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Can Engagement in Environmentally-Friendly Behavior Increase Well-Being?

13

Leonie Venhoeven, Linda Steg, and Jan Willem Bolderdijk

13.1 Introduction

The transition to a sustainable society is an important goal in the coming years. As defined in the Brundtland report, a sustainable society is one in which “the use of goods and services [...] respond to basic needs and bring a better quality of life, while minimizing the use of natural resources, toxic materials and emissions of waste and pollutants over the life cycle, so as not to jeopardize the needs of future generations” (Norwegian Ministry of the Environment 1994). To make a transition to such a society, individual behavior changes are needed (IPCC 2014), as they are an important driver of environmental change (DuNann Winter and Koger 2004; Gardner and Stern 2002; Gifford et al. 2011; Hackmann et al. 2014; Vlek and Steg 2007; Weaver et al. 2014).

As a sustainable society not only focuses on increasing the quality of the environment, but also includes increasing quality of life, one would expect individuals to be very willing to change their behavior accordingly. Although a better quality of life is a crucial part of Brundtland’s definition of sustainability, however, many seem to assume that engagement in sustainable or

environmentally-friendly behavior will have a negative impact on the individual quality of life or well-being of those who act in this way. Engagement in environmentally-friendly behavior may entail some level of discomfort – for example, taking a short shower or turning down the thermostat – or may involve giving up certain things – for example, not flying or decreasing meat consumption. Because of this, it is often assumed that people see acting in an environmentally-friendly way as “being asked to give up a modern, high-technology existence for an austere, bleak but needed substitute” (De Young 1990–1991, p. 216).

However, there is also a brighter view of sustainable or environmentally-friendly behavior. Several correlational studies show that people who engage in more environmentally-friendly behavior actually experience more well-being (Brown and Kasser 2005; Kasser and Sheldon 2002; Xiao and Li 2011). Furthermore, other research reveals that, overall, people associate environmentally-friendly behavior with positive emotions (Venhoeven et al., under review) and may experience feelings of “warm glow” after acting this way (Taufik et al. 2015). How can we explain that engagement in environmentally-friendly behavior seems to be both positively and negatively related to well-being? Is one of these options simply truer than the other, or is the story more complex? In this chapter, we discuss the relationship between environmentally-friendly

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behavior and well-being in more depth, and give several explanations for why a positive and negative relationship might exist.

13.2 Why Would Environmentally-Friendly Behavior Affect Well-being?

A possible explanation for why environmentally-friendly behavior seems to be both positively and negatively related to well-being can be found in the definition of well-being itself, and thereby in its related causes (Venhoeven et al. 2013). The well-being literature often makes a distinction between hedonic and eudaimonic well-being. The former concept generally refers to feelings of *pleasure*, while the latter refers to feelings of *meaning* (Deci and Ryan 2008). However, the idea that there are different contents of well-being has been challenged (Kashdan et al. 2008). Notably, it has been argued that rather than different *types* of well-being, there may be different *causes* of well-being. Behavior may contribute to a general feeling of well-being both because it is pleasurable and because it is meaningful to do. Applying this reasoning to environmentally-friendly behavior, both the pleasure associated with the behavior and the meaning of the behavior may lead to its contributing to or, under some circumstances, detracting from well-being.

13.2.1 Environmentally-Friendly Behavior and Pleasure

Although it is not assumed to be the first association people have with engagement in environmentally-friendly behavior, some types of environmental action can very well be perceived as pleasant to do. For example, some people enjoy riding their bicycle on a sunny day or perceive a train ride to be more comfortable than a flight with a low-cost airline. For these people, engagement in these activities thus not only benefits the environment, but also is inherently enjoyable.

However, not all environmentally-friendly behaviors are perceived to be more enjoyable than their environmentally-unfriendly counterparts, and many may even be perceived to be less

enjoyable. Turning down the thermostat on a cold winter day, waiting for the bus at a small, windy bus stop, or cycling in the rain may be considered environmentally-friendly but, at the same time, uncomfortable behavior. It is this association that may underlie the assumed negative relationship between engagement in environmentally-friendly behavior and well-being.

