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Theoretical Basis for Organizational Pro-Environmental Research

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Abstract and Keywords

This chapter provides a theoretical framework to explain workplace pro-environmental behavior (WPEB). It first discusses psychological factors that have proved to be successful in predicting private sphere pro-environmental behaviors, by looking at value theories, goal-framing theory, theories on habits, and theories that assume that behavior results from (individual, social, normative, and hedonic) cost-benefits analyses. Next, it argues that specific contextual characteristics of the workplace may affect (the influence of these factors on) WPEB by affecting the relative strength of people's normative, gain, and hedonic goals. Such characteristics are: the limited level of autonomy over WPEB, the high levels of formally shaped social interactions, and reduced levels of self-control at the workplace. The chapter argues it is crucial to consider the interaction between individual factors and contextual factors in order to enhance our understanding of pro-environmental behavior in organizations.

Keywords: autonomy, cost-benefit analyses, goal-framing theory, profit-generation, self-control, social interactions, value theories, workplace pro-environmental behavior

Environmental problems due to greenhouse gas, pollution, and the use of raw materials and energy are to a large extent caused by human behavior.

Environmental behavior refers to any behavior that has an impact on the environment, both good and bad. Pro-environmental behavior (PEB) reflects behavior that harms the environment as little as possible or even benefits it

(Steg & Vlek, 2009). Most of the research on understanding and encouraging PEB has been focused on psychological factors influencing individual behavior within the household or the community, like household energy use and travel behavior (e.g., Abrahamse & Steg, 2011; Kurz, Donaghue, & Walker, 2005; Poortinga, Steg, & Vlek, 2003). These studies revealed important insights as to which psychological factors affect environmental behavior. Yet, individual behavior does not solely depend on psychological factors (Guagnano, Stern, & Dietz, 1995; Ölander & Thøgersen, 1995; Steg & Vlek, 2009; Stern, Dietz, Abel, Guagnano, & Kalop, 1999; Thøgersen, 2005). Various contextual factors, such as the availability of recycling facilities, parking policies, work requirements, or culture can facilitate or constrain PEB and influence the extent to which psychological factors determine PEB (Steg & Vlek, 2009).

One specific context that is likely to have important implications for the likelihood of PEB is the workplace. Within a lifetime, most people spend a substantial part of their time at work, and their behavior at work is likely to significantly affect environmental quality. Yet little is known about workplace pro-environmental behaviors (WPEB), which individual and contextual factors motivate such behavior, and how these factors interact. This knowledge is necessary if we are to understand how WPEB can be encouraged. In this **(p.34)** chapter, we review theoretical frameworks that can increase our understanding of workplace environmental behaviors (WEB). We propose that WEB is determined by similar psychological factors as private environmental behavior at home. Therefore, we first provide an overview of theories that proved to be successful in improving our understanding of private environmental behavior. More specifically, we discuss value theories, goal-framing theory, theories that assume that behavior results from cost-benefit analyses (including individual, social, normative, and hedonic costs and benefits), and theories on habits. In the second part of this chapter, we argue that the work setting has some specific (contextual) characteristics that have important implications for WEB, which determine the significance of various psychological factors for explaining such behavior. Thus, we consider the general focus of organizations on profit generation, the extent to which WPEB is autonomous, high levels of interactions between employees and formally shaped relationships, and reduced self-control when spending prolonged effort to fulfill tasks at work. Finally, we present the main conclusions and provide a research agenda to better understand and promote WPEB.

Theoretical Frameworks to Predict Pro-Environmental Behavior

In some situations we carefully and deliberately elaborate on costs and benefits of available behavioral options before we act. Yet, in other situations we are likely to habitually repeat behavior we have shown before, without deliberation. We first review theories that assume that we reason before we act. Various theories aim to provide insight into which aspects we are likely to consider in this respect, and the nature of the decision processes involved. We first describe

two general overarching frameworks: value theory, which focuses on general determinants of behavior, and goal-framing theory, which provides an overarching framework on which factors we consider before we act. Values and goals determine which individual, social, normative, or affective consequences people focus on when considering whether to act pro-environmentally. Next, we describe prominent theoretical frameworks that focus on some of these consequences: the theory of planned behavior, the norm activation model, the value-belief-norm theory, identity theory, social norms theories, and the theory of material possessions. After that, we elaborate on habits.

Value Theories

Values are defined as “desirable goals, varying in importance, that serve as guiding principles in people’s lives” (Schwartz, 1992, p. 21). Values have different **(p.35)** key features that make them particularly important for understanding environmental behavior. First, values reflect beliefs about the (un)desirability of certain end-states, such as social justice, wealth, or unity with nature. Values reflect the extent to which a person believes that for example the quality of nature and the environment is an important aspect in life. Second, values are ordered in a priority system, which means that although people generally endorse the same values, the importance of different values is likely to differ across individuals. Values guide the selection and evaluation of various behavior-specific beliefs, attitudes, intentions, and ultimately behaviors. Third, values are abstract and transcend specific situations and behaviors, and are relatively stable over time.

