THE ROLE OF BEHAVIORAL CONTROL, IMAGINATION, AND MINDFULNESS IN INCLUSIVE INNOVATION BEHAVIOR

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Abstract
Inclusive innovation holds that effective management includes fundamental responsibilities in the strategies and operations of a firm. Yet, social dynamic processes play a key role in how responsible behaviors, and consequently inclusive innovation, is realized. We extend the social dynamic process model of responsible behavior by deepening its four constituent social processes with relevant literatures. First, we specify the 'weighing values and norms' process by applying the Triple Theory of Parfit to the organizational context. Second, we expand the 'addressing responsibility' process with literature on behavioral control within an agency perspective and make a link with learning. Third, imagination is put forward as the underlying mechanism for both the 'analyzing the situation' process as well as for anticipating and learning responsible behavior. Fourth, we point out how the 'taking distance' process is very similar to the concept of mindfulness. Based on our review of the related literatures, we propose an innovation decision-making model that explicitly includes responsible behavior. This model we call the inclusive innovation behavior model. Finally, we draw implications for inclusive innovation research and practice.

Keywords: inclusive innovation, responsible behavior, control, imagination, mindfulness, social dynamic processes

Introduction

Arguably the simplest definition of innovation is the achievement of culturally defined goals by non-institutionalized means (Merton, 1968). As such, innovations might be seen as illegitimate or even immoral – depending on their impact. Innovation in firms therefore revolves around a fine balance between following general organizational rules for ethical decision-making and providing space for more individual and contextualized considerations. Nijhof, Fisscher and Looise (2000) label the former the formal approach, while the latter is

labeled as either the monological or dialogical approach. The monological approach focuses on enabling and encouraging people to reflect on their own values, while the dialogical approach focuses on communication to determine if behavior is responsible. These three approaches are arguably rooted in the three major streams in moral philosophy: consequentialism, deontology, and contractualism (Parfitt, 2011).

However, Parfitt argues that these three major streams are not in conflict and ultimately lead to the same stance, labeled the Triple Theory, which is that "An act is wrong just when such acts are disallowed by some principle that is optimific, uniquely universally willeable, and not reasonably rejectable" (2011: 413). When we limit this view to the firm context, behavior is irresponsible when it threatens a firms' *long term profitability*, violates a firm's *rules and procedures* and goes against *shared firm values*. Thus, behavior that for instance breaks firm rules and procedures – but not the other two principles – cannot be seen as irresponsible according to the Triple Theory. One might argue that, based on this position, for example bribing could be considered responsible behavior. Yet, since bribing will most probably be in conflict with national legal regulation, such behavior will threaten long-term profitability – and perhaps even a firm's existence – as it risks severe legal, economic, and moral sanctions when such behavior comes to light.

Interestingly, Nijhof, Fisscher and Looise (2002) already described under the rubric of 'inclusive innovation' how effective management includes fundamental social responsibilities in a firm's strategy and operations. Hence, emphasizing the relation between the deontological and consequentalist streams in moral philosophy. However, they also pose that dialogue should be the basis for developing a code of conduct and thus prelude to the combination of the three streams in the Triple Theory of Parfitt. Yet, additionally, Nijhof, Fisscher and Looise (2002) also bring to the fore that intentions stated in codes of conduct only become effective when they are reflected in actual behaviors in firms. Indeed, research needs to go beyond the development of tools and methods for incorporating socially responsible behavior and focus on how to improve the actual *implementation*, i.e. uptake in daily practice, of such tools and methods.

One of the few, if not the only study in this domain proposes a social dynamic process model of responsible behavior (Fisscher, Nijhof & Steensma, 2003). Four key processes related to *acting* upon a sense of moral responsibility were uncovered from moral dilemma narratives: 'weighing values and norms,' 'taking distance,' 'analyzing the situation,' and 'addressing responsibility.' According to the model these four processes all influence how one *deals with responsibilities*, which in turn leads to certain effects. These effects could then either be anticipated and/or provide a basis for learning from the situation at hand (Fisscher, Nijhof, Steensma, 2003; Figure 1). In this paper we aim to extend this social dynamic process model of responsible behavior by refining and extending the original four key processes in the social dynamic process model of responsible behavior. We do this by extending the model with the concepts of control, imagination, and mindfulness; while the aforementioned Triple Theory for firms may be seen as a general principle for inclusive innovation behavior in the 'weighing values and norms' process (see Figure 1).

