Benign</p> <p>Nature is seen as robust and resilient</p> <p>Low environmental concern</p> <p>Free market and technology as preferred management strategy</p>
	<p>Nature Ephemeral</p> <p>Nature is seen as fragile and precarious</p> <p>High environmental concern</p> <p>Behaviour change as preferred management strategy</p>

Figure 14.2 Myths of nature. The line symbolises the landscape and the vulnerability of nature, the ball symbolises environmentally risky behaviour.

See Steg & Vlek (2009b) for a full description of the myths of nature and how they are applied in research.

risks are perceived in the different myths of nature and lists the main differences in beliefs between the myths of nature. The propositions of the theory, including the relationships with pro-environmental behaviour, were supported in empirical research (see Steg & Vlek, 2009b, for an overview).

Environmental concerns, worldviews and myths of nature are more specific than are values, because they focus on environmental issues only, while values focus on general overarching goals in life, including environmental, altruistic and egoistic concerns. Nevertheless, recent studies show that values are often more predictive of environmental behaviours than more specific, related concepts (Steg, De Groot, Dreijerink, Abrahamse, & Siero, 2011), perhaps because most people do not act out of environmental reasons only.

14.6 PRACTICAL RELEVANCE OF VALUE RESEARCH

Advertisers who design communication themes often use the knowledge of value research to promote pro-environmental behaviour. For example, the Danish bus company Midttrafik released a campaign in 2010, 'be a World saver', emphasising the positive climate consequences of taking the bus instead of the car. This consequence is typically regarded as important for someone who endorses biospheric values. By focusing on these biospheric consequences, it is assumed that biospheric values will be activated and become more salient relative to other values, thus strengthening an argument, or a justification, for taking the bus.

Because individuals differ in their value priorities, values are also used to segment the population into relatively homogeneous groups that can be targeted by tailored messages or other forms of interventions (Kamakura & Mazzon, 1991; see also Chapter 21). From this perspective, Midttrafik's campaign may be perceived as a campaign targeting a particular segment: those giving high priority to altruistic or biospheric values. In order to also persuade a segment of travellers with an egoistic value orientation to take the bus, Midttrafik might run other campaigns emphasising attributes on which the bus compares favourably to the car, such as the possibility to relax or read, or meet interesting people.

14.7 SUMMARY

In this chapter we have discussed the role of values in predicting and explaining pro-environmental behaviour. We have first defined values as abstract, overarching goals

that vary in importance and serve as guiding principles in someone's life. We have also argued that values provide a useful tool in research on the psychological determinants of environmental behaviour, because they are easy to measure, stable and widely applicable. In the second part of this chapter, we have reviewed different value theories and typologies along with empirical research on the predictiveness of different value concepts for pro-environmental behaviour. An important conclusion from this review is that biospheric and altruistic (or self-transcendent) values tend to be positively related to pro-environmental behaviour, whereas egoistic (or self-enhancement) values tend to be negatively related to environmental behaviour. However, in general, people will be more inclined to act upon biospheric and altruistic values when these values are activated in a specific context, linked to their self-concept, and supported by cognitive reasons. Finally, we have discussed how values differ from similar concepts such as environmental concern, worldviews and myths of nature, and illustrated how values may be used in applied settings to identify which costs and benefits should be focused on when promoting pro-environmental behaviour for different groups of people.

GLOSSARY

- altruistic values** A value type reflecting the concern for society and other people (sometimes also referred to as pro-social or self-transcendent values).
- biospheric values** A value type reflecting the concern with the quality of nature and the environment for its own sake.
- circumplex** A set of variables which, when plotted as vectors in a two-dimensional space, fall in a circular pattern.
- decomposed game technique** An experimental instrument developed by social psychologists to assess one's social value orientation.
- ecological worldviews** Beliefs regarding humanity's ability to upset the balance of nature, the existence of limits to growth and rejecting humanity's right to rule over the rest of nature.
- egoistic values** A value type reflecting a concern for yourself (sometimes also referred to as pro-self or self-enhancement values).
- environmental concern** The extent to which an individual is concerned about local and/or global environmental problems.
- myths of nature** Perceptions of environmental risks and preferred management strategies to control these risks.
- Schwartz's value theory** A value theory that describes a universal structure of values enabling us to examine values based on their priority compared with other values in individuals and societies.
- social value orientations (SVO)** Value orientations based on the extent to which individuals care about own payoffs and payoffs of others in a social dilemma situation.
- value** A desirable transsituational goal that varies in importance and serves as a guiding principle in the life of a person or other social entity.

SUGGESTIONS FOR FURTHER READING

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REVIEW QUESTIONS

1. Explain the advantages and disadvantages of focusing on values in environmental psychological research.
2. Describe which values are important when explaining pro-environmental behaviours.
3. How can we use our current knowledge about values in applied research?
4. How do values differ from related determinants of environmental behaviour, such as environmental concerns or myths of nature?