

University of Groningen

## Value-Driven Leadership in Sustainable Entrepreneurship

Ünal, A. Berfu

*Published in:*  
De Gruyter Handbook of Sustainable Entrepreneurship Research

*DOI:*  
[10.1515/9783110756159-008](https://doi.org/10.1515/9783110756159-008)

**IMPORTANT NOTE: You are advised to consult the publisher's version (publisher's PDF) if you wish to cite from it. Please check the document version below.**

*Document Version*  
Publisher's PDF, also known as Version of record

*Publication date:*  
2023

[Link to publication in University of Groningen/UMCG research database](#)

*Citation for published version (APA):*  
Ünal, A. B. (2023). Value-Driven Leadership in Sustainable Entrepreneurship. In G. de Jong, N. Faber, E. Folmer, T. Long, & B. Ünal (Eds.), *De Gruyter Handbook of Sustainable Entrepreneurship Research* (pp. 107-122). (De Gruyter Handbooks in Business, Economics and Finance). De Gruyter.  
<https://doi.org/10.1515/9783110756159-008>

### Copyright

Other than for strictly personal use, it is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), unless the work is under an open content license (like Creative Commons).

The publication may also be distributed here under the terms of Article 25fa of the Dutch Copyright Act, indicated by the "Taverne" license. More information can be found on the University of Groningen website: <https://www.rug.nl/library/open-access/self-archiving-pure/taverne-amendment>.

### Take-down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

*Downloaded from the University of Groningen/UMCG research database (Pure): <http://www.rug.nl/research/portal>. For technical reasons the number of authors shown on this cover page is limited to 10 maximum.*

A. Berfu Ünal

## 6 Value-Driven Leadership in Sustainable Entrepreneurship

**Abstract:** Values, serving as key principles in life, can predict entrepreneurial intentions and behaviours. Research identified self-enhancement values (e.g., competence) as particularly relevant in predicting entrepreneurship endeavours. Interestingly, new evidence suggests that values that are not related to self-enhancement but self-transcendence (e.g., biospheric values) could be equally, if not more relevant when the focus is on starting a sustainable enterprise rather than a conventional enterprise. In the current chapter, we first explain the value theory with reference to key conceptualisations. Next, we discuss the process of how values predict environmental actions like sustainable entrepreneurship, by using insights from the field of environmental psychology. Finally, we draw conclusions for sustainable entrepreneurship research, and identify current gaps in our knowledge and future research needs on this topic.

**Keywords:** values, self-transcendence values, self-enhancement values, value-belief-norm theory

### 1 Introduction

It is expected that our planet Earth will warm up by 2 °C by the year 2100 if CO<sub>2</sub> emissions are not drastically reduced in the coming decades (IPCC, 2022). Such an increase in temperature is associated with irreversible effects, including biodiversity loss, extreme climate hazards, loss of life and ecosystems and loss of resources that are key to our survival. Mitigation and climate adaptation strategies are estimated to be effective if we manage to keep global warming below 1.5 °C (IPCC, 2022). As such, it is of utmost importance to reduce our CO<sub>2</sub> emissions and reach a steady state where global warming is kept below 1.5 °C. Unsustainable businesses, industries and sectors are a major threat to strategies aimed at mitigating the adverse effects of climate change and global warming. We need radical systemic transitions in all sectors whereby unsustainable practices are replaced by sustainable ones with minimal negative impact on the environment. Sustainable entrepreneurs can play a major role in these much-needed systemic transitions by introducing CO<sub>2</sub> neutral solutions in the market and by innovating and greening the way sectors and businesses operate. An important question is what kind of characteristics distinguish sustainable entrepreneurs from conventional entrepreneurs. Knowing this

---

**A. Berfu Ünal**, Department of Sustainable Entrepreneurship in a Circular Economy, Faculty Campus Fryslân, University of Groningen, Groningen, the Netherlands

<https://doi.org/10.1515/9783110756159-008>

would help create a context allowing for sustainable entrepreneurs to flourish, thereby helping to mitigate environmental problems.

In their definition of sustainable entrepreneurship, Shepherd and Patzelt (2011) argue that sustainable entrepreneurs can be distinguished by looking at what they prioritise in their businesses. More specifically, while conventional entrepreneurs prioritise economic profitability over other goals, sustainable entrepreneurs prioritise environmental goals as well while engaging in some form of business innovation. As such, sustainable entrepreneurs do not only focus on aspects to be developed (e.g., economic and non-economic gains) but also on aspects to be preserved, such as the environment, resources and communities (see Shepherd & Patzelt, 2011, for an overview). The definition departs from the traditional understanding of entrepreneurship as being mainly interested in the ‘Profit’ component of the triple P, and brings forward the importance of considering the ‘People’ and ‘Planet’ components as well. Indeed, sustainable entrepreneurs strive to find a balance to manage the so-called triple bottom line (Elkington, 2004) of being economically, socially and environmentally resilient (Kuckertz & Wagner, 2010). Therefore, another major distinction of sustainable entrepreneurs from conventional entrepreneurs is having a strong motivation to protect the environment. What kind of factors determine whether an entrepreneur has such motivation? And who are more likely to lead in sustainable entrepreneurship endeavours? In the current chapter, we will introduce values as a psychological factor with a motivational influence in affecting not only decisional outcomes to become a sustainable entrepreneur but also related processes and drivers of sustainable entrepreneurship, such as opportunity or problem recognition. In that, we aim at bridging the fields of environmental psychology and sustainable entrepreneurship, and discuss how we can gain insights from environmental psychology to use and develop theory in sustainable entrepreneurship research.