Four types of values are particularly relevant to understand environmental behavior: hedonic, egoistic, altruistic, and biospheric values (e.g., De Groot & Steg, 2008; Steg, Perlaviciute, Van der Werff, & Lurvink, 2014b). People with strong hedonic values find pleasure or sensuous satisfaction for themselves particularly important as a guiding principle in their life, whereas people with strong egoistic values focus on individual costs and benefits when making choices (Steg et al., 2014b). Both hedonic and egoistic values reflect self-enhancement values, with a main focus on self-interests. People with strong altruistic values are especially concerned about the welfare of other people and society, whereas people with strong biospheric values base their behavioral decision on the costs and benefits for the environment (De Groot & Steg, 2008; De Groot, Steg, & Dicke, 2008). These two value types reflect self-transcendent values, in which people particularly consider consequences beyond their short-term self-interest.

People who strongly endorse values beyond their immediate own interests, that is biospheric and (to a lesser extent) altruistic values, are more likely to have strong pro-environmental beliefs and norms and engage in PEB (e.g., De Groot et al., 2008; De Groot & Steg, 2008; Honkanen & Verplanken, 2004). In contrast, pro-environmental beliefs, norms, and behaviors appear to be less likely among

those with strong egoistic and hedonic values, probably because PEB often is rather costly in terms of money, effort, or comfort. For example, research has shown that car use has clear positive hedonic and egoistic consequences, and people with strong egoistic and hedonic values use their car more often (Steg et al., 2014b). Yet in some cases hedonic or egoistic values may concur with behaving pro-environmentally. For example, reducing energy consumption decreases energy costs as well, and for some people cycling is not only pro-environmental but also pleasurable.

Goal-Framing Theory

Values influence which goals are prominent in a given situation. People may not always act upon the values they strongly endorse, as the strength of one's goals **(p.36)** also depends on situational cues, as we explain in the following (Steg, 2012; Steg, Bolderdijk, Keizer, & Perlaviciute, 2014). Goal-framing theory (Lindenberg & Steg, 2007) provides an overarching theoretical framework for understanding the influence of goals and their situational dependency. Goal-framing theory proposes that goals “frame” the way people process information and act upon it in a specific situation. What people attend to, what knowledge and attitudes become cognitively accessible, how people evaluate various aspects of the situation, and what behavioral alternatives are being considered all depend on which goals are dominant at a given moment (which depends on values strength and situational cues). Three overarching goals are distinguished: the gain goal that focuses people on guarding and improving their resources, the normative goal that focuses a person on other people and acting appropriately, and the hedonic goal that focuses someone at feeling better right now. These goals coincide with the values described in the preceding, with altruistic and biospheric values both affecting the strength of normative goals (focusing either on the goal to increase the welfare of others or the biosphere).

Goal-framing theory states that the goal that is strongest or “focal” is the goal frame, whereas other goals remain in the background and increase the strength of the goal frame when they are compatible or decrease its strength when they are in conflict. For example, when your normative goal is focal and you have to choose how to get to work, you will probably particularly consider the environmental consequences of transport modes, and consequently, be motivated to go by bicycle rather than by car (if the travel distance is not too long). This choice is even more likely when other goals in the background support the normative goal, for example, when you realize that cycling makes you feel better than driving and when cycling saves money. In contrast, you may be less likely to cycle when this normative action would threaten the fulfillment of other goals in the background, for example, when you realize that cycling is less comfortable (e.g., when it is raining) or is time consuming.

Many PEBs involve a conflict between normative goals on the one hand and gain and hedonic goals at the other hand. Indeed, acting pro-environmentally is generally perceived as the right thing to do, but often it is more costly in terms of money, effort, or comfort. This implies that PEBs will be most likely when normative goals are focal, and less likely when gain or hedonic goals are focal. However, in some cases, acting pro-environmentally can fulfill gain or hedonic goals as well (e.g., it can be financially attractive or pleasurable). An example is turning in bottles or cans at a designated location instead of throwing them in the trash because of the rebate. However, as soon as the price or the pleasurableness changes and the personal costs outweigh the benefits, people with strong gain and hedonic goals are likely to no longer act pro-environmentally. Thus gain **(p.37)** and hedonic goals are a relatively fickle basis for consistent and prolonged PEBs. Normative goals generally provide a more solid basis for stable and prolonged PEBs, as acting pro-environmentally is generally the right thing to do in many different situations (De Groot & Steg, 2009a). So, how can normative goals be strengthened and be made focal?

As indicated, goals strength not only depends on values, but also on situational cues. Hence, the relative strength and influence of goals can differ across situations (in contrast to values, which are believed to be relatively stable across time). More specifically, goals can be strengthened by situational cues that activate or deactivate different values (Lindenberg & Steg, 2007; Steg et al., 2014). For example, normative goals are more likely to be focal among those with strong biospheric and altruistic values. Normative goals can be further strengthened by normative cues in the environment, such as objects that are associated with normative goals (e.g., posters of charity, clearly visible recycle bins) or the presence of significant others who do the right thing. (We elaborate on the influence of norms in the section on social norm theory.) On the other hand, normative goals can be weakened by cues in the environment that strengthen gain or hedonic goals. For example, seeing objects that are typical in business situations, such as business suits, can strengthen a gain goal, thereby weakening the normative goal (Kay, Wheeler, Bargh, & Ross, 2004). This implies that normative goals can be strengthened by increasing the relative importance and cognitive accessibility of biospheric or altruistic values in specific situations through environmental cues (De Groot & Steg, 2009a).