The structure of the paper is as follows: first we briefly discuss the concept of agency, based on which we discuss the role of control in responsible behavior and its relation with the

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'addressing responsibility' process and learning. Next, we introduce the concepts of imagination and mindfulness as they are closely related to the 'analyzing the situation' and 'taking distance' processes respectively. Finally, we refine and extend the social dynamic process model of responsible behavior with the aforementioned concepts and Triple Theory based responsible behavior framework.
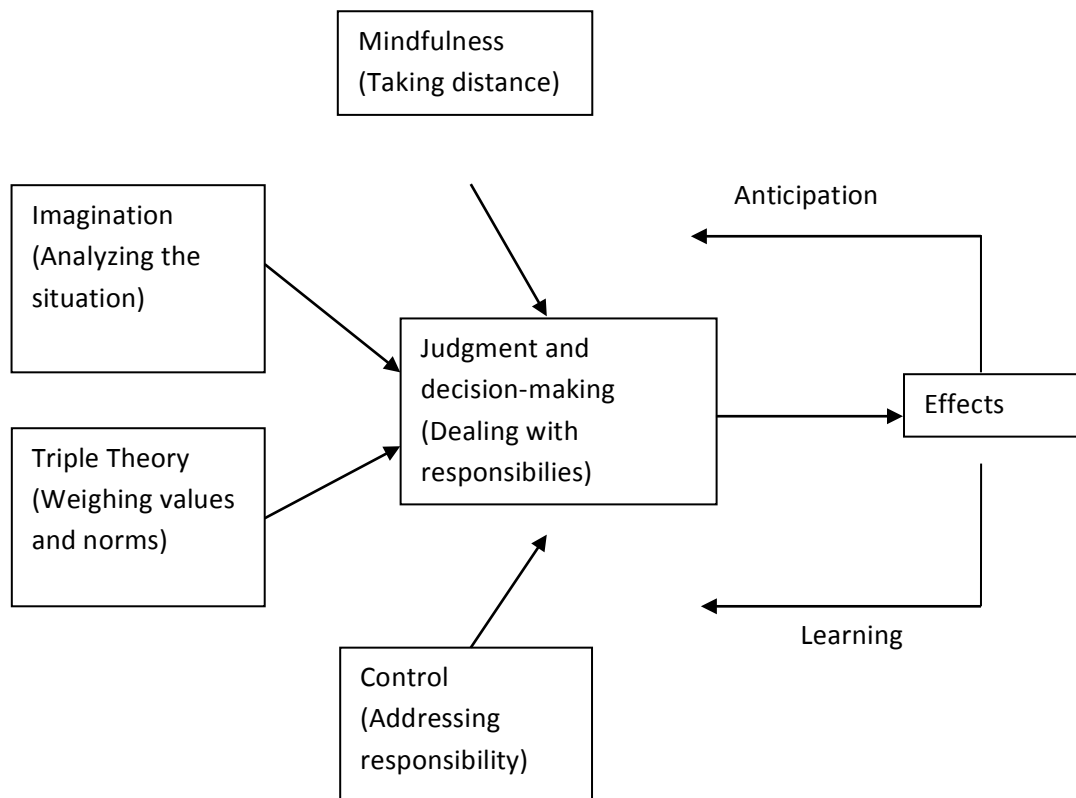

Figure 1:
Inclusive innovation judgment and decision-making model based on the social dynamic process model of responsible behavior

Control

The exercise of control – be it by managers, employees or relevant other stakeholders and over oneself or others – is fundamental to responsible behavior and thus inclusive innovation. Without control over others, standards of behavior cannot be enforced, while control over oneself is fundamental to be held responsible. Hence, control is related to agency and the capacity to make a difference. Therefore, we first briefly demarcate the concept of agency, then elaborate on the concept of control – particularly behavior control – and its relation with the 'addressing responsibility' process. Also, we make the relation between control and learning explicit.