Being enjoyable or comfortable is thus not a defining part of environmentally-friendly behavior as such, but rather a byproduct of specific types of behavior. Some strategies therefore target increasing the pleasure aspect of specific environmentally-friendly behavior in order to stimulate engagement (Nordahl 2012; Volkswagen 2011). Examples are making travel by public transport more comfortable by working with taxi companies that bring passengers from the station to their final destination (<http://www.ns.nl/reizigers/producten/van-deur-tot-deur/ns-zonetaxi.html>), or transforming a bottle bank into an arcade to make separating glass a fun activity (Volkswagen 2011). However, as will be discussed later in the chapter, there may be some drawbacks of using this strategy to increase well-being associated with environmentally-friendly behavior. In the next section, therefore, we focus on meaning as a route to well-being. As we will argue next, this route may prove to be a way to strengthen the link between engagement in environmentally-friendly behavior and well-being *in general*, instead of focusing on specific behaviors like with pleasure, via a route that may still bring pleasure in the end.

13.2.2 Environmentally-Friendly Behavior and Meaning

As described above, pleasure is not inherent to engaging in all types of environmentally-friendly behavior: while some types are more pleasant to engage in than their environmentally-unfriendly counterpart, other types are not, and may even be less pleasant to engage in than their environmentally-unfriendly counterpart. What is inherent to engaging in environmentally-friendly behavior, however, is that it can be positioned as doing the right thing, for example as assuring

a better living environment for people now and in the future, all over the world. As a result, engagement in this type of behavior could be seen as meaningful. More often than a pleasant experience, therefore, environmentally-friendly behavior may be perceived as a meaningful experience by those who act in this way.

Many studies show that it feels good to do good. Spending money on others feels better than spending money on yourself (Aknin et al. 2012; Dunn et al. 2008), having the feeling that your work helps or benefits others prevents signs of burnout (Grant and Sonnentag 2010) and prosocial (Andreoni 1989; Andreoni 1990) and environmentally-friendly behavior (Taufik et al. 2015) can make people feel good and elicit feelings of “warm glow”. If perceiving your actions as ‘right’ or meaningful is indeed a route to well-being other than pleasure, the extent to which engagement in environmentally-friendly behavior contributes to well-being probably depends on the extent to which it is perceived as doing the right thing. Below, we first discuss why doing the right thing may contribute to well-being. Following this reasoning, we argue that, in as far as it is considered the right thing to do, environmentally-friendly behavior can enhance well-being. We end with several factors that may influence the extent to which this behavior is perceived as the right thing to do.

13.2.2.1 Why Meaning Provides Well-Being

Self-Concept. One of the reasons why doing the right thing could foster well-being is that it affects how you see yourself: if you are making the effort to engage in good behavior, you must be a good person. Indeed, well-being is greater when one’s actions are perceived as doing good instead of doing harm (Grant and Campbell 2007), and how positively people think of themselves is determined by how moral they perceive themselves to be (Dunning 2007; Sachdeva et al. 2009).

Following this reasoning, having a strong environmental self-identity, that is, seeing yourself as an environmentally-friendly person (Van der Werff et al. 2014a), may be beneficial for well-being. Seeing yourself as someone whose actions

are environmentally-friendly may have a positive influence on your self-concept: it may mean you see yourself as someone who does good (Bolderdijk et al. 2013). Research shows, for instance, that the higher perceived environmental (e.g., CO₂ emissions) and symbolic (e.g., shows who I am) values of an electric vehicle increase the likelihood that people will be interested in buying this type of car (Noppers et al. 2014). Although this was not explicitly studied, environmental and symbolic attributes may be precisely those attributes that make such a purchase an illustration of how good a person you are, and thereby may make such a purchase feel good. Furthermore, a more direct test of the process of self-concept shows that environmentally-friendly behavior can elicit feelings of “warm glow” *because* this behavior sends a positive self-signal (Taufik et al. 2015). Being able to attribute engagement in environmentally-friendly behavior to yourself, in other words, feeling *you* are someone who does the right thing, may therefore be an important factor in explaining why this engagement could foster well-being.