## 2 Value Theory

Entrepreneurship is a value-driven process (Muñoz, 2017), meaning that certain values might guide and motivate individuals to pursue entrepreneurship. Values are defined as leading principles in life that serve as a compass and remind us about what we deem important (Schwartz, 1992; Steg, Bolderdijk et al., 2014). A prominent, widely accepted and cross-culturally valid approach to study values is Schwartz’s (1992) conceptualisation of basic values (also see Schwartz & Bardi, 2001). Schwartz’s (1992) value theory comprises four quadrants that are depictive of a continuum of value clusters (motivational goals) in a circular structure, on which ten distinct value types are mapped (see Figure 6.1). These four value clusters are openness to change, conservatism, self-enhancement and self-transcendence. Openness to change refers to having a key interest in novelty and innovation as well as enjoying life. Conservatism, on the

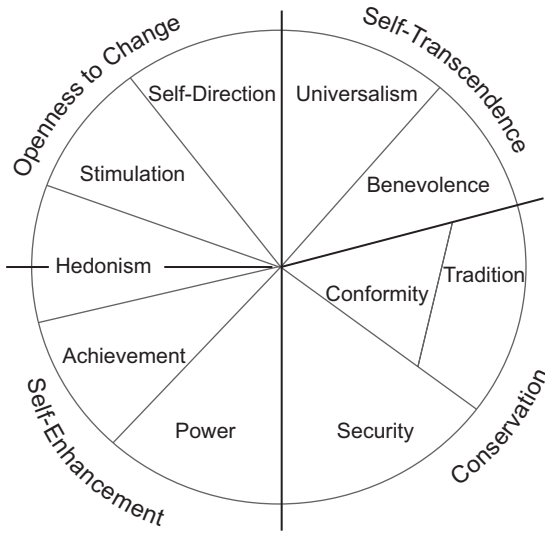
other hand, refers to having a key interest in preserving tradition, conforming to social expectations and keeping the status quo. The third value cluster is self-enhancement, which puts the emphasis on competence, power and self-achievement. Finally the fourth cluster, self-transcendence, puts the emphasis on the well-being of others and shying away from acting in line with self-interests.

Schwartz (1992, 2012) identifies six characteristics that are inherent to values. First, values motivate people to act in a certain way because they are goals that are desirable for the individual. Therefore, they guide and predict behaviour and decisions. As an example, values related to the motivation of openness to change would lead someone to look for novel and pleasurable experiences in any given situation. Second, values are related to affective outcomes. For instance, when we encounter a situation that is against our core set of values, we would feel threatened, and our affective response would be negative. At times, these emotions also inform us in a top-down manner, making us categorically against options that are in seeming contradiction with our values (Perlaviciute et al., 2018). Third, values are difficult to change once formed; they are stable over situations and time. This indicates that the same set of values motivate similar actions in different settings, such as in the private sphere and work sphere. Fourth, values determine which consequences of behaviours are more important for the individual and whether there would be a conflict with one's core values if acted in a certain way. For instance, someone with the key value of benevolence would consider the consequences of their actions on other people's well-being, and if there is a possible threat to the well-being of others, they might refrain from executing that particular action. Fifth, people hold various values but some values are more important than others. Hence, the prioritisation of values differs from individual to individual, making it a stable individual difference factor. This means that, for example, for some people values that are under self-transcendence might be of key importance while for some others these values might be further down in priority. Sixth and final, values might conflict with one another. More specifically, Schwartz posits that when two values on the four quadrants are proximal to each other, then they are more similar or at least positively related. For example, achievement and power or achievement and hedonism as neighbouring values are expected to have a positive correlation. On the contrary, when two values are distal to each other, they might be negatively related and they might even conflict with each other. For example, self-direction, which is a value signifying independence and action-orientedness, is distal to the value conformity, which signifies the importance of acting in line with the expectations of others and restraining self-interest. As a result, these two values might oppose each other. When such conflict arises, action follows from considering the relative importance of different values for the individual, and whether the context supports the activation of these values.

Applications of Schwartz's values to entrepreneurship were mostly focused on openness to change and self-enhancement values as the most relevant motivators behind entrepreneurship endeavours and intentions (Gorgievski, Ascalon, & Stephan, 2011; Morales et al., 2019; Kirkley, 2016). Indeed, entrepreneurs have traditionally

been associated with features such as being innovative, ambitious, creative and independent, willing to pioneer, having self-direction and having clear individual goals to achieve (Fayolle, Liñán, & Moriano, 2014; Kirkley, 2016). Therefore, values on the left side of the circular value conceptualisation (Figure 6.1), which reflect a motivation for self-enhancement and openness to change, have been in general associated with entrepreneurship. Values on the right side of the circular value conceptualisation, on the other hand, were somewhat negatively associated with entrepreneurship (Hueso et al., 2020). This might be because entrepreneurs are generally viewed as risk-takers and opportunity seekers (McGrath, MacMillan, & Scheinberg, 1992; Shane & Venkataraman, 2000), which might oppose values such as conformity, tradition or security that are nested on the right side and that are related to avoiding risks and maintaining the status quo (Schwartz & Bardi, 2001). In addition, values that put the emphasis on prioritising the well-being of others (i.e., universalism and benevolence) nested under self-transcendence were thought to discourage people from being entrepreneurs as entrepreneurship might require an egoistic focus in the process of starting a new business, where personal time needs to be dedicated to work rather than others (Hueso et al., 2020). Are the same set of values applicable to understand what would predict sustainable entrepreneurship intentions and behaviours?

