Stepping back while staying engaged: On the cognitive effects of obstacles
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Chapter 5  General Discussion
When performing a Google search on the words "obstacle" and "step back", various self-help pages and blogs will be among the first hits. Most of them seem to suggest that when people face an obstacle to a goal, it would be smart to step back and look at the situation from a more distanced perspective.

 Obviously, Google does not have a quality filter. However, several theoretical perspectives and empirical findings in the psychological literature give reason to assume that mentally stepping back and looking at the bigger picture might indeed be a useful response to obstacles. For example, Lewin (1935) theorized that to overcome a barrier standing in the way of a desired object, people needed to adopt an overall perspective on the problem situation, which in turn should be easier to the extent that they can psychologically distance themselves from it without disengaging altogether from their goal pursuit. In line with the notion that a more distanced perspective on the overall situation (i.e., including the obstacle and the goal) could be useful for dealing with obstacles, recent research also suggests that a more global rather than local processing style promotes understanding (Fiske & Neuberg, 1990; Förster et al., 2010; Förster & Dannenberg, 2010) and creative thinking (Friedman et al., 2003) and that psychological distance versus proximity helps people deal with negative experiences (Ayduk & Kross, 2009; 2010a; 2010b; Kross & Ayduk, 2008, 2011), increases self-control (Metcalfe & Mischel, 1999; Mischel et al., 1989; see also Fujita, 2008; Fujita & Roberts, 2010; Fujita, & Sasota, 2011), aligns people’s behavioral intentions with their values rather than with feasibility concerns (Eyal et al., 2009; see also Fujita et al., 2008; Kivetz & Tyler, 2007), promotes integrative agreements based on overarching interests among negotiators (Giacomantonio et al., 2010; Henderson et al., 2006; Henderson, 2011), and, like global processing, enhances creative thinking (Förster et al., 2004; Jia et al., 2009; Polman & Emich, 2011).

In this dissertation, I started by asking, quite generally, about the basic cognitive processes that are elicited by obstacles. More specifically, Chapter 2 examined whether and when obstacles are most likely to elicit a more global processing style, leading people to focus more on "the big picture." Because global processing and psychological distance are bi-directionally related (Liberman & Förster, 2009a; 2009b), Chapter 3

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8 A few examples returned from a Google search on August 1, 2011: "Remember the closer you are to an object, the bigger it looks. That is because it is taking up more of your focus. In the same way, the closer you are to a situation, the bigger and more impossible it looks. Again, this is because your focus is full of the obstacle or situations you are facing. Once you step back from the impact of the obstacle that suddenly hit your life, your perspective will change" (http://mindsetforliving.com/turn-every-obstacle-into-an-opportunity); "Instead we must learn to step back from our emotions and see the situation from an external perspective." (http://blog.iqmatrix.com/mind-map/overcoming-insurmountable-obstacles-mind-map); "When 'disaster' initially hits, it may seem larger than life, but if you can step back and look at it realistically, often the solution becomes apparent to you." (http://www.amanet.org/training/articles/Climb-or-Blow-Up-Every-Mountain-Five-Steps-to-Overcoming-Obstacles.aspx)
examined whether and when obstacles are most likely to lead people to mentally "step back" and increase the psychological distance between themselves and other objects. In Chapter 4 I turned to the question of how the basic cognitive processes elicited by obstacles might help people to deal with them. Given that both global processing and psychological distance promote creative thinking (Förster, et al., 2004; Friedman et al., 2003; Jia, et al., 2009; Polman & Emich, 2011), this chapter investigated whether one function of people's cognitive response to obstacles might be to promote a search for more creative means.