What is agency?

Agency can be described in terms of selfhood, motivation, will, purposiveness, intentionality, choice, initiative, freedom, or creativity. In their seminal paper on agency, Emirbayer and Mische (1998: 963) make a call to "reconceptualize human agency as a temporary embedded process of social engagement, informed by the past (in its habitual aspect), but also oriented toward the future (as a capacity to imagine alternative possibilities) and toward the present (as a capacity to contextualize past habits and future projects within the contingencies of the moment)."

In their reconceptualization of human agency Emirbayer and Mische (1998) distinguish three constitutive elements: the iterational, the projective and the practical-evaluative. The iterational element is characterized by the selective reactivation of past patterns of thoughts and action. The projective element is characterized by the imaginative generation of possible future trajectories of action. And, finally, the practical-evaluative element is characterized by the practical and normative judgments among alternative possible trajectories of action. It is exactly this practical-evaluative element where one *deals with responsibility*, although behavior will also be orientated on the future –in the form of anticipated effects– and informed by the past – in the form of learning from experience. What we find appealing in the reconceptualization by Emirbayer and Mische, is the combination of the past and future into the present. Hence, agency is directed towards a concrete envisioned future goal, which is more than just a want or an undefined motive. Or formulated more eloquently: human intelligence is based on the capacity to "read future results in present on-goings" (Dewey 1981: 69).

Control and the 'addressing responsibility' process

One can only attribute responsibility to a person, when there is agency, i.e. a person can choose to make a difference. This holds that for one to be responsible, one should be able to control the situation in one way or the other. Indeed, control is a central concept in responsible behavior (Fisscher, Nijhof, Steensma, 2003). There is a substantial body of literature on how people experience control under the rubric of (perceived) behavioral control (Ajzen 1991).

Actual behavioral control refers to the extent to which a person actually has the skills, resources, and other prerequisites needed to perform a given behavior. Perceived behavior control then refers to people's perceptions of their ability to perform a given behavior. Perceived behavior control was mostly built on perceived self-efficacy (Bandura 1994). However, recent research (see, Ajzen 2002) has demonstrated that the overarching concept of perceived behavioral control is comprised of two components: self-efficacy and controllability. Perceived self-efficacy refers to "beliefs in one's capabilities to organize and execute the courses of action required to produce given levels of attainments" (Bandura 1998: 624). This perceived ease or difficulty of performing a behavior should be distinguished from perceived controllability: "beliefs about the extent to which performing the behavior is up to the actor" (Ajzen 2002: 672).

A third dimension related to both self-efficacy and controllability is the concept of locus of control (Lefcourt 1966; Rotter 1966, 1982). A person has an external locus of control when he or she believes an event is not entirely contingent upon his or her action, due to, for

instance, luck, chance, fate, powerful others, or unpredictable forces. If the person perceives that the event is contingent upon his or her own behavior, he or she has a belief in internal control. Note that self-efficacy expectations do not necessarily correspond to beliefs about internal control factors and that controllability expectations have no necessary basis in the perceived operation of external factors. Instead, Ajzen (2002) suggests that self-efficacy and controllability may both reflect beliefs about the presence of both internal and external factors. For example, a R&D manager may believe that developing a new product results in higher R&D performance (internal locus of control), may believe that s\he can decide, i.e. has the authority, to develop a new product (high controllability), but may not believe s\he is capable to develop a new product (low self-efficacy).

These three constituent elements of behavioral control may help in unraveling the complexity of business situations (Fisscher et al., 2003). Since facts, impressions, and interpretations are blended, addressing responsibility very much depends on the perception of control. Towards the future, effects of addressing responsibility will lead to learning, which is also related to control.

Control and learning from effects

The social dynamic process model of responsible innovation poses that, based on the effects of behavior, learning will take place, which feeds back in to dealing with future responsibility issues. Interestingly, control also has a substantial role in the learning process, as we know general consensus exists in adult learning theory on the importance of learner control (Illeris, 2004; Kessels & Poell, 2004; Knowles et al., 2005). Individuals are assumed to be able to make their own choices, weigh their options and make responsible, well-informed decisions in their own interest (Kessels & Poell, 2004). Moreover, learning develops most quickly when individuals clearly take responsibility for their own learning process.