As discussed, we argue that sustainable entrepreneurship differs from classical entrepreneurship in the sense that it inherently puts the emphasis on aspects to be protected as well as to be developed (Shepherd & Patzelt, 2011). Following from that, if we were to map what type of values would put the emphasis on aspects to be sustained and aspects to be developed, we could argue that self-enhancement and openness to change would be more related to aspects to be developed, while self-transcendence and conservatism would be more related to aspects to be sustained. This means that not only the left side of the circular value conceptualisation might be relevant to study sustainable entrepreneurship but also the right side (see Figure 6.1), opening new avenues for research in the field of sustainable entrepreneurship. Indeed, the findings of Santos and colleagues (2021) already demonstrated links between values nested under conservatism and self-transcendence and the decision to become self-employed, as one of the proxies to becoming an entrepreneur. However, new research is needed that specifically looks into intentions to become a sustainable entrepreneur and how values other than the ones nested under self-enhancement and openness to change can be relevant. In addition, we reason that perhaps a value conceptualisation that is more predictive of sustainable behaviours and actions could better explain the outcomes and processes involved in sustainable entrepreneurship. Below we will discuss such value conceptualisation that is adapted from the value scale of Schwartz (1973) and that is specifically relevant to understand involvement and interest in pro-environmental actions and endeavours like sustainable entrepreneurship.



**Figure 6.1:** The theoretical structure behind the value-conceptualisation of Schwartz (retrieved from Schwartz, 2012).

### 3 Values That Are Particularly Related to Sustainable Behaviours

Sustainable entrepreneurship can be regarded as a pro-environmental endeavour, and therefore values literature from environmental psychology could help us understand which values are more relevant to predict the behaviour of sustainable entrepreneurs. With the emergence of environmental problems such as global warming and ozone depletion, scholars were interested in studying whether attitudes towards environmental issues were rooted in people's values (Stern, Dietz, & Guagnano, 1998). However, as Schwartz's value measure was lengthy to administer with 56 items and as it did not include a dedicated value for the preservation of the environment, scholars came up with an alternative measure that is brief and easier to administer (please see Bouman, Steg, & Kiers, 2018; De Groot & Steg, 2008; Stern, Dietz, & Guagnano, 1998; Steg et al., 2014b, to read more about the process of developing the brief value measure). Particularly, four types of values are distinguished in environmental psychology based on Schwartz's value theory and are used to explain people's pro-environmental intentions and actions: biospheric, altruistic, egoistic and hedonic values. Among these four values, biospheric and altruistic values are nested under self-transcendence values, meaning they put the emphasis away from the self. More specifically, people who strongly endorse biospheric values find it of utmost importance to protect the environment while

people who strongly endorse altruistic values find it of utmost importance to protect the well-being of others. Hence, both biospheric and altruistic values make one focus on aspects that transcend the self. The other two values, egoistic and hedonic, are nested under self-enhancement values, meaning they put the emphasis on maximising benefits for the self. In line with that, people who strongly endorse egoistic values find it of utmost importance to increase their personal gain, profit or status, while people who strongly endorse hedonic values find it of utmost importance to increase pleasure and convenience at any given time. As we will discuss in more detail below, the four values exert their influence on sustainable actions either directly or indirectly via intermediate variables. As such, different processes might be at play in explaining the influence of values on sustainable actions.

### 3.1 Direct Effect of Values on Sustainable Actions

Research shows that biospheric and altruistic values are positively related to pro-environmental behaviours and intentions as well as awareness of environmental problems and feeling a moral responsibility to act on these problems (De Groot & Steg, 2008; Jakovcevic & Steg, 2013; Nordlund & Garvill, 2003; Ünal, Steg, & Granskaya, 2019; Ünal, Steg, & Gorsira, 2018; Steg, Dreijerink, & Abrahamse, 2005; Stern, 2000). Indeed, biospheric people in particular consider the consequences of their actions for the environment, they act pro-environmentally consistently and simply for the sake of protecting the environment. Biospheric people are therefore less likely to be discouraged when pro-environmental behaviours are costly or effortful. Altruistic values are also positively related to pro-environmental actions (Steg et al., 2014a) unless they are in conflict with biospheric values. For instance, when people had to choose between donating to a pro-environmental versus pro-social cause, altruistic values predicted donating to a pro-social cause positively and biospheric values predicted donating to a pro-environmental cause negatively: a strong endorsement of biospheric values was associated with preferring to donate to a pro-environmental cause over pro-social cause (De Groot & Steg, 2008). Yet, when there is no such goal conflict, altruistic and biospheric values are both related to pro-environmental choices and actions.