The results from each empirical chapter provide answers to the above questions and thereby contribute to our understanding of the cognitive processes involved in dealing with obstacles. More specifically, Chapter 2 (Marguc, Förster, & Van Kleef, 2011) revealed that both physical and non-physical obstacles elicit a more global processing style, such that participants not only broadened their perception, but also opened up mental categories and became better at integrating seemingly unrelated pieces of information. However, the link between obstacles and global processing was most likely to be found when participants were either chronically or situationally very engaged and thus inclined to follow through with what they are doing, but not when they were less engaged. Similarly, Chapter 3 (Marguc, Van Kleef, & Förster, in press) showed that obstacles to social goals, to personal goals, and obstacles in a computer game increase psychological distance, such that participants who thought about how to reach a social goal or an important personal goal despite an obstacle (compared with participants who only thought about how to reach those goals) and participants who navigated a computerized maze with an obstacle (compared with participants who navigated the same maze without an obstacle) estimated places unrelated to the problem as being further away from their current location and estimated objects presented on the screen as being smaller. This latter finding is in line with the notion that faraway objects tend to look smaller and with recent research showing that motivational states influence size perception (e.g., Van Koningsbruggen et al., 2010; Veltkamp et al., 2008). Again, the link between obstacles and psychological distance was only found when distancing was relevant, that is, when the obstacle appeared on participants' own route to their goal rather than on other people's routes to their goals, and when chronic or situational levels of engagement were high rather than low.

Complementing the above findings, Chapter 4 (Marguc, Förster, & Van Kleef, under review), revealed that obstacles can spark creative goal pursuit. More specifically, participants who thought about how to overcome an obstacle to a social goal broadened especially those categories that were relevant for problem solving (i.e., the
category of "vehicles" rather than the category of "vegetables" when the obstacle was a fallen tree blocking the road) and participants who thought about how to overcome an obstacle to an important study goal also actively generated more original means than participants who only thought about how to reach this goal. This link between obstacles and originality was mediated by abstract thinking, a variable that has previously been associated with greater creativity (Finke, 1995; Förster et al., 2004; Ward, 1995; see also Friedman & Förster, 2010), as abstract categories are usually broader and more inclusive than concrete categories (see Liberman, Sagristano, & Trope, 2002), allowing people to access and combine more remote concepts (Martindale, 1981, 1995). Together, the findings from Studies 4.1 and 4.2 can be interpreted as initial evidence for the functionality of a mental stepping back response to obstacles: It promotes a search for more creative means.

Below, I discuss the most important theoretical and practical implications of the current work and address open questions that point toward potential future directions that will help to further elucidate the cognitive, motivational, and affective processes involved in dealing with obstacles during goal pursuit. Rather than elaborating on issues pertaining to each individual chapter, I focus on overarching issues pertaining to the dissertation as a whole.

**New Insights on Existing Findings**

The present research sheds new light on existing findings and assumptions. Roughly, these can be summarized as suggesting that difficulty does not *always* lead people to focus more on the concrete details of an action (cf. Vallacher & Wegner, 1987, 1989; Wegner & Vallacher, 1986; Wegner et al., 1983; Wegner et al., 1984), that high engagement is not *always* associated with a more local processing style (cf. Gable & Harmon-Jones, 2008, 2010a; 2010b; Harmon-Jones, Gable, & Price, 2011; but see also Friedman & Förster, 2011), that effects involving global versus local processing and psychological distance are not *always* independent of content (cf. Förster & Dannenberg, 2010; Trope & Liberman, 2010), and that (mentally) stepping back does not *always* mean avoidance (cf. Koch et al., 2009; Stins, Roelofs, Villan, Kooijman, Hagenaars, Beek, 2011). The current findings thus highlight several theoretical puzzles in the psychological literature that still need to be resolved.

**Difficulty is Not Always Concrete**

When does difficulty lead people to focus more narrowly on concrete details or more broadly on abstract meanings? When does it increase or decrease psychological
distance? When does difficulty not have any effects on these variables? Early findings by Wegner and colleagues seemed to suggest that difficulty should always lead to a more local focus on concrete aspects of an action rather than to a global focus on abstract meanings. For example, studies have shown that asking participants to drink coffee from a heavy, unwieldy mug rather than from a regular one (Wegner et al., 1984) or to eat Cheetos snacks with chopsticks rather than with their hands (Wegner et al., 1983) led them to describe the actions of drinking and eating in more concrete terms (e.g., as "moving a cup to my lips" rather than "quenching my thirst"). However, more recent studies by Alter and Oppenheimer (2008) revealed that participants who read instructions in a difficult-to-read font generated more abstract descriptions and indicated greater spatial distance estimates for places mentioned in the instructions compared with participants who read the same instructions in an easy-to-read font. In the present studies, perceived difficulty had no effect on perceptual scope, conceptual scope, or psychological distance when controlled for as a covariate (see Marguc, Förster, & Van Kleef, 2011, under review; Marguc, Van Kleef, & Förster, in press).