Yet, most people have a tendency to avoid taking responsibility for their own learning process, especially in the beginning. It is, therefore, crucial that the firm, when dealing with moral dilemmas, does not take back this responsibility by enforcing coercive procedures and guidelines of the formal approach, but instead enables employees to develop from a dependent to a self-directed learner (Illeris, 2004; Knowles et al., 2005) when it comes to ethical decision-making.

With its roots in adult education, self-directed learning has a history of learning outside school environments (Loyens et al., 2008; Merriam, 2001). Self-directed learning was first defined by Tough (1967) as widespread and systematic learning that is part of everyday life and does not depend on an instructor or a classroom. His study of this type of learning provided a significant boost to the field of adult education (Merriam, 2001). Also, Knowles' main assumption in describing the adult learner is that learners become increasingly self-directed as they mature (Knowles et al., 2005; Merriam, 2001). He defined self-directed learning as "a process in which individuals take the initiative, with or without the help from others, in diagnosing their learning needs, formulating goals, identifying human and material resources, choosing and implementing appropriate learning strategies, and evaluating learning outcomes" (Knowles, 1975). Later studies add that self-directed learning entails having both the willingness to engage in the learning activities, as well as the ability to do so (Loyens et al., 2008). Two main conclusions can be drawn from the relation between control

and learning. First, taking at least some responsibility is crucial for learning from the situation at hand. Second, firms that desire responsible innovation behavior, need to consider thoroughly in which way they encourage their employees to act responsibly. This holds, that simple procedures and guidelines do not instill inclusive innovation behaviors.

Imagination

Whereas control is essential for both addressing responsibility and actually feeling responsible, one will also need to 'analyze the situation.' When analyzing the situation a number of questions may be raised (see, Fisscher et al, 2003). What are the facts and what are interpretations and suppositions? What motives and intentions may people have? What could be the effect of an action? In answering such questions people strongly depend on their imagination. Although 'imagination' is often used in everyday language, both as a noun and as a verb, conceptual clarity appears to be lacking. Most work on imagination, or mental simulation as it is also called, is done in the fields of philosophy and psychology. Within philosophy, Kant (1781) described imagination as connecting elements by forming an image. Nowadays, the work on imagination in philosophy can be broadly divided in two groups. One group focuses on the output of imagination such as mental images, sensations and concepts or the mental representation of a thing (Gendler, 2011). The other group focuses on the process of imagination by describing imagination as putting together previously isolated items by finding unsuspected connections (Mills, 1959).

Different types of imagination

We aim to provide a rudimentary typology of different streams of imagination and draw implications for inclusive innovation. We base our typology on the comprehensive work of Tversky and Kahneman (1974), Gendler (2011), and Markman, Klein and Suhr (2009). Although their different categorizations are, at least not in all cases, easily mapped onto each other, we did derive five specific forms of imagination. These five are: prospective thinking, counterfactual thinking, perspective taking, motor skills, and memory (see Table 1).

	Kahneman & Tversky (1982)	Gendler (2011)	Markman, Klein & Suhr (2009)
Prospective thinking	Prediction	The role of imagination in counterfactual reasoning, and in planning for the future	Simulating and preparing for the future
	Assessing conditioned probabilities		
	Assessing the probability of a specified event		
Counterfactual thinking	Counterfactual assessments		Counterfactual thinking: simulating the past
	Assessments of causality		
Perspective taking		The role of imagination in enabling empathy and perspective taking	Perspective taking: simulating other minds
			Alternatives and alternate selves
Motor skills		The role of imagination in the mental simulation of action and behavior	The mental simulation of action and behavior
Memory		The relation between imagination and memory	Mental simulation and memory