As mentioned, many pro-environmental actions can be costly (time-wise or financially) or effortful, such as consuming organic produce or having to walk to a nearby waste separation facility instead of throwing your recyclable waste in the residual bin. Such costly pro-environmental actions might be discouraging for people who strongly endorse egoistic and hedonic values. Supporting this argument, egoistic and hedonic values are mostly found to be either not related to pro-environmental actions or negatively related (De Groot & Steg, 2008; Jakovcevic & Steg, 2013; Thøgersen & Ölander, 2002; Ünal, Steg, & Granskaya, 2019; Ünal, Steg, & Gorsira, 2018). This has been a pattern that was confirmed in various pro-environmental domains, such as car-use reduction, recycling, adoption of sustainable innovations or acceptability of

pro-environmental policies. It needs to be noted that egoistic and hedonic values could also facilitate pro-environmental actions depending on the domain (Steg et al., 2014b). For example, when the pro-environmental behaviour is financially or status-wise beneficial for the person, people who strongly endorse egoistic values might consider executing the behaviour. An example could be the adoption and sustainable use of solar panels in anticipation of saving money by producing energy (Namazkhan, 2022). Similarly, when executing the behaviour is pleasurable, people who strongly endorse hedonic values might consider doing it. An example is, for instance, commuting to work by bike rather than by car on a sunny day for the fun of it rather than being concerned about traffic-related CO<sub>2</sub> emissions.

Hence, the abundance of research from environmental psychology points out that biospheric values in particular and altruistic values are more likely to steer a person towards sustainability while egoistic and hedonic values are more likely to steer a person away from sustainability, except when the execution of the behaviour might fulfil the motivation of self-enhancement. Interestingly, there has not been a thorough investigation of whether and how the four values (Steg et al., 2014a) are related to the undertaking of sustainable entrepreneurship. Can we observe the same pattern of relationships in the pro-environmental domain of sustainable entrepreneurship?

Indeed, one might expect that having a key concern for the protection of the environment (i.e., biospheric values) or others in a community (i.e., altruistic values) would have a direct relationship with looking for opportunities to improve the quality of the environment or well-being of others, respectively. Hence, biospheric values in particular as well as altruistic values are expected to predict sustainable entrepreneurship intentions and behaviours. In addition, undertaking the endeavour of sustainable entrepreneurship could also be appealing to people who strongly endorse egoistic values, if starting up a sustainable business is associated with personal gains such as financial profit or recognition. Similarly, if starting up a sustainable business is associated with having pleasure and fun, such as the pleasure of starting a new venture, one can imagine that people who strongly endorse hedonic values might also be interested in this endeavour. As such, different motivations might be at play to predict the intention and behaviour of sustainable entrepreneurship. An interesting question is whether sustainable entrepreneurs could strongly endorse two seemingly contradicting values, such as biospheric and egoistic values or whether two seemingly contradicting values could equally strongly and positively predict their behaviours. That is because according to Schwartz, values that are nested under opposing motivations, such as the motivation to self-enhance and self-transcendence, would be in conflict. In other words, biospheric and egoistic values, for example, should be in conflict with each other, leading to different choices and actions. Yet, sustainable entrepreneurship involves starting up a business, and characteristics such as independence and autonomy might facilitate this process despite being mainly associated with an egoistic self-concern. In addition, starting up a sustainable business inherently needs some form of financial gain in order for the enterprise to exist over time. This means that having



an egoistic motivation to make revenue might be crucial for the achievement of the normative biospheric goal of the enterprise. Hence, co-endorsement of egoistic and biospheric values could be important for starting, as well as for the success and scaling up of sustainable enterprises. This is an assumption that is yet to be investigated. In addition, it is also curious to investigate whether sustainable entrepreneurs are able to balance this seeming conflict of both doing good for the environment while being profitable, which we will discuss further.

### 3.2 Indirect Effect of Values via Intermediate Factors

Values are regarded as distal predictors of behaviour. As such, they are also thought to affect behaviour and intentions via some other intermediate variables. One theory that aims at explaining the indirect influence of values on behaviours is the value–belief–norm theory (VBN) (see Figure 6.2) by Stern (2000). The theory builds on the norm–activation model (NAM) (Schwartz, 1973) which argues that pro-environmental actions result from a moral normative process, whereby feeling a moral obligation to act pro-environmentally (i.e., personal norm) has a direct and strong influence on behaviour. This moral obligation stems from the belief that one can change the adverse environmental outcomes by changing their behaviour (i.e., outcome efficacy), which is a consequence of having awareness of environmental problems resulting from one’s individual behaviour (i.e., problem awareness). The VBN model explains what would ignite this process of norm activation to act pro-environmentally.

More specifically, Stern (2000) argues that values fuel this norm–activation process. Values colour beliefs and perceptions indeed (Steg et al., 2014a), meaning they make us think and reason in a certain way that is in line with our key values. According to the VBN theory, biospheric values specifically and altruistic values colour beliefs such that more importance is given to environmental problems, which increases awareness about these problems and the felt responsibility that one can help with the solution of these problems by changing unsustainable behaviours. This process results in feeling a strong moral obligation to act and change behaviour. The VBN, however, predicts that egoistic and hedonic values would either have no influence on the norm–activation process or a negative influence. For instance, it is expected that a strong concern for one’s personal benefits and pleasure (i.e., egoistic and hedonic values) might have a negative impact on problem awareness and outcome efficacy, as pro-environmental actions can be costly in terms of time or effort (Steg et al., 2014a), thereby having negative implications for the fulfilment of egoistic and hedonic values.