The relative strength of different goals determines which costs and benefits people consider when making choices. In the following, we discuss theories that focus on different goals, and describe which types of costs and benefits are considered in these different theories.

Theories Focusing on Gain Goals

When gain goals are strong, people particularly focus on costs and benefits in terms of scarce resources (Lindenberg & Steg, 2007). Both individual (e.g., money, time) and social (e.g., social approval, status) costs and benefits are

likely to be considered. People prefer to choose options with highest benefits against lowest costs. In the following, we describe two theories that assume that individuals base their choices mainly on such individual and social considerations: the theory of planned behavior and social norm theory.

The Theory of Planned Behavior

The theory of planned behavior (TPB; Ajzen, 1991) assumes that individuals make reasoned choices based on weighing the expected (individual and social) **(p.38)** costs and benefits of behavior. The TPB assumes that behavior results from one's intention that reflects how hard an individual is willing to try to perform a behavior. For example, the stronger a person's intention toward energy conservation, the more likely it is that person puts effort to conserve energy. The intention depends on three factors: attitudes, subjective norms, and perceived behavioral control.

Attitudes toward behavior reflect the extent to which performing the behavior is evaluated positively or negatively. For example, if a person has a positive attitude toward organic products, it is more likely that he or she will intend to buy organic food, whereas this person may have a negative attitude toward recycled paper, decreasing the intention to buy recycled toilet paper. Attitudes are based on beliefs about positive or negative consequences of the behavior, taking into account the importance of these costs and benefits. For example, a person might believe that organic products are healthy and tasty, and find these factors very important. At the same time this person can believe that organic products are more expensive and expire faster, but believe that these factors are not too important. In this case, weighing the costs and benefits with their importance results in an overall positive attitude toward organic products. Which costs and benefits are most relevant for people varies across behaviors, and needs to be established in a pilot study.

Subjective norms reflect social costs and benefits and refer to the perception of whether important others would approve or disapprove of behavior, taking into account one's motivation to comply with these expectations. For example, if your neighbors, whose opinion you value, expect you to put your garden waste in the designated bin, you would be motivated to comply with these expectations.

Perceived behavioral control reflects the appraisal of one's ability to perform the behavior, and depends on the perceived availability of the requisite opportunities and resources. For example, if you think that you do not have enough money to buy organic products, your perceived behavioral control will be low, and consequently you may not intend to buy organic products. Perceived behavioral control can affect behavior via intention, but also directly, for example, if you intend to buy organic products, but while shopping realize they are out of stock.

The TPB proposes that people choose options with highest benefits against lowest costs, taking into account individual and social costs and benefits. All other factors, such as values, general beliefs, and socio-demographic factors, are assumed to influence behavior indirectly via attitudes, subjective norms, and perceived behavioral control. The TPB has been successful in predicting a range of environmental intentions and behaviors in households, such as recycling, energy conservation, travel mode choice, or pro-environmental buying (p.39) (e.g., Armitage & Conner, 2001; Bamberg & Möser, 2007; Tonglet, Phillips, & Bates, 2004), and the predictive power of attitudes, subjective norms, and perceived behavioral control appeared to be similar (Bamberg & Möser, 2007). There is some evidence that the TPB is successful in predicting WPEB. For example, positive attitudes toward pro-environmental treatment of hazardous wastewater, the perception that important others would approve of this behavior, and a feeling of perceived behavioral control over this behavior increased pro-environmental intentions among managers (Flannery & May, 2000), whereas positive attitudes toward recycling increased recycling among employees (Tudor, Barr, & Gilg, 2007).

Social Norms

Some theories specifically focus on the perceived social costs and benefits of behavior, for example, theories on the influence of social norms. The focus theory of normative conduct (Cialdini, 2003) proposes a distinction between two types of social norms: descriptive norms and injunctive norms. *Descriptive norms* refer to perceptions of the behavior commonly shown by others in a certain situation. Descriptive norms influence behavior by providing information on which behavior is likely to be effective and adaptive in a certain situation (Cialdini, Reno, & Kallgren, 1990). For example, being in an organization in which many people leave their computer on during their lunch break signals that this is effective behavior, thereby increasing the probability that others will do the same. Descriptive norms are most influential when people are not sure how to act or when the descriptive norm is (made) salient. A message on the organizations' well-read bulletin board that 75% of the employees switch off their office light when going home, will most likely increase the effect of this pro-environmental descriptive norm on the remaining 25%.

Injunctive norms refer to the behavior that is perceived to be commonly approved or disapproved by others. Injunctive norms influence behavior by indicating which behaviors might be met with (social) rewards or sanctions. This type of social norm is comparable to the subjective norm as proposed by the TPB. For example, in an organization in which the norm favors energy savings, people may turn their lights off when leaving their workplace because they want to avoid comments of disapproval from their colleagues or gain approval.

Even if people personally do not care about the environmental consequences of injunctive norm violations, they may act pro-environmentally because they care about the potential (dis)approval of others. Hence, injunctive norms are more influential when others are present (i.e., public setting) and can observe the behavior (Nettle, Harper, Kidson, Stone, Penton-Voak, & Bateson, 2013; Raihani & Bshary, 2012).