Table 1:
Different types of imagination

The first stream of research, prospective thinking, deals with how people simulate future events. Kahneman and Tversky (1982) recognize three different judgmental activities in which mental simulation is involved to imagine the future. First, *prediction* is about predicting a situation or events in general. For instance, one can imagine that a newly developed product will be a big success in the market. Second, *assessing the probability of a specified event*. How does an R&D manager assess the likelihood of having sold a newly developed product a thousand times in the coming three years? The difference with the previous case is that here a future state is specified and the R&D manager will try to obtain some measure of the "ease" with which this future state can be reached, within the constraints of a realistic model of the economic situation and market conditions. Third, *assessing conditioned probabilities.* An R&D manager may ask himself: "If the economy goes down into a double-dip, what are the likely consequences for my R&D department?" The difference between this simulation and the previous simulation is that it starts from an initial situation and first this situation needs to be reached before the simulation becomes relevant. This means that an interesting ambiguity exists: what changes should be made in one's current situation *before* the simulation can become relevant? Are there only a few and easy changes or many big changes? The scale and scope of change will affects its probability. In the responsible behavior model, prospective thinking is related to how people *anticipate* effects of their behavior.

The second stream of research, counterfactual thinking, deals with how people simulate past events and their consequences. Kahneman and Tversky (1982) recognize two different

judgmental activities in which mental simulation is used to imagine the past. First, *counterfactual assessment.* What would have happened if we had not spend so much money on the development of that product three years ago? Counterfactual simulations can be used to mentally modify a past event and simulate what would have happened and how it would affect the present (Byrne, 2008; Roese, 1997). Second, *assessment of causality.* To mentally test whether the new knowledge management system caused an increase in new products developed, we may undo the new knowledge management system in our mind, and observe whether the increase in new products developed still occurs in the simulation. Where counterfactual assessment focuses the question 'would the outcome be the same if something else had happened?', the assessment of causality focuses on the question 'did an event actually have an effect on the outcome?' Gendler (2011) and Markman, Klein and Suhr (2009) also recognize the possibility of simulating past and future events. Gendler (2011) does not distinguish between the different types of event simulation at all, whereas Markman, Klein and Suhr (2009) only distinguish between future and past events. Counterfactual thinking is important in *learning* from experienced ethical dilemmas and how behaving differently would have affected the outcome.

Yet, Gendler (2011) and Markman, Klein and Suhr (2009) do recognize two other streams of imagination research, which Kahneman & Tversky (1982) do not mention: perspective taking and motor simulation. The third stream focuses on the possibility to imagine other people's response by perspective taking. Perspective taking holds that one puts oneself in the shoes of someone else and, as a process, it is closely related to empathy. Designers of a new product, for example, could imagine how customers would use their products and what specific design aspects might be appealing to customers. Perspective taking is essential for the *anticipation* of other people's responses to responsible behavior.

The fourth stream of research focuses on the possibility to imagine action and behavior by motor simulation and mental practice. Although this may be a less important stream of imagination research for innovation management, a production team may imagine how they can work more efficiently by moving around less in a factory. With regards to responsible behavior, especially imagining the impact of gestures and facial expressions will strongly influence how behavior is interpreted. If what one is saying is not aligned to ones physique, this might be interpreted as insincere. Hence, this type of imagination moderates the effect of (ir)responsible behavior.

The fifth stream of research is on the relation between imagination and memory. A memory is the mental representation of a past event. It can be distinguished from the mental representation of a present event, which is called a perception, and the mental representation of a (possible) future event, which is called a simulation (Gilbert & Wilson, 2007). Each time a memory is recalled, the memory actually gets restored again, which might lead to changes in the memory itself. It might even happen that some simulations are stored as 'memories' of the past, although the event in reality did not happen. Also important within this area is how memory is used to imagine the future. To imagine the future, one often needs to draw on the past. When a brand known for its reliability launches a new product, an individual consumer will attribute a problem to for instance bad luck while a less reliable brand will immediately be blamed for making the low quality products.

Also this type of imagination is related to learning as one recalls past experiences with moral dilemmas.

Imagination can be a process and output. In the examples provided, we demonstrate that the different types of imagination are related to 'analyzing the situation,' but are also linked to anticipating future events (prospective thinking and perspective taking), and learning from past experience (counterfactual thinking and memory). Additionally, motor simulation will have a moderating effect on the interpretation of (ir)responsible behavior.