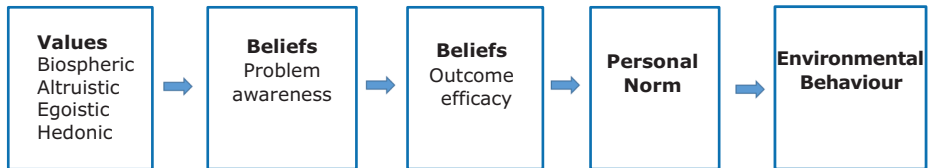
There has not been a full replication of the VBN theory yet to predict sustainable entrepreneurship intentions or related processes such as opportunity recognition. In a recent study, we tested whether values predict sustainable opportunity recognition via problem recognition, which we defined similar to problem awareness in VBN and

NAM (Enthoven, 2021). Findings revealed that biospheric values were positively related to both problem and opportunity recognition for sustainable entrepreneurship whereas egoistic values were negatively related. In addition, problem recognition mediated the effect of biospheric values on sustainable opportunity recognition (please see Enthoven, 2021 for a detailed account of the findings). As the recognition of sustainable opportunities is a first step to start a sustainable business, it is crucial to find factors that predict this process. Based on our study, we conclude that having a key concern for the environment (i.e., biospheric values) would fuel this process of opportunity recognition both directly but also indirectly by means of making the person aware of environmental problems (i.e., problem recognition). Hence, biospheric values seem to work as a general motivating factor for sustainable entrepreneurship processes.

Evidence from the study of Thelken and de Jong (2020) further supports the premise that biospheric values would have a positive relationship to sustainable entrepreneurship endeavours. Notably, it was found that intention to start a sustainable entrepreneurship endeavour was predicted by positive attitudes towards sustainable entrepreneurship, which had a strong relationship with holding biospheric values. The finding indicates that a strong concern for the environment not only colours beliefs as cognitive estimations but also attitudinal evaluations about what is favourable and unfavourable. A positive evaluation of sustainable entrepreneurship is then related to being more willing to start a sustainable business. Thelken and de Jong (2020) also found a weak albeit positive relationship with altruistic values and attitudes towards sustainable entrepreneurship as well as with hedonic values and attitudes towards sustainable entrepreneurship. As altruistic values are also a type of self-transcendence value, it is not surprising that altruistic values predict sustainable entrepreneurship processes positively. However, the finding on hedonic values might come as a surprise when one compares it to findings from environmental psychology literature, as mainly negative or no effects of hedonic values were shown in the literature (Jakovcevic & Steg, 2013; De Groot & Steg, 2008). It could be argued that a positive relationship with hedonic values gives support to the conceptualisation of Shepherd and Patzelt (2011) that entrepreneurship also focuses on aspects to be developed, such as personal outcomes like pleasure, which is a premise that needs to be investigated further.

In a similar vein, one could expect a positive relationship between egoistic values and attitudes towards sustainable entrepreneurship as egoistic values also put the emphasis on aspects to be developed, such as maximising positive outcomes for the self, in the form of making money or profit as well as in the form of gaining reputation. As argued by Dean and McMullen (2007), sustainable entrepreneurs could play a key role in changing market dynamics by finding sustainable and environmental solutions that are also profitable. In other words, sustainability and profitability need not exclude each other in sustainable entrepreneurship endeavours but can rather be used to support each other. If sustainable entrepreneurs are then those who value both sustainability and profitability, one might assume they would endorse both biospheric

and egoistic values or that egoistic values would also be related to sustainable entrepreneurship intentions, as discussed before. While such a relationship was not revealed in the study of Thelken and de Jong (2020), it is of interest for future research to look into whether egoistic values and biospheric values could go hand in hand in supporting sustainable entrepreneurship. This is an important question both on a theoretical level as well as practice level and it will also help with the previous call of having the need to do more research to understand which values drive sustainable entrepreneurship (Rajasekaran, 2013) and via which processes.



**Figure 6.2:** Value-belief-norm theory. Adapted from Stern (2000).

### 3.3 Indirect Effect of Values as a Moderator

Values as general motivating factors do not only predict behaviour indirectly via intermediate mediators like in the VBN model. Values could also interact with contextual factors in predicting sustainable actions and behaviours. In other words, values moderate the effect of contextual factors in predicting sustainable behaviours. For instance, in one study researchers investigated how cultural context interacts with entrepreneurship values in predicting owning an enterprise (Morales et al., 2019). They used two values from Schwartz's value conceptualisation that are most conventionally associated with entrepreneurship: self-enhancement and openness to change. Cultural context was measured with two dimensions from Schwartz's cultural classification, mastery and egalitarianism, which reflected expectations about how members of that country should behave (Schwartz, 1999) and that were found to be positively related to early stage entrepreneurial activity (Liñán, Fernández-Serrano, & Romero, 2013). As an example, in cultures that score high on mastery as opposed to harmony, people are expected to act independently, be assertive and make use of their skills to achieve goals. In cultures that value egalitarianism as opposed to hierarchy, people are considered equal and are encouraged to change the status quo rather than being confined in their social roles. Morales and colleagues (2019) found that values of openness to change and self-enhancement moderated the relationship between cultural context and having an enterprise. More specifically, a cultural context that values mastery and egalitarianism was found to be particularly stimulating for people with somewhat lower entrepreneurship values. When people had high entrepreneurship values then the cultural context did not matter

as people with high entrepreneurship values would pursue their goal irrespective of contextual support. In countries where sustainable entrepreneurship is not desired or supported, context might inhibit the flourishing of sustainable entrepreneurship. Values play a key role in motivating individuals to pursue sustainable entrepreneurship where contextual support is missing.