(p.40) Like the impact of descriptive social norms, the impact of injunctive norms on environmental behavior also depends on the salience of these norms (Cialdini et al., 1990). For example, in an organization with a “reduce energy policy,” the probability that an employee will conform to this injunctive norm increases when he or she observes a colleague engaging in energy-saving behavior. The impact of an injunctive norm is also influenced by the extent to which descriptive norms seem to support this injunctive norm. Therefore, a well-intended campaign telling people that they should join the “reduce energy policy” because the majority of the employees leave their lights on are likely to lead to an increase rather than a decrease in the likelihood that employees will join. As a result, the influence of an injunctive norm can be weakened by a conflicting descriptive norm (Cialdini, 2003).

Interestingly, the influence of injunctive norms is also inhibited when disrespect for other injunctive norms is observed, the so-called cross-norm inhibition effect (Keizer, Lindenberg, & Steg, 2008, 2013). For example, people are less likely to follow an injunctive anti-litter norm when they observe that other people violated another norm, such as spraying graffiti where this is not allowed (Keizer et al., 2008). The cross-norm inhibition effect is stronger when disrespect for norms is (made) more salient. This implies that making an injunctive norm salient can be counter-effective in a setting with a conflicting descriptive norm, as it (also) increases the salience of these injunctive norm violations. For example, placing an anti-litter prohibition sign in a littered setting increased rather than decreased littering (Keizer, Lindenberg, & Steg, 2011) as the sign focuses one’s attention on the fact that others do not respect (anti-litter) norms. In the organizational context, the cross-norm inhibition effect implies that violations of an environmental organizational rule can spread among employees and also weaken compliance to other (environmental) rules. This effect can be explained on the basis of goal-framing theory: Being aware of norm violations of others weakens one’s normative goals and increases the relative strength of one’s hedonic and gain goals (Keizer et al., 2008; Lindenberg & Steg, 2007).

Theories Focusing on Normative Goals

When normative goals are strong, people particularly consider normative costs and benefits of behavior options, such as moral considerations. Theories and models that focus on moral considerations assume that caring about the environment is perceived as a moral issue and that acting pro-environmentally is the right thing to do, whereas not acting pro-environmentally is morally wrong.

We discuss three theoretical frameworks that focus on normative considerations: the norm activation model, the value-believe norm theory, and identity theory.

(p.41) The Norm Activation Model

The norm activation model (NAM; Schwartz, 1977; Schwartz & Howard, 1981) proposes that people are more likely to engage in PEB when they experience a personal norm to do so, that is, when they feel morally obliged to engage in a specific action. Personal norms particularly influence behavior when they are activated, which depends on four situational factors (Steg & De Groot, 2010). First, people must be aware of the adverse consequences of not acting pro-environmentally (awareness of consequences). Second, individuals should feel responsible for the negative consequences of not acting pro-environmentally (ascription of responsibility). Third, people should think they can help reduce environmental problems by acting pro-environmentally (outcome-efficacy). Outcome-efficacy is very relevant in the environmental domain, as typically, environmental problems are only solved when many people collaborate (Steg & Nordlund, 2012). Outcome efficacy is low if people do not believe that others will do their bit (Steg & De Groot, 2010). Fourth, people should think they are capable of engaging in specific PEB (self-efficacy); this is comparable to perceived behavioral control as included in the TPB. Research shows that some of these activating factors are causally related: The more people are aware of the environmental problems caused by their behavior, the more they feel responsible for these problems, and/or the more they will perceive their own actions to reduce these problems as worthwhile. This in turn activates personal norms, which increases the likelihood of PEB (Figure 3.1 ; Steg & De Groot, 2010). The NAM proved to be successful in predicting individual PEB, including reducing car use (Nordlund & Garvill, 2003), environmental activism (Steg & De Groot, 2010), and the acceptance of pro-environmental policies (De Groot & Steg, 2009b). Some factors included in the NAM predicted WPEB as well (e.g., personal norms: Scherbaum, Popovich, & Finlinson, 2008, awareness of consequences: Gadenne, Kennedy, & McKeiver, 2009).

The Value-Belief-Norm Theory of Environmentalism

The value-belief-norm (VBN) theory of environmentalism (Stern, 2000; Stern et al., 1999) extends the NAM by assuming

that awareness of consequences is influenced by stable individual variables: values and ecological worldviews. More specifically, VBN theory proposes that values influence awareness of (p.42) consequences via the strength of ecological worldviews as reflected in the New Environmental Paradigm (NEP; Dunlap, Van Liere, Mertig, & Jones, 2000). The NEP reflects fundamental beliefs about the relationship between human and nature and supports the idea of humankind as a part of nature, as opposed to the traditional social paradigm,

which supports the idea that humankind was created to rule over the rest of nature (Dunlap et al., 2000). The degree of acceptance of the NEP depends on one's values. People with strong egoistic or hedonic values are less likely to define other living organisms within their notion of self and hence are less likely to support NEP. In contrast, strong altruistic and biospheric values are generally associated with seeing plants, animals, and other people as part of the self (Schultz, 2001), and hence, stronger support for the NEP.