Such discrepancies suggest that it might not be difficulty per se that influences processing styles, construal levels, and psychological distance, but something about the different sources or manipulations of difficulty. For example, the need to figure out what to do or to understand what is going on might play a role in determining the cognitive effects of difficulty. After all, what distinguishes prototypical studies by Wegner and colleagues (Wegner et al., 1983, 1984) from the current studies is that participants in the former probably knew what to do (i.e., to lift a heavy, unwieldy mug one can simply increase strength; participants were instructed that they had to use chopsticks to eat Cheetos), whereas participants in the latter (Marguc, Förster, & Van Kleef, 2011, under review; Marguc, Van Kleef, & Förster, in press) first had to figure out how to deal with the obstacle. Similarly, although Alter and Oppenheimer (2008) explained their results by suggesting that disfluent objects naturally feel more distant, their findings could also be interpreted as suggesting that the source of difficulty (e.g., difficult-to-read fonts) undermined understanding. Because global processing promotes understanding (Fiske & Neuberg, 1990; Förster, et al., 2010; Förster & Dannenberg, 2010) and is related to abstract thinking and psychological distance (Förster et al., 2004), an increase in these variables could be useful in such situations or, more generally, in tasks that afford more creative processes (see Amabile, 1996). Regardless of these speculations, an interesting puzzle for future research will be to examine factors that determine when difficulty increases global processing, abstract
thinking, and psychological distance, when it does the opposite, and when it has no effects on these variables.

**Engagement is Not Always Local**

What are the cognitive correlates of engagement? When is engagement associated with more local processing and when is it associated with more global processing? On the one hand, recent research suggests that motivational intensity (for reviews, see Gable & Harmon-Jones, 2010b; Harmon-Jones et al., 2011), which may be related to engagement, is associated with a local focus on details rather a global focus on the Gestalt of objects. This is in line with the assumption that a local focus prevents people from becoming too distracted by information that is irrelevant to their current goal pursuit (Derryberry & Reed, 1998; Förster & Liberman, 2009; Harmon-Jones, et al., 2011; see also Fujita et al., 2007). On the other hand, the present research suggests that when people face an obstacle, engagement is associated with a more global rather than local perceptual (Study 4.4) and conceptual (Studies 4.5 and 4.6) scope. This, in turn, is in line with the idea that a global focus allows people to broaden their perspective and take into account information that could be relevant for making a good choice (Fujita et al., 2007) or figuring out what to do when the means to a goal are unclear (Friedman & Förster, 2011). After all, obstacles change the original goal pursuit situation and this may require people to adapt their strategy of goal attainment. Focusing all too narrowly in such situations might prevent people from understanding the situation in its entirety and from figuring out what to do (e.g., deciding whether further persistence is warranted or finding alternative means). From this perspective it also makes sense that, when there is an obstacle, high rather than low engagement leads people to broaden their perspective, because if people are not very concerned with continuing an activity, they do not need to understand what is going on, figure out what to do, or find alternative means. Future research might thus examine more systematically when high engagement or motivational intensity is associated with global or local processing, and, because global/local processing is related to psychological distance (Liberman & Förster, 2009a; 2009b), when high engagement is associated with greater psychological distance or proximity.

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9 In the present studies, there was also no difference in processing styles between individuals high and low in engagement when no obstacle was encountered.
Cognitive Procedures are not Always Independent of Content

Are effects involving global/local processing styles and psychological distance always independent of content? Can we always expect such different ways of perceiving and thinking about objects, people, or events to transfer from the situation in which they were elicited to content-wise completely unrelated situations or tasks? Previous research on global/local processing styles (for a review, see Förster & Dannenberg, 2010; Tulving & Schacter, 1990) and psychological distance (for a review, see Trope & Liberman, 2010; see also Liberman & Förster, 2009a) could be interpreted as suggesting that the answer to both questions is "yes." However, the findings from the current Chapter 4 and recent research by others (De Dreu & Nijstad, 2008; Fitzsimons & Fishbach, 2010) suggest that there are situations in which the content of specific targets or tasks matters. To illustrate, in the current Studies 2.1 to 3.3, the cognitive effects of obstacles transferred from the task in which they were elicited to completely unrelated tasks, as one would expect based on previous research (Förster & Dannenberg, 2010; Trope & Liberman, 2010). Yet, although participants in Study 4.1 broadened all categories a little, they broadened especially goal-relevant categories rather than goal-irrelevant categories. This finding is, in turn, consistent with the notion that when people face an obstacle to a goal, it would be more efficient to broaden specifically those categories that are relevant for problem solving than to broaden all kinds of categories. In other words, it would be more efficient for a person whose bicycle broke on the way to work to broaden the category of vehicles rather than the categories of fruit and clothing.