13.2.2.2 When Environmentally-Friendly Behavior Provides Well-Being

Autonomy. As described in the previous section, engagement in meaningful or right behavior may enhance well-being because it contributes to a positive self-concept: by doing good you show yourself that you are a good person. In order to provide meaning in this sense, it is important that people can credibly attribute their choice to engage in environmentally-friendly behavior to their own volition. One important factor in this respect may be that the choice to engage in this behavior is made autonomously. When people autonomously choose to behave in a certain way, this signals to themselves and to others that they value this autonomously chosen behavior: they are more likely to attribute the choice of engagement to internal instead of external causes (Van der Werff et al. 2014b). Autonomously choosing to engage in environmentally-friendly behavior shows that you are someone who values helping the environment, and this in turn

leads you to conclude you are a good person. However, when the choice of this behavior is not autonomous, you may be less likely to attribute its value and goodness to yourself, and thereby gain less well-being from its engagement. In line with this reasoning, the question is whether the meaning that can be derived from pursuing a sustainable lifestyle will be experienced by any person who accidentally happens to act in a pro-environmental way. It is likely that only those who deliberately choose a pro-environmental lifestyle will deem this engagement meaningful (Evans and Jackson 2008), thereby gaining well-being from their engagement.

In addition to attributing the behavior to yourself, engaging in environmentally-friendly behavior should be seen as the right thing to do by those who act in this way, in order to provide meaning. Below, we discuss two factors that may influence the perceived “rightness” of environmentally-friendly behavior: individual values and the perceived environmental impact of the behavior.

Values. The first factor that may influence whether environmentally-friendly behavior is perceived to be the right thing to do is the extent to which this type of behavior matches with individuals’ values, that is, with what people find important in their life (De Groot and Steg 2010; Sheldon and Houser-Marko 2001). Values can be defined as “desirable trans-situational goals varying in importance, which serve as a guiding principle in the life of a person or other social entity” (Schwartz 1992, p. 21). The value people place on the ecosystem and biosphere is a particularly important predictor of engagement in environmentally-friendly behavior (De Groot and Steg 2008, 2009, 2010; Steg and De Groot 2012). People who value the ecosystem and biosphere, that is, people with strong biospheric values, place a strong importance on preserving the environment, which they see as a guiding principle in their lives (De Groot and Steg 2008). Therefore, behaviors that contribute to reaching this trans-situational goal may be more meaningful for them than for people with weaker biospheric values. This implies that engagement in environmentally-friendly

behavior may contribute more to the well-being of individuals with strong biospheric values.

In general, biospheric values are related to more internalized types of motivation to act in an environmentally-friendly way (De Groot and Steg 2010). People with stronger biospheric values say they enjoy contributing to the environment more (intrinsic motivation), see doing things for the environment as a more integral part of their life (integrated regulation), and think doing things for the environment is a more sensible thing to do (identified regulation). In other words, they see engagement in environmentally-friendly behavior as more meaningful. An interesting side-effect seems to be that, by seeing this behavior as more *meaningful* (integrated and identified regulation), it becomes more *pleasurable* to engage in (intrinsic motivation) as well. When people talk about the ‘simple pleasures’ associated with environmentally-friendly behaviors, such as an energy-saving ritual, a shift in the way they eat, or a shift in the way they move (Evans and Jackson 2008), it is probably this source of pleasure they are describing.

Yet, people with stronger biospheric values also say that they would feel guiltier if they failed to do things for the environment (introjected regulation) (De Groot and Steg 2010). Similarly, the more strongly people endorse self-transcendent and biospheric values, the more moral obligation they feel to reduce their personal car use (Nordlund and Garvill 2003). This indicates that because they see the behavior as a more moral and thus meaningful cause, they feel more obliged to act accordingly, hence guiltier when not acting accordingly. Building on these findings, one could argue that the effect of biospheric values on the meaning provided by engagement in environmentally-friendly behavior operates like a catalyst of both negative and positive emotions. Firstly, as people with stronger biospheric values place more value on environmentally-friendly behavior, the engagement in this type of behavior may be more meaningful for them and thereby may have a more positive impact on their well-being than for people with weaker biospheric values. For instance, people who act more in line with

their values are found to feel their lives are more meaningful (Sheldon and Krieger 2014). Secondly, as people with stronger biospheric values place more value on environmentally-friendly behavior, the *failure* to engage in environmentally-friendly behavior may also be more meaningful for them and thereby may have a more negative impact on their well-being than for people with weaker biospheric values. As mentioned above, people expect to feel guilty if they do not act in line with their values (De Groot and Steg 2010). As stronger biospheric values make engagement in environmentally-friendly behavior more meaningful, this may amplify both the positive emotions elicited by engagement in this type of behavior, and the negative emotions elicited by a failure to engage in it.