Mindfulness

When people use their imagination in the 'analyze the situation' process, it might be beneficial to take some distance from the situation at hand. Distance creates room for weighing carefully all the relevant values, facts, and viewpoints (Fisscher et al., 2003). A concept that is very similar to the idea of 'taking distance' is that of mindfulness. Although research on mindfulness in the management field remains limited (Dane, 2011), the concept of mindfulness has received moderate attention from the late eighties onward, mostly by the work of Karl Weick and associates (e.g., Levinthal & Rerup 2006; Rerup 2005; Weick 1987; Weick & Putnam 2006; Weick & Roberts 1993; Weick & Sutcliffe 2001, 2006; Weick et al. 1999). In explaining the relevance of mindfulness, Weick points to Chia (2005: 1092) who describes managing as "firstly and fundamentally the task of becoming aware, attending to, sorting out and prioritizing an inherently messy, fluxing, chaotic world of competing demands that are placed on a manager's attention." However, the use of the term is somewhat ambiguous as at least two streams of mindfulness – a Western and an Eastern view – can be distinguished (Weick & Putnam 2006; Weick & Sutcliffe 2006).

The Western view is represented by, for instance, Weber and Johnson (2009) who state that mindfulness comes into play when awareness is combined with the process of attention-guided encoding and evaluation of a certain situation. Central in this view is the work of Langer (1989), who relates mindfulness to having implicit awareness of context and informational content; mindfulness consists of active differentiation and refinement of existing categories, creation of new categories, and a nuanced appreciation for context. Therefore, Western mindfulness is as much about attention as it is about encoding. Levinthal and Rerup (2006) draw heavily on the work of Langer. The consequence of such processing is that concepts, labels, ideas and judgments are often imposed, often automatically, on everything that is encountered. For example, Frable, Blackstone, and Scherbaum (1990) found that people with a non-visible 'deviation' from the social norm (e.g., being epileptic, an abuse victim, wealthy, gay) were more mindful in interaction when they wanted to prevent disclosure of this 'deviation,' which could lead to stereotyping/stigmatizing. Also, "Starbuck (1993) suggests that good doctors do not base their treatments on diagnosis. They leave diagnosis out of the chain between symptoms and treatment because it discards too much information and injects random errors" (Weick 1998: 550). Hence, the Western view of mindfulness has the risk of furnishing superficial, incomplete, or distorted pictures of reality (Brown et al. 2007). In our view this Western notion of mindfulness fits more closely with the 'analyzing the situation' process, and hence we turn to the Eastern view for extending the 'taking a distance' process.

The Eastern view of mindfulness precedes conceptualization. "Mindfulness is moment-to-moment nonreactive, nonjudgmental awareness" (Kabat-Zinn 2002: 69). More precisely, mindfulness can be described as "purposely placing one's attention in the present in a non-judgmental way while limiting evaluative thought processes" (Stauffer 2007). Before, we referred to Brown, Ryan and Creswell's seminal review of mindfulness research, who define mindfulness as "receptive attention to and awareness of present events and experience" (Brown et al. 2007: 212). Here, awareness is the conscious registration of stimuli and when a stimulus is sufficiently strong, attention is engaged, which is manifest as an initial 'taking notice' of, or 'turning toward' the object. In contrast to the Western, more conceptual, model of processing, an Eastern mindful mode of processing involves a receptive state of mind, wherein attention is kept to a bare registration of the facts observed. Mindfulness "involves the capacity to be aware of internal and external events and occurrences as phenomena, rather than the object of a conceptually constructed world, [...] consciousness takes on a clarity and freshness that permits more flexible, more objectively informed psychological and behavioral responses" (Brown et al. 2007: 212).