In a similar vein, recent research by De Dreu and Nijstad (2008) has shown that a conflict mindset, which has previously been associated with a more narrow perspective (e.g., Carnevale & Probst, 1998), leads people to broaden those categories that are relevant for pursuing their current goal, but not other categories (e.g., they broaden the category of weapons, but not the categories of vegetables or clothes). Although this finding does not necessarily involve transfer effects, it is consistent with the notion that although global/local processing styles are, as such, content-free ways of perceiving or processing information, content may play a role when goals are involved, leading to more specific, nuanced effects. With regard to social distance, which is one dimension of psychological distance, recent research by Fitzsimons and Fishbach (2010) has shown that when people experience a lack of progress to important personal goals, they feel closer to others who are instrumental to goal attainment rather than to others who are not instrumental. Hence, although a lack of progress might, for example, suggest greater distance from participants’ goals, this
distance did not transfer invariably to other targets. What mattered was instead whether targets were relevant, or instrumental, to achieving the goal at hand.

To reconcile such findings with the notion that global versus local processing styles and psychological distance versus proximity are generally content-free (i.e., one can focus on the global shape or the local details of the same object; one can think about the same person living in a faraway place or around the corner), one might adopt a motivated cognition account (see also De Dreu & Carnevale, 2003; De Dreu & Nijstad, 2008; Förster, Liberman & Friedman, 2007; Van Kleef, De Dreu, & Manstead, 2004), which suggests that current motivations determine what people focus their cognitive resources on. For example, when the main goal is to figure out how to deal with an obstacle, it would generally make sense to adopt a more distanced perspective and broaden one’s perceptual and conceptual scope. After all, this allows one to perceive the overall situation and not miss out on information that could potentially be relevant. Accordingly, transfer effects might be found when (all) targets or stimuli in a task are neutral with regard to instrumentality. However, if (at least some) targets are informative with regard to instrumentality, this might change the general distancing and broadening effect of obstacles, such that people might not only broaden goal-relevant rather than goal-irrelevant categories, as in Study 4.1, but also feel closer to other people or objects that are instrumental to goal attainment and, perhaps, even further away from other people or objects that are clearly detrimental. Such possibilities could be addressed in future research.

**Stepping Back is Not Always Avoidance**

Because the notion of stepping back implies increasing the distance between oneself and other objects, one might wonder whether mentally stepping back is the same as avoidance. Yet, although some researchers have interpreted the physical version of stepping back as avoidance (e.g., Koch et al., 2009; Stins et al., 2011), the present results speak against such a simple equation. First, it was the highly engaged individuals, who are inclined to follow through with ongoing activities, rather than the less engaged individuals, who are not inclined to follow through with what they are doing, who responded to obstacles by mentally stepping back and increasing psychological distance. Second, a mental stepping back response in the current studies not only involved greater psychological distance but also more global processing. By contrast, avoidance is typically associated with more local processing and approach is typically associated with more global processing (Förster & Higgins, 2005; Förster, et al., 2006; Friedman & Förster, 2000). This suggests that in the context of obstacles
stepping back does not reflect avoidance, but rather an attempt to deal with the problem, as illustrated in the French proverb *reculer pour mieux sauter* (i.e., "stepping back in order to make a better leap"). Recent research by Ayduk and Kross (for a review, see Ayduk & Kross, 2010a) allows for a similar conclusion. In their studies, participants who were asked to "step back" and adopt a more distanced perspective when writing about negative experiences confronted these experiences no less than participants who were asked to write about them from a self-immersed perspective. In other words, it was not the case that the former avoided their negative experiences. Rather, they differed from the latter in how they dealt with them at the cognitive level. In light of such findings, an interesting task for future research would be to explore the similarities and differences between *stepping back*, which involves broadening one's perspective, opening up mental categories, and adopting a more distanced view on the situation while staying engaged, and *stepping out*, which may be associated with avoidance and disengagement from a problem and thereby likens Lewin's notion of leaving the field (1935).