Impact. A second factor that may influence whether environmentally-friendly behavior is perceived to be the right thing to do is the impact it has on the environment, for example in terms of the amount of CO₂ emitted. It sounds obvious that the higher the impact of a certain type of behavior on the environment, the more meaningful it would be perceived to engage in that behavior. For instance, people who are saving 500 tons of CO₂ per year via energy reductions could be expected to feel they are making a more meaningful contribution than people who save 500 kg of CO₂ per year. Previous research, however, suggests that the amount and perceived worth of behavior do not always correspond.

One of the reasons often mentioned for this discrepancy is that the value of the commonly used unit to express environmental impact, CO₂ emissions, may be difficult to grasp for most people (Fitzpatrick and Smith 2009; Jain et al. 2013; Vassileva et al. 2012; Zapico et al. 2011). In general, people know that more CO₂ emissions are worse for the environment than fewer CO₂ emissions, but whether a single number of CO₂ emissions is large or small may be difficult for them to judge. When the actual impact of behavior is described in terms of CO₂ emissions, therefore, this may tell people little about whether this is meaningful. Building on this, studies have not found the amount of CO₂ emissions to be related to the perceived meaning or worth of

environmentally-friendly behaviors (Dogan et al. 2014). CO₂ emissions may be one indicator people use to evaluate the meaning or worth of behavior, but it is not the only one, and possibly not even the most important.

A more significant reason why the actual impact of behavior and its perceived meaning may not always correspond is that how people feel about certain outcomes is not necessarily related to the size of those outcomes (Hsee and Rottenstreich 2004; Hsee et al. 2005). Therefore, especially when people rely on how they feel about an effect, they can be insensitive to the scope of the effect when judging its perceived value. For instance, previous research illustrates that emphasizing the environmental benefits of several eco-driving behaviors makes engagement in these behaviors more worthwhile than emphasizing their financial benefits, independently of the amount of these benefits (Dogan et al. 2014). Just as people do not necessarily feel better about the idea that they can help 100 people compared to one person (Small et al. 2007), engagement in environmentally-friendly behavior may be considered meaningful regardless of the impact, as any contribution, however small, is a good contribution, and thus diagnostic of a good self-concept.

13.3 Practical Implications

Following the processes discussed in this chapter, there seem to be two routes to increase the positive effect of engagement in environmentally-friendly behavior on well-being: decrease the “discomfort” and make it more “pleasant” to engage in the behavior, or increase the “meaning” of engagement. Although policymakers often use the first route, we now present several reasons why the second route may have additional benefits.

13.3.1 Spillover

One way to make using public transport more comfortable or more fun than using a car is to reshape bus stops into small strawberry houses

that shelter passengers from the cold and rain (example derived from Nordahl 2012). Although this may be an effective strategy to increase the comfort or fun of taking the bus, it *only* has this effect. It does not influence how people perceive other environmentally-friendly modes of transport, such as riding a bicycle, or other environmentally-friendly behaviors such as decreasing energy use by taking shorter showers. Thus, in order to contribute to well-being via this route, one would have to increase the comfort or fun of many environmentally-friendly behaviors separately, which would require a huge investment of time and money.

In contrast, the meaning of environmentally-friendly behavior is derived from the mere idea that it *is* environmentally-friendly, i.e. that the behavior belongs to this category. Specific behavior thus gains meaning when it is seen as making a contribution to a better environment, and when making a positive contribution to the environment in general is seen as the right thing to do. By making people aware that it is important to take care of the environment, and by showing them what types of behavior contribute to this goal, whole groups of behavior potentially gain meaning (Evans et al. 2013; Thøgersen and Crompton 2009), and engagement in them can thereby contribute to well-being. This route may therefore be much more efficient as it potentially has a much larger range.