The VBN theory has been empirically validated in a few studies on individual behavior (Jakovcevic & Steg, 2013; Steg, Dreijerink, & Abrahamse, 2005; Stern et al., 1999). To our knowledge, the VBN theory has not been tested systematically in organizations, although one study showed that stronger acceptance of the NEP increased energy-conservation behavior at work (Scherbaum et al., 2008). However, similar to research on private environmental behavior (e.g., Poortinga et al., 2003; Steg, De Groot, Dreijerink, Abrahamse, & Siero, 2011), this relationship was rather weak.

Environmental Self-Identity

The theories on normative considerations we discussed in the preceding focused on behavior-specific predictors of behavior, such as the personal norm to engage in that specific behavior. A more general type of normative consideration is environmental self-identity, which predicts a wide range of environmental intentions and behaviors (Van der Werff, Steg, & Keizer, 2013a,b, 2014a, b). Environmental self-identity reflects the extent to which people see themselves as people who act pro-environmentally (Van der Werff et al., 2013a). Individuals with a strong environmental self-identity will more strongly see themselves as people who act pro-environmentally and act accordingly (Manetti, Pierro, & Livi, 2004; Van der Werff et al., 2013a, 2014a,b). Research has shown that environmental self-identity depends on biospheric values and past behavior, which implies that the environmental self-identity has a stable core and is not highly susceptible to changes in different contexts, but can be enhanced to some extent by reminding people on their past PEB or weakened when people realize that they have not acted pro-environmentally in the past (Van der Werff et al., 2014a). Environmental self-identity is strengthened when an individual's previous PEBs were manifold, difficult, or unique (Van der Werff et al., 2014b). Environmental self-identity affects PEB via personal norms, suggesting that the environmental **(p.43)** self-identity increases one's intrinsic motivation to act pro-environmentally (Van der Werff et al., 2013b).

The relationship between biospheric values and PEB on the one hand, and between past behavior and PEB on the other hand both appear to be mediated by the environmental self-identity (Van der Werff et al., 2014a), which implies that biospheric values as well as past environmental actions affect behavior because people are more likely to see themselves as a pro-environmental person. Hence, environmental self-identity not only reflects normative considerations,

but also symbolic motivations, because behaving according to one's environmental self-identity signals to the self and others that you care for the environment (Noppers, Keizer, Bolderdijk, & Steg, 2014).

The significance of symbolic motivations for (environmental) behavior is also emphasized in the theory of material possession: People may engage in a particular behavior to show to the self or others who they are or aspire to be (Dittmar, 1992, 2004). Research has shown that people may indeed use or buy (pro-environmental) products to signify their self-identity, status, and group affiliations (e.g., Griskevicius, Tybur, & Van den Bergh, 2010; Steg, 2005; see Gatersleben & Steg, 2012, for a review). For example, buying an electric car can signal a concern for the environment or a personal innovativeness and thus fulfill symbolic functions (Noppers et al., 2014).

Hedonic Factors and Environmental Behavior

Many people believe that they act rationally and weigh relevant personal and moral costs and benefits of behavioral alternatives. However, this is not always the case (Zajonc, 1980). Affective motives can have a significant influence on environmental behavior, making people act upon their gut feelings rather than on conscious deliberations of pros and cons of actions. Also, people may act in a certain manner because it is more pleasant. *Affect* refers to experiences and feelings of emotions as a response to objects or events (Slovic, Finucane, Peters, & MacGregor, 2007). In general, if these feelings are pleasant, they influence attitudes positively and motivate behavior that reproduces these feelings; but if these feelings are unpleasant they influence attitudes negatively and motivate behavior that avoids the feelings. This means that the extent to which PEB results in a positive or negative affect (experienced affect), but also the extent to which people believe that behaving pro-environmentally will elicit positive or negative feelings (anticipated affect), can form a significant factor in predicting PEB (Fraj & Martinez, 2007; Gatersleben & Steg, 2012). For example, negative anticipated affect (e.g., if I would use public transport instead of the car I would feel angry, frustrated, unsatisfied, or sad) inhibited individual's desire to use public **(p.44)** transportation to travel to work (Carrus, Passafaro, & Bonnes, 2008). Yet, people may also experience positive emotions when engaging in PEB, even though such behavior may not be that pleasurable, because it feels good to make a meaningful contribution to the collective good (Carrus et al., 2008; Venhoeven, Bolderdijk, & Steg, 2013). Anticipated affect may thus encourage PEBs as well.

Affect can strongly influence PEB and overrule cognitive considerations (personal and moral costs and benefits). Using an overall, readily available affective impression is much more efficient than weighing all the costs and benefits or retrieving many relevant examples from memory, especially when it

comprises complex behavior and when cognitive resources are limited (Slovic et al., 2007).

Habits and Environmental Behavior

The theories we discussed in the preceding generally assume that PEB results from reasoned choices. Yet, everyday behavior is often habitual. In many cases people do not consider the implications and form no intentions before engaging in environmental behavior, but are guided by automatic cognitive structures. Habits are defined as “cognitive structures that automatically determine future behavior by linking specific situational cues to behavioral patterns” (Klöckner & Verplanken, 2012, p. 198). When people frequently behave in the same way in similar situations to reach a certain goal, situational cues will be mentally associated with that behavior. The more frequently this occurs, the stronger and more accessible the association becomes, and the more likely the behavior is repeated the next time these situational cues are encountered. Due to this, people do not need to think about everything they do, enabling a more efficient allocation of their scarce cognitive resources. Habits have four key features: They are performed frequently, there is a high degree of consistency in the context in which the specific behavior is performed, there is success in reaching a goal by performing the behavior, and the performance of behavior is without conscious control (Klöckner & Verplanken, 2012).

When habits are strong, people no longer make conscious choices. Indeed, research has shown that habits moderate the impact of factors such as intentions and personal norms on environmental behavior: Intentions and personal norms are particularly related to behavior when habits are weak (e.g., Klöckner & Matthies, 2004; Verplanken, Aarts, Van Knippenberg, & Van Knippenberg, 1994). Habits are generally considered to be barriers for PEB, assuming that many PEBs involve that people change existing routines. However, not all habits have a negative influence on the environment. People may habitually act pro-environmentally as well, for example, habitually separating their paper from other garbage or switch off the lights when they leave a room. Habitual behavior may involve misperceptions and selective attention: People tend to focus more **(p.45)** on information that confirms their habits, and neglect information that is not compatible with their habitual behavior. This implies that habits are not easily broken; significant changes in a situation may be needed before people reconsider their habitual behavior.

Because habits form a direct and automatic link between situational cues and specific behavioral patterns, contextual factors or cues can be essential in the creation of good habits and the breaking of bad habits. More generally, contextual factors can have important influences on behavior. For example, the availability of facilities, rules, laws, or price regimes can determine the attractiveness of PEB or even form constraints for specific PEBs. This is particularly relevant for PEB in organizations, as the organizational context can

affect the likelihood of WPEB in important ways. Contextual factors may affect WPEB in three different ways: They may affect behavior directly (e.g., you want to recycle your paper but realize that there is no paper recycle bin), they may moderate the relationship between goals and behavior (e.g., a normative goal may only result in a reduction in commuting by car when feasible alternatives are available), and they may determine which types of goals most strongly affect behavior (e.g., normative goals may be weakened when WPEB is very costly; see Steg & Vlek, 2009). In the next part of this chapter we focus on the latter and discuss relevant contextual factors in organizations that affect WPEB, which should be considered and targeted when trying to encourage WPEB.

Unique Characteristics of the Organizational Context That Determine the Importance of Factors Influencing Pro-Environmental Behavior

The theories discussed in the previous section are typically applied to predict PEB in the private sphere, and empirical evidence is mostly based on research on behavior in the private domain (e.g., in the household). But to what extent are these theories relevant for WPEB? This is a highly important question since most people spend a substantial part of their waking hours in a work setting. As indicated at the end of the previous section, we argue that the significance of factors influencing environmental behavior depends on the context in which choices are made. In this section, we discuss some key characteristics of the workplace context that may affect the significance of different factors for the likelihood of WPEB.

Organizations are social entities that possess values (which are often reflected in their mission statement), and a purpose for existence. The organizational mission and actions taken to accomplish that mission can affect employee behavior. Thus, within an organizational context, individual and organizational factors **(p.46)** determine behavioral choices. We first discuss how the focus on profit-generation, which is prevalent in many organizations, may affect WPEB. Then we elaborate on the effects of high levels of social interaction typical for many workplace settings. Next, we discuss the effects of autonomy at work on environmental actions. Finally, we elaborate on how reduced levels of self-control after spending prolonged effort to fulfill tasks at work may affect WPEB.

The Organization as a Profit-Generating Context

Organizations can have different *raison d'être*. In broad terms this can range from profit-generation to social services or more altruistic reasons. For commercial organizations, which are the most common types of organizations, a focus on profit-generation is evident, but an economic focus is also essential for nonprofit organizations to maintain their existence. In general, a focus on profit making is thus built into the system of the functioning of organizations. This profit-making goal of organizations, or of employees within organizations, can conflict with the goal to be pro-environmental, because WPEB is in general believed to be more financially costly (Wagner, Van Phu, Azomahou, &

Wehrmeyer, 2002). However, WPEB can also involve cost savings for organizations. For example, saving energy saves money as well, and a pro-environmental image may have competitive advantages. Research has indeed shown that “green” organizations often benefit from pro-environmental decisions and behavior in the form of lower costs, fewer risks and liabilities, more efficient operations (Husted & Allen, 2007; Russo & Fouts, 1997), higher work motivation (Ellemers, Kingma, Van de Burgt, & Barreto, 2011), competitive advantages, preservation of resources and raw materials, and favorable corporate image (Rondinelli & Berry, 2000). Indeed, a meta-analysis revealed a positive relationship between corporate environmental performance and corporate financial performance across industries (Orlitzky, Schmidt, & Rynes, 2003). Although management may believe otherwise, pro-environmental decisions do not necessarily reduce profit generation. This may explain the growing interest in corporate social responsibility (CSR) and corporate environmental responsibility (CER) programs (Mueller, Hattrup, Spiess, & Lin-Hi, 2012).

Corporate social responsibility and corporate environmental responsibility imply that organizations aim to increase and optimally balance their economic, social, and environmental performance (Dahlsrud, 2008). The growing interest in CSR and CER indicates that besides profit generation, other goals such as the well-being of stakeholders and environmental impact play a role in organizational decision making too. Still, in general, environmental and social goals are not prioritized and mainly play a background role, whereas economic profitability **(p.47)** is often the key concern in organizations (David, Bloom, & Hillman, 2007). There may be many cues in the organizational context suggesting that organizations are mainly concerned with economic profitability, such as reward systems on the basis of annual profitability, short- and long-term strategies focused on profit generation and outcomes measured in profit ratios. These are likely to strengthen employees’ gain goals and inhibit WPEB (cf. Tudor, Barr, & Gilg, 2008). For example, research has shown that labeling a social dilemma game to coincide with the gain goal frame (“Wallstreet Game”) as opposed to social or normative label (“Community Game”) significantly increased the focus on profit making and therefore inhibited normative behavior (Lieberman, Samuels, & Ross, 2004). From a goal-framing perspective, these results suggest that such cues strengthen gain goals of employees, thereby pushing their normative goals to the background (Lindenberg & Steg, 2013). Within organizational contexts, gain goals are likely to be constantly strengthened by situational cues indicating that profit making and competition play a central role, increasing the relative strength of gain goals. This implies that, in case of goal conflicts, decisions will likely mostly be decided in favor of profit making, as this goal is likely to be most salient (Lindenberg & Steg, 2013).

The economic focus of organizations can thus affect employees' WPEB and the levels of attention and resources directed toward WPEB (cf. Tudor et al., 2008). Based on the preceding and goal-framing theory, we argue that when gain goals are dominant, employees will engage in WPEB if it is mandatory or less costly. This implies that when WPEB is based on gain goals, there is no stable basis for WPEB, because employees will no longer perform the behavior when it is not mandatory or whenever the costs increase (De Groot & Steg, 2008). Yet, organizations with more embedded CER are likely to have developed a culture of environmental responsibility motivated by ethical and discretionary values and felt responsibility. In such cases, normative cues are likely to be present in the organizational context, which may increase the strength of employees' normative goals, which form a more stable basis for WPEB as it is less influenced by rules or costs (Pandey, Rupp, & Thornton, 2013; Werther & Chandler, 2011).

The Organization Can Limit Autonomy over Individual Pro-Environmental Behavior

Decision-making processes within organizations influence whether WEB is mandated or autonomous. Although in some organizations decisions are made bottom-up, with rules and procedures being initiated by employees, more often decisions are made top-down, with rules and procedures imposed by management. This affects employees' control over their WPEB. As discussed, environmental **(p.48)** self-identity (the extent to which you see yourself as a type of person who acts pro-environmentally) is determined by values and past environmental behavior that signals who you are (Van der Werff et al., 2014b). Employees' environmental self-identity is most likely strengthened when they engage in autonomous WPEB, as in that case, the behavior clearly signals who they are. When management imposes rules and procedures, employees have limited control over their WPEB. As a consequence, employees may not believe that their WPEB is autonomous or unique and therefore their environmental self-identity will not be strengthened. Thus the organizational context can result in low autonomy, thereby decreasing the relative strength and influence of the environmental self-identity on behavior. This may have important implications, because, as argued, environmental self-identity is a stable predictor of a wide range of PEB. Even when WPEB is imposed by management, they likely not only aim to promote the enforced WPEB, but also other types of WPEB, thereby promoting positive spillover between behaviors. It is likely that the environmental self-identity promotes such positive spillover effects (Van der Werff et al., 2014b). Yet, when a specific WPEB is mandated, it will possibly promote that particular WPEB, but it will not strengthen employees' environmental self-identity, thereby limiting the likelihood of possible positive spillover effects to other WPEB.

The Organization as a Context with High Levels of Formally Shaped Social Interaction

Another key feature of the organizational context is the high level of interactions among employees. Employees have regular social interactions with one another and their behaviors are generally easily observed by their colleagues (Carrico & Riemer, 2011). As discussed, people form perceptions about which behavior is most commonly done (descriptive norms) and which behavior is perceived as most appropriate (injunctive norms) through social interactions and observing others (Cialdini et al., 1990; Keizer & Schultz, 2012). This implies that in a context in which social interactions are common, such as the workplace, social norms will probably be very salient and strongly influence environmental behavior. High levels of social interactions may also increase the likelihood of the cross-norm inhibition effect explained earlier. This implies that visible norm violations in organizations are likely to weaken employees' normative goals and strengthen their gain or hedonic goals, which probably inhibits WPEB. Importantly, this also implies that norm support cues, such as colleagues who act in line with pro-environmental norms, will strengthen employees' normative goals and encourage WPEB. Hence, social norms offer an important target for behavioral interventions at work.

(p.49) Another important aspect of the organizational context is that many interactions and relationships in organizations are formally shaped in hierarchical relationships, which define the span of control of managers and supervisors. Although the degree to which and how interactions and relationships are formally shaped varies across organizations, typically those higher in the hierarchy such as managers are responsible for the introduction of company (environmental) policies. Research on the (cross-)norm inhibition effect reveals that specifically observed disrespect by these higher-ups decreases rule compliance by the lower echelon (Keizer, Lindenberg, Steg, Veldstra, & Hoekstra, forthcoming). This implies that it is important that managers conform to environmental rules and standards. Compliance with organizational norms or policies also depends on the perceived respect for these norms by fellow colleagues, as this conveys the descriptive norm that colleagues comply with these norms and policies. This is an important consideration, as many norms cannot be strictly enforced by sanctions and therefore depend on respect for norms. Hence, compliance by higher-ups is a prerequisite, but for durable respect for (environmental) norms and policies, it is of key importance that employees of the lower echelon observe that their fellow colleagues show respect for these norms and policies too.