Altogether, the theoretical implications share one common theme: The notion that global/local processing styles and psychological distance are not just triggered by certain types of stimuli or by thinking about the near or distant future, but can be elicited spontaneously and flexibly in the service of goals, depending on the specifics of a situation and on the motivational states of a person. I will now move on to the practical implications of this research or the question of how the current findings can be used in applied settings.

**Implications for Organizations, Products, and People**

Obstacles can occur in very diverse settings. Accordingly, the present research has implications for organizations, products, and people. More specifically, the results from the empirical chapters suggest that obstacles could promote openness to change and innovation in organizations, enhance the quality of products, and benefit individuals in the long run. In addition, the results could be used to create situations in which people would be more likely to mentally step back, look at the bigger picture, and think of creative means to attain goals in the face of obstacles.

**Counteracting a "We Have Always Done it That Way" Mentality**

Because global processing and psychological distance both promote creative thinking (Förster, et al., 2004; Friedman et al., 2003; Jia, et al., 2009; Polman & Emich, 2011) and the results from Chapter 4 suggest that the cognitive processes elicited by
obstacles help people to find more creative means to specific goals, the present findings could be used in organizations plagued by a "we have always done it that way" mentality. Provided that employees are engaged in their work, confronting them with obstacles that are, perhaps, not overly threatening (see also Förster et al., 2010; Friedman & Förster, 2010) could increase their openness to doing things differently and spark innovation. Similarly, if employees fail to mentally step back and look at the bigger picture upon facing work-related obstacles, one reason for this might be that they are not very engaged in what they are doing. In that case, measures could be taken to increase engagement. One way to strengthen engagement is to create regulatory fit (Higgins, 2000, 2005) in the working environment. Regulatory fit occurs, for example, when the manner of performing a task fits a person's regulatory orientation towards ideals and nurturance on the one hand or towards responsibilities and safety on the other hand. Because these orientations are accompanied by preferences for performing tasks in an eager versus vigilant manner, respectively, engagement is strengthened when individuals can perform tasks in a manner that fits their regulatory orientation—it simply "feels right" to do something in the preferred way. This suggests that if employees fail to consider the bigger picture in response to obstacles because of a lack of engagement, giving them different tasks—tasks that fit—could help to increase engagement and make them think of more creative solutions when faced with a work-related obstacle.

**Increasing the Quality of Products**

Anyone who has ever created a product that had to pass the eyes of critics (e.g., a journal article, a design for a new website, a sales pitch) knows that negative feedback can at times feel like an obstacle one needs to overcome. Indeed, the results from the present research suggest that construing such feedback as an obstacle to overcome (see Study 2.2) rather than, for example, an offence to one's work, distractions, nuisances, or suggestions that have nothing to do with the subject matter, could be smart: Because obstacles lead people to broaden their perspective, to use more inclusive, abstract mental categories, to perform better at tasks that require active integration of seemingly unrelated pieces of information (see Chapter 2), and to think of more creative ways to reach their goals (Chapter 4), negative feedback from different sources and of different kinds could be more easily incorporated and taken into account in the further development of the product. Because more critical questions are dealt with, the quality of the product may in turn increase. Again, such benefits are most likely to occur when engagement is high rather than low and, presumably, when the feedback is not all too threatening (e.g., stating that the work is an insult to the discipline, that it is a sign
of incompetence, that it is useless; see also Förster et al., 2010; Friedman & Förster, 2010).

Growing Personally Through Obstacles

Can obstacles have positive effects for individuals? Based on the current findings and on research suggesting that a global processing style increases understanding (Fiske & Neuberg, 1990; Förster et al., 2010; Förster & Dannenberg, 2010) and that greater psychological distance leads people to align their intentions with their higher-order values rather than with feasibility concerns (Eyal et al., 2009; see also Fujita et al., 2008; Kivetz & Tyler, 2007), a tentative answer would be "yes".

That is, if people respond to obstacles interfering with a personal goal by looking at the situation from a more distanced, global