Mindfulness is however not to be mistaken with concentration. Primarily, mindfulness involves a voluntary fluid regulation of states of attention and awareness, zeroing in on specific details, or zooming out to gain a larger perspective on what is taking place. And finally, mindfulness is present-oriented which actually promotes self-control and more effective goal attainment. Eastern mindfulness is not antithetical to the pursuit of goals, but the nature of that pursuit is likely to be selective. Goal pursuit is more in line with self-endorsed, intrinsic goals and values, and a perception of having 'enough,' while less entangled with wants and desires (Brown et al. 2007). There is also preliminary evidence that mindfulness can support more effective goal attainment (Brown & Vansteenkiste 2006). These findings suggest that "behavior is guided by goal standards only to the extent that people are attentive to those goals, but also suggest that mindful attention to one's day-to-day activities may facilitate goal attainment, perhaps by enhancing self-regulation and integrated goal commitment" (Brown et al. 2007: 224). A consequence of the Eastern view is that "when people move away from conceptuality and encoding, outcomes are affected more by the quality than the quantity of attention" (Weick & Sutcliffe 2006: 514). Mindfulness is fundamentally a quality of consciousness. Moreover, Weick and Putnam (2006: 281) point out that "stable attention by itself, and not attention to specifics such as failure, simplification, or operations, may explain considerable variance in reliable performance. If that is plausible, then it means that greater awareness of how attention functions may be a precondition for greater alertness."

The operation of Eastern mindfulness may occur through the creation of a mental gap between the stimulus-response relations that shape automatic behavior. Hence, "mindfulness may encourage the capacity to respond in ways that subserve one's values, goals, or needs, rather than to react in terms of habits, overlearned responses, or reactions to situational cues. [...] The fact that more mindful persons were more accurate in gambling tasks, implies that mindfulness may function to inhibit distraction from intrusive thoughts, allowing for deeper processing of relevant stimuli (i.e., greater accuracy and less overconfidence) and greater recognition of risk (i.e., less bet acceptance)" (Brown et al. 2007: 223-224).

When combining the notion of mindfulness with the social dynamic process model of responsible innovation four key points come to the fore. First of all, key elements related to mindfulness – awareness, attention and prioritizing – are central to managing innovation. Second, mindfulness is present-oriented like the practical-evaluative element of agency. Third, the orientation on the present in the form of Eastern mindfulness promotes self-control, more effective goal attainment, and integrated goal commitment. Fourth, Eastern mindfulness helps in overcoming habitual responses to both internal wants and desires and external events. Hence, mindfulness actually supersedes institutionalized responses and focuses on an individual's values, goals, or needs. Mindfulness, especially the Eastern view, is therefore an essential factor for inclusive innovation behavior.

Discussion and conclusion

We extended the social dynamic process model of responsible innovation by reviewing a number of related literatures. Our extension leads to five key findings. First, control is a central concept in responsibility. It will be difficult to 'address responsibility' when perceived control is lacking. Particularly, three different types of control come into play. A person's locus of control determines if one believes an event is contingent on ones behavior. Controllability deals with having the authority to decide over a certain issue, while self-efficacy holds that one believes one has the capability to actually perform a given behavior. Although the procedures of a firm affect all three forms of control, it is especially controllability where too strict procedures may hamper situational and contextualized decision making on innovation. Moreover, we found that when people have more control over a situation, they will learn quicker and better. Hence, firms should be very keen on providing both enabling instead of coercive guidelines and explicitly training innovation managers in dealing with moral dilemmas.

Second, the process of 'analyzing the situation' is strongly related to one's imagination. Prospective thinking is essential for anticipating consequences of behavior and taking a more inclusive approach to innovation. Not only the technological solution, but also the social impact of an innovation needs to be 'imagined.' Also, counterfactual thinking is important for one to learn from moral dilemmas. Only by considering causal relations one can imagine how to behave otherwise in future. Obviously, this also relates to the concept of memory as learning builds on previous experiences. In relation to other people involved, imagination is also needed for perspective taking. One can only come to a shared view on inclusive innovation by imagining other people's reactions and by empathizing with their position. Physical behavior that is in line with ones dealing with a moral dilemma is important for being perceived as sincere. Hence, motor simulation is of importance too with regards to other people's reaction.

Third, we found mindfulness a useful construct to elaborate on the 'taking distance' process. The Western view on mindfulness helps in prioritizing and responding to situations. Yet, especially the Eastern view could be very helpful in taking some distance. By being 'in the present' habitual responses can be overcome and a more integrated approach can be taken to include moral considerations into innovation behavior. By being mindful one can stay closer to his or her own values, goals and needs and respond more fitting with the situation at hand.

Fourth and final, we started this paper by proposing the Triple Theory of Parfit as a general guideline for inclusive innovation behavior in firms. We argued that the Triple Theory combines formal, monological and dialogical approaches to ethical decision making in organizations. As such, the application of the Triple Theory to firms could arguably substitute the 'weighing values and norms' process. Essentially, this holds that innovation behavior is only wrong when it threatens a firms' long-term profitability, violates a firm's rules and procedures, and goes against shared firm values. By following this general guideline, innovation managers could imagine how an innovation would impact the firm and if it is aligned with a firm's moral principles.

Practical implications

The findings of this study have a number of implications for practice. First, we elaborated on the role of behavioral control in inclusive innovation behavior. Responsible behavior can only be included in a firm's innovation strategies and policies, when people feel they actually have a sense of control over the situation. This sense of control can be improved by providing supportive guidelines that are aligned with the intricacies of day-to-day practice. Also, training staff in dealing with moral dilemmas will help them when they experience such a problem in practice. Since self-control and learning have a mutually beneficial effect, offering such learning opportunities will substantially improve responsible behavior.

Second, training could also be helpful for improving the use of imagination and mindfulness in inclusive innovation behavior. Improved imagination will lead to increased learning from moral dilemmas one has experienced, but also to better anticipation of future consequences of behavior and the responses of relevant others. The scope of such training could both help in resolving smaller day-to-day dilemmas as in dealing with large social impact type of innovations. Likewise, mindfulness training might help in overcoming automated responses and acting more in line with values. For example, from process innovation we know that in practice processes might substantially differ from their formal design, thus when a design is not followed, it might be wise to take some distance instead of blaming this on worker resistance and engage in an open dialogue. Perhaps the other way is actually more efficient or effective.

Fourth, applying the Triple Theory provides a more pragmatic approach to including responsible behavior in practical innovation dilemmas. Sometimes, endangering long-term profitability, violating procedures or going against firm values can actually be the most responsible behavior. The Triple Theory could be used as a general basis underlying training and dialogue in responsible behavior training. Additionally, the Triple Theory can be used to design and structure responsible behavior guidelines, which acknowledge the contextual considerations that play a role in most moral dilemmas.

Future research

The proposed extension of the social dynamic process model of responsible behavior is based on a review of relevant literatures. Hence, the most important venue for future research is studying whether the model holds water in real life cases where firms are attempting to perform inclusive innovation. Additionally, field studies might point at other factors that are not included in the model yet, but might play a role in inclusive innovation.

Especially, how the different processes are combined in the spur of the moment is a particularly interesting venue to explore by drawing on research on improvisation.

Furthermore, studying how effective different forms of training are on inclusive innovation behavior by means of a field experiments could prove to be an interesting venue for research. For example, by providing a group of innovation managers with training in mindfulness or imagination and research if this group performs better in solving innovation related moral dilemmas than an untrained control group. Likewise, a full-blown experimental setting could be executed with students. Obviously, people involved in innovation management could be surveyed to test the relations between the concepts in the extended model. Nonetheless, we would like to point out that in the case of responsible behavior surveys might lead to social responsibility bias.

Finally, whether Parfit's Triple Theory can be limited to specifically the firm and whether it provides in most, if not all, cases a good general guideline, needs to be studied more in-depth. Although it would go beyond the scope of this study, reviewing the three moral philosophy streams for as far as applied in studies dealing with both innovation and ethics would be worthwhile. We do believe that in this study we demonstrated how the Triple Theory could be an important contribution in weighing different moral considerations. However, if our translation of the three elements of the Triple Theory to the firm context fits well could be discussed. Additionally, how well the Triple Theory holds for responsible innovation can only be studied by applying it in practice as for moral dilemmas it is often the exception that proves the rule.

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