The supporting function of context has also been investigated in other studies in relation to different contextual factors. For instance, Ruepert, Keizer and Steg (2017) looked at perceived Corporate Environmental Responsibility (CER) among employees and how it affects pro-environmental actions at work. A positive perception of CER would be indicative of employees thinking that they are working in a context that prioritises environmental goals and that follows a roadmap and strategy to implement these goals. Findings revealed that perceived CER was positively related to pro-environmental actions at work, particularly for employees with weak to moderate biospheric values. This indicates that for those who are very strongly biospheric, contextual factors such as CER do not need to be in place. People with a very strong biospheric concern would carry out the desired actions anyway irrespective of contextual reminders or support. However, for those with a somewhat lower concern for the environment (weak or moderate biospheric values), contextual support would be needed to remind them about the right behaviour. Therefore, findings of Ruepert and colleagues suggest that CER could act like a contextual reminder for employees, motivating them to do the right thing even though they normally have a lower concern for the environment.

Perceptions about a sustainable entrepreneur at the workplace could act like a contextual factor as well. Sustainable entrepreneurs might have a transformational influence over their colleagues and employees by being a good role model with their own sustainable behaviour at work as well as with their sustainable business goals for the enterprise. This is an important leadership role given that employee pro-environmental behaviour at work could help with the reduction of CO<sub>2</sub> emissions. In a recent replication of this theorisation of Ruepert and colleagues (2017), we investigated whether perceived environmental transformational leadership would indeed positively impact pro-environmental intentions at work (Sarař, Ŭnal, & De Jong, forthcoming). Environmental transformational leadership is defined as being able to create a concrete environmental vision at work and inspiring employees to follow that vision without being coercive, but rather by being an inspiring role model (Graves, Sarkis, & Zhu, 2013). We found that perceived environmental transformational leadership is related to acting pro-environmentally at work, particularly among those with a lower concern for the environment (weak biospheric values). Similarly, environmental transformational leadership was related to a higher intrinsic motivation to act pro-environmentally at work, particularly among those who are normally not concerned for the environment. Our findings, therefore, support the theoretical reasoning of Ruepert and colleagues (2017) by showing that environmental transformational leadership could also act like a contextual factor supporting employee pro-environmental behaviour.

As sustainable entrepreneurs are usually those with a strong focus on protecting the environment and sustaining natural resources, they can be regarded as environmental leaders as well. Therefore, they could act like transformational leaders in the workplace who are capable of having an influence on daily pro-environmental decisions of their employees. On top of the positive impact they can create with a sustainable business, they could also impact employee behaviours at work positively, which would be another way to help reduce CO<sub>2</sub> emissions resulting from unsustainable businesses and practices.

## 4 Conclusions

Sustainable entrepreneurship is a field that is rapidly growing but still in its infancy. We need theories that are particularly relevant for research and applications in the field. We argue that existing theories from environmental psychology can be used and replicated in the field of sustainable entrepreneurship in order to test whether they are readily applicable. That is because sustainable entrepreneurship is a domain that involves various actions and intentions that are pro-environmental. In addition, new theories can be developed based on insights from environmental psychology that can explain not only sustainable entrepreneurship intentions and behaviours but also related processes, such as sustainable problem and opportunity recognition.

The current chapter had the aim to introduce an alternative value conceptualisation adapted from Schwartz's value theory, that is specific to the study of pro-environmental actions, and that is currently the prominent approach to study the motivational roots of pro-environmental actions (Steg et al., 2014a). We provided a summary of the literature on how values might directly or indirectly influence pro-environmental intentions and actions, and which theories, like the value-belief-norm theory, are applicable to understand the process behind value-driven decisions for sustainable behaviours. Next, we discussed how this specific value conceptualisation could predict sustainable entrepreneurship intentions and behaviours, and via which processes. Finally, we also mentioned new avenues for research in sustainable entrepreneurship, which we will elaborate on.

One line of research that is currently missing is whether self-transcendence values drive intentions and actions to become a sustainable entrepreneur or not. While self-enhancement values have been conventionally put together with entrepreneurship, we reason that self-transcendence values could be equally, if not more, related to sustainable entrepreneurship intentions and behaviours. As scholars nested different values under the dimension of self-transcendence (De Groot & Steg, 2008; Schwartz, 2012; Stern et al., 1998; Steg et al., 2014a), we propose to particularly focus on biospheric and altruistic values as these were found to provide a stable basis for pro-environmental actions in general (De Groot & Steg, 2009). How would biospheric and altruistic values uniquely

contribute to the prediction of sustainable entrepreneurship intentions? How are they related to the processes involved in sustainable entrepreneurship such as problem recognition? As biospheric and altruistic values might also be in conflict when the person needs to choose between engaging in an environmental versus pro-social action, a related research question is whether different forms of sustainable entrepreneurship (i.e., focusing on preserving the well-being of the environment versus well-being of communities and others) are rooted in different values. In line with this argument, one might expect altruistic values to be more strongly associated with social entrepreneurship than sustainable entrepreneurship for instance, as this would put the emphasis on improving the well-being of communities and others, which needs to be tested by future research.

A second line of research follows from the first one and concerns whether the seemingly contradicting values under self-enhancement and self-transcendence could actually be less conflicting in the domain of sustainable entrepreneurship. This can be studied by asking for value prioritisations and linking these to sustainable entrepreneurship intentions and processes, such as sustainable problem and opportunity recognition. For instance: do biospheric and egoistic values predict sustainable entrepreneurship intentions positively and equally strongly? And how are these values prioritised by sustainable entrepreneurs?