The Organization as a Depleting Context

Another important characteristic of organizational context that is likely to affect WPEB is the high demands on self-control. Self-control entails individuals' effortful regulation of their thoughts and behaviors (Molden, Hui, Scholer, Meider, Noreen, D'Agostino, & Martin, 2012), which are governed by a limited resource consisting of the self's capacity or willingness to engage in self-

regulation (Baumeister & Vohs, 2007). These acts of self-control can cause regulatory resource depletion, so-called ego depletion (Baumeister, Bratslavsky, Muraven, & Tice, 1998; Muraven & Baumeister, 2000; Vohs & Heatherton, 2000). Prolonged claims on self-control by high cognitive load due to work-related behavior can thus result in a temporary reduction in self-control. As WPEBs are generally more costly in the sense of comfort, effort, or money, individuals require a certain level of self-control to counter the impulse or urge to just aim for profit, easiness, or comfort. Therefore, ego depletion is likely to weaken normative goals, and strengthen hedonic and gain goals. Hence, when employees encounter reduced levels of self-control after a long workday or an effortful task, their normative goals are likely pushed to the background.

We might expect that low self-control is the rule rather than the exception for employees at work. This can further inhibit WPEB because of weaker normative goals. Yet, ego-depletion can sometimes promote WPEB. Research has **(p.50)** shown that people with low levels of self-control are more likely to rely on habits and heuristics (simple decision-making rules) as quick guides to behavioral choices (e.g., Janssen, Fennis, Pruyn, & Vohs, 2008). This implies that employees with a strong environmental self-identity or strong biospheric values may act pro-environmentally even when self-control is low, as doing so may be habitual for them. In addition, people with low self-control are more likely to rely on heuristics such as social proofs (Salmon, Fennis, De Ridder, Adriaanse, & De Vet, 2013), and hence are more likely to base decisions on descriptive norms. This again suggests that descriptive norms will be influential in organizations, not only because the high level of social interactions, but also because of ego depletion. When colleagues act pro-environmentally, particularly depleted employees may follow this descriptive norm and act pro-environmentally too. Hence, lack of self-control may not always be a barrier to WPEB.

Conclusion and Research Agenda

This chapter provided an overview of relevant frameworks and theories on individual factors influencing environmental behavior. We first discussed theories that provide overarching frameworks for understanding and investigating factors influencing WPEB, notably, value theory and goal-framing theory. We argued that behavior is influenced by the strength of hedonic, gain, and normative goals in a particular situation, and that the strength of these goals depends on one's values and on situational cues that activate or deactivate these values. Second, we elaborated on theories that focus on gain, normative, and hedonic goals, respectively. We introduced the TPB and the social norm theory that focus on gain goals, and discussed the NAM, the VBN theory, and identity theory that focus on normative goals. We also indicated the significance of hedonic goals for environmental actions, and elaborated on habitual behavior. We indicated that these theories have mainly been applied to explain private environmental behavior. The question remains whether the theories are also applicable in an organizational context; this is an important topic for future

research. Future research should also study communalities and differences between factors influencing behavior at work and at home.

Next, we argued that environmental behavior depends on both individual and contextual factors. The influence of contextual factors has hardly been examined in studies on environmental behavior, and is an important topic for future research. This is probably even more relevant for WEB, as the organizational context can substantially affect WPEB. We introduced four unique characteristics of the organizational context that are likely to affect the strength of normative, gain, and hedonic goals at work, thereby affecting the likelihood **(p.51)** of WPEB. More specifically, we discussed implications of the general focus on profit generation, the possible limited autonomy of employees over individual WPEB, the high level of formally shaped interactions between employees, and lower levels of self-control due to high cognitive load. Importantly, we indicated that these four characteristics do not necessarily inhibit WPEB by strengthening (the influence of) gain and hedonic goals, but may also promote such behavior by strengthening (the influence of) normative goals. Future research is needed to examine under which circumstances organizational characteristics are most likely to strengthen normative goals and to encourage WPEB.

Environmental psychologists aim to study the interactions between humans and their environment. As such, they can play an important role in understanding and encouraging WPEB, by studying to what extent and how the interaction between individual and contextual factors affect WPEB. Such interactions between individual and contextual factors have hardly been conceptualized nor studied in environmental research, and are a key topic for future research. The organizational context offers unique opportunities to study such interactions.

To promote WPEB, organizations need to understand which factors are most influential for WEB, and how these factors can be effectively addressed via organizational changes and policies. This implies that we need to study to what extent interventions aimed to change individual and contextual factors are acceptable and effective in encouraging WPEB, and which factors are key to enhance these effects.

People spend a substantial proportion of their time at work, and behavior at work has important implications for environmental quality. This makes it highly important and timely to study factors encouraging WPEB, and to understand effective and acceptable ways to promote such behavior. We hope this chapter encourages researchers to take up the challenging research agenda and to enrich our understanding of factors influencing WEB.

Suggested Additional Readings

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