13.3.2 Long-Term Effects

Besides the investments it would take to increase the pleasure or fun of all separate environmentally-friendly behaviors, one could question the endurance of such a strategy. As the effect known as the ‘hedonic treadmill’ suggests, people undergo a short-lived boost in their well-being when they have a pleasant experience. However, when they get used to the new experience, this boost fades and their well-being returns to its previous levels (but for a revision of the model, see Diener et al.

2006). Increasing the fun of environmentally-friendly behavior, for instance by using a slide instead of stairs to get to your train (<http://metro.co.uk/2011/07/22/overvecht-railway-station-in-utrecht-installs-childrens-slide-to-help-busy-passengers-88544/>), may have only a short-lived effect on the well-being provided by engagement in this behavior, and thereby be only a short-lived motivation for engagement.

Meaning, on the other hand, may prove to be a longer-lasting basis for well-being and engagement. On a general level, an orientation towards “the pleasant life” with a focus on having pleasurable experiences is less strongly related to long-term life satisfaction than either an orientation towards “the engaged life”, with a focus on losing oneself in one’s activities/experiencing flow, or an orientation towards “the meaningful life”, with a focus on having a purpose (Peterson et al. 2005). Applying this to the environmental domain, this suggests that meaning derived from engagement in environmentally-friendly behavior may provide a better basis for long-term well-being than pleasure will. In addition, besides being more strongly linked to long-term well-being, perceived personal meaning can provide a more stable basis for actual engagement in an activity than perceived pleasure can. Having an interest in following politics and finding it inherently enjoyable to do so, for instance, does not necessarily translate into voting behavior, while following politics because it is perceived to be meaningful does lead people to vote (Losier and Koestner 1999). Applying this to the environmental domain, this suggests that following the available knowledge on climate developments because it is inherently enjoyable might not necessarily translate into acting in an environmentally-friendly way, while following climate developments because it is perceived to be meaningful does lead people to act accordingly. Thus, as well as providing a better basis for long-term well-being, meaning may also be a more stable base for engagement in environmentally-friendly behavior in the first place.

13.3.3 Initial Pull Versus Long-Term Effects

As mentioned in the previous sections, increasing the feeling that engagement in environmentally-friendly behavior is meaningful may be a more stable basis for behavior change than making the behavior more pleasant to engage in. However, the latter may be crucial for convincing people to start engaging in this behavior, especially if they do not yet greatly value the environment. The question that arises is whether this means one has to choose between a focus on pleasure, which may motivate people to act in a desirable way in the short-run but may not last, and a focus on meaning, which may have more stable long-term effects but may have a difficult start. Is it possible to obtain both desirable short- and long-term effects?

Studies on environmental self-identity suggest that there are opportunities to combine these two. Framing behavior people have already performed in the past as environmentally-friendly increases their perception of themselves as an environmentally-friendly person, which in turn increases the likelihood of engagement in environmentally-friendly behavior in the future (Cornelissen et al. 2008; Van der Werff et al. 2014a). Making some environmentally-friendly behaviors more pleasant to engage in may increase the initial engagement and well-being derived from these specific behaviors. Then, by making people aware of the positive effects of their engagement on the environment afterwards, the personal meaning they start to attach to the behavior may lead to a longer-lasting well-being. Moreover, their initial engagement in environmentally-friendly behavior may cause spillover to other types of environmentally-friendly behavior, once they link their engagement to personal meaning.

Referring back to the processes discussed in this chapter, making it easy for people to attribute the choice of engagement in this behavior to themselves (for instance, by increasing feelings of autonomous choice), linking environmentally-friendly behavior to the values people hold (for instance, by strengthening biospheric values from a young age onwards), and increasing the emo-

tional rather than the actual impact of engagement (for instance, by projecting a tree on the wall that grows when energy use is low, and withers when energy use is high) may be a good starting point for convincing people of the personal meaning they attach to environmentally-friendly behavior – thereby providing a more stable basis for engagement itself and the well-being derived from it.

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