A third line of research is to study how sustainable entrepreneurs would deal with sustainability challenges in the face of scaling up. Indeed, a fast scaling up of enterprises associated with economic growth might pose dangers to sustainability, which might threaten the fulfilment of biospheric motivations. How would sustainable entrepreneurs deal with such challenges and how would they ensure to safeguard sustainability in the face of high profitability? In a similar vein, prioritising sustainability at the start-up phase could jeopardise profitability, leaving the sustainable entrepreneur with the danger of ceasing their business ventures (Thelken, Únal, & Enthoven, 2021). As such, it is important to study how sustainable entrepreneurs find a balance between the fulfilment of sustainability and economic goals, and whether these goals are directly related to their strongly endorsed values.

A final and fourth line of research concerns the study of cultural context and how it might facilitate or impair the emergence of sustainable entrepreneurs. The dominant view of cultural context having a strong and direct influence on entrepreneurship likelihood is already challenged (Stephan & Pathak, 2016). Indeed, cultural context, described by using aggregate values as representing the context, is shown to be a distal and mainly an indirect predictor of entrepreneurship endeavours (Stephan & Uhlaner, 2010; Stephan & Pathak, 2016). How does cultural context exert its influence? What are some relevant mediating and moderating factors that can explain the influence of cultural context particularly for sustainable entrepreneurship likelihood?

The field of sustainable entrepreneurship will be strengthened when research is more theory based and where applications come from theory. We invite scholars to explore the potential of other theories from environmental psychology to be used in sustainable entrepreneurship research.

## References

- Bouman, T., Steg, L., & Kiers, H. A. (2018). Measuring values in environmental research: A test of an environmental portrait value questionnaire. *Frontiers in Psychology, 9*, 564.
- Dean, T. J., & McMullen, J. S. (2007). Toward a theory of sustainable entrepreneurship: Reducing environmental degradation through entrepreneurial action. *Journal of Business Venturing, 22*(1), 50–76.
- De Groot, J. I., & Steg, L. (2008). Value orientations to explain beliefs related to environmental significant behavior: How to measure egoistic, altruistic, and biospheric value orientations. *Environment and Behavior, 40*(3), 330–354.
- De Groot, J. I., & Steg, L. (2009). Mean or green: Which values can promote stable pro-environmental behavior? *Conservation Letters, 2*(2), 61–66.
- Elkington, J. (2004) Enter the triple bottom line. In A. Henriques & J. Richardson (Eds.), *The Triple Bottom Line, Does It All Add Up? Assessing the Sustainability of Business and CSR* pp. 1–16. London: Earthscan Publications Ltd.
- Enthoven, M. (2021). *Unpacking opportunity recognition for sustainable entrepreneurship*. Doctoral Dissertation. University of Groningen.
- Fayolle, A., Liñán, F., & Moriano, J. A. (2014). Beyond entrepreneurial intentions: Values and motivations in entrepreneurship. *International Entrepreneurship and Management Journal, 10*(4), 679–689.
- Gorgievski, M. J., Ascalon, M. E., & Stephan, U. (2011). Small business owners' success criteria, a values approach to personal differences. *Journal of Small Business Management, 49*(2), 207–232.
- Graves, L. M., Sarkis, J., & Zhu, Q. (2013). How transformational leadership and employee motivation combine to predict employee proenvironmental behaviors in China. *Journal of Environmental Psychology, 35*, 81–91.
- Hueso, J. A., Jaén, I., Liñán, F., & Basuki, W. (2020). The influence of collectivistic personal values on the formation of entrepreneurial intentions. *International Small Business Journal, 38*(5), 449–473.
- Intergovernmental Panel on Climate Change (IPCC) (2022). Summary for policymakers. In H.-O. Pörtner, D. C. Roberts, E. S. Poloczanska, K. Mintenbeck, M. Tignor, A. Alegría, M. Craig, S. Langsdorf, S. Lösschke, V. Möller & A. Okem (Eds.), *Climate Change 2022: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* Cambridge: Cambridge University Press.
- Jakovcovic, A., & Steg, L. (2013). Sustainable transportation in Argentina: Values, beliefs, norms and car use reduction. *Transportation Research Part F: Traffic Psychology and Behaviour, 20*, 70–79.
- Kirkley, W. W. (2016). Entrepreneurial behaviour: The role of values. *International Journal of Entrepreneurial Behavior & Research, 22*(3), 290–328.
- Kuckertz, A., & Wagner, M. (2010). The influence of sustainability orientation on entrepreneurial intentions – Investigating the role of business experience. *Journal of Business Venturing, 25*(5), 524–539.
- Liñán, F., Fernández Serrano, J., & Romero, I. (2013). Necessity and opportunity entrepreneurship: The mediating effect of culture. *Revista de Economía Mundial, 33*, 21–47.
- McGrath, R. G., MacMillan, I. C., & Scheinberg, S. (1992). Elitists, risk-takers, and rugged individualists? An exploratory analysis of cultural differences between entrepreneurs and non-entrepreneurs. *Journal of Business Venturing, 7*(2), 115–135.
- Morales, C., Holtschlag, C., Masuda, A. D., & Marquina, P. (2019). In which cultural contexts do individual values explain entrepreneurship? An integrative values framework using Schwartz's theories. *International Small Business Journal, 37*(3), 241–267.
- Muñoz, P. (2017). A cognitive map of sustainable decision-making in entrepreneurship: A configurational approach. *International Journal of Entrepreneurial Behavior & Research, 24*(3), 787–813.

- Namazkhan, M. (2022). Modeling household energy consumption to understand sustainable energy behaviour: An integrated approach. Doctoral Dissertation. University of Groningen.
- Nordlund, A. M., & Garvill, J. (2003). Effects of values, problem awareness, and personal norm on willingness to reduce personal car use. *Journal of Environmental Psychology, 23*(4), 339–347.
- Perlaviciute, G., Steg, L., Contzen, N., Roeser, S., & Huijts, N. (2018). Emotional responses to energy projects: Insights for responsible decision making in a sustainable energy transition. *Sustainability, 10* (7), 2526.
- Rajasekaran, B. (2013). Sustainable entrepreneurship: Past researches and future directions. *Journal of Entrepreneurship and Management, 2*(1), 20.
- Ruepert, A. M., Keizer, K., & Steg, L. (2017). The relationship between corporate environmental responsibility, employees' biospheric values and pro-environmental behaviour at work. *Journal of Environmental Psychology, 54*, 65–78.
- Santos, S. C., Neumeyer, X., Caetano, A., & Liñán, F. (2021). Understanding how and when personal values foster entrepreneurial behavior: A humane perspective. *Journal of Small Business Management, 59*(3), 373–396.
- Saral, H. C., Unal, A. B., & De Jong, G. (forthcoming). Exploring the direct and indirect mechanisms behind the influence of environmental transformational leadership on employee green behaviors.
- Schwartz, S. H. (1973). Normative explanations of helping behavior: A critique, proposal, and empirical test. *Journal of Experimental Social Psychology, 9*(4), 349–364.
- Schwartz, S. H. (1992). Universals in the content and structure of values: Theoretical advances and empirical tests in 20 countries. *Advances in Experimental Social Psychology, 25*, 1–65.
- Schwartz, S. H. (2012). An overview of the Schwartz theory of basic values. *Online Readings in Psychology and Culture, 2*(1), 2307–2919.
- Schwartz, S. H., & Bardi, A. (2001). Value hierarchies across cultures: Taking a similarities perspective. *Journal of Cross-cultural Psychology, 32*(3), 268–290.
- Schwartz, S. H. (1999). A theory of cultural values and some implications for work. *Applied Psychology, 48*(1), 23–47.
- Shane, S., & Venkataraman, S. (2000). The promise of entrepreneurship as a field of research. *Academy of Management Review, 25*(1), 217–226.
- Shepherd, D. A., & Patzelt, H. (2011). The new field of sustainable entrepreneurship: Studying entrepreneurial action linking 'what is to be sustained' with 'what is to be developed'. *Entrepreneurship Theory and Practice, 35*(1), 137–163.
- Steg, L., Bolderdijk, J. W., Keizer, K., & Perlaviciute, G. (2014a). An integrated framework for encouraging pro-environmental behaviour: The role of values, situational factors and goals. *Journal of Environmental Psychology, 38*, 104–115.
- Steg, L., Dreijerink, L., & Abrahamse, W. (2005). Factors influencing the acceptability of energy policies: A test of VBN theory. *Journal of Environmental Psychology, 25*(4), 415–425.
- Steg, L., Perlaviciute, G., Van der Werff, E., & Lurvink, J. (2014b). The significance of hedonic values for environmentally relevant attitudes, preferences, and actions. *Environment and Behavior, 46*(2), 163–192.
- Stephan, U., & Pathak, S. (2016). Beyond cultural values? Cultural leadership ideals and entrepreneurship. *Journal of Business Venturing, 31*(5), 505–523.
- Stephan, U., & Uhlaner, L. M. (2010). Performance-based vs socially supportive culture: A cross-national study of descriptive norms and entrepreneurship. *Journal of International Business Studies, 41*(8), 1347–1364.
- Stern, P. C., Dietz, T., & Guagnano, G. A. (1998). A brief inventory of values. *Educational and Psychological Measurement, 58*(6), 984–1001.
- Stern, P. C. (2000). New environmental theories: Toward a coherent theory of environmentally significant behavior. *Journal of Social Issues, 56*(3), 407–424.



- Thelken, H. N., & de Jong, G. (2020). The impact of values and future orientation on intention formation within sustainable entrepreneurship. *Journal of Cleaner Production*, 266, 122052.
- Thelken, H. N., Ünal, A. B., & Enthoven, M. P. M. (2021). Individual resolution of (paradoxical) tensions between economic and sustainable goals in growing sustainable enterprises. Working paper. Included in the *Academy of Management Proceedings* as Cognitive Strategies to Resolve Paradoxical Tensions in Sustainable Enterprises.
- Thøgersen, J., & Ölander, F. (2002). Human values and the emergence of a sustainable consumption pattern: A panel study. *Journal of Economic Psychology*, 23(5), 605–630.
- Ünal, A. B., Steg, L., & Gorsira, M. (2018). Values versus environmental knowledge as triggers of a process of activation of personal norms for eco-driving. *Environment and Behavior*, 50(10), 1092–1118.
- Ünal, A. B., Steg, L., & Granskaya, J. (2019). 'To support or not to support, that is the question'. Testing the VBN theory in predicting support for car use reduction policies in Russia. *Transportation Research Part A: Policy and Practice*, 119, 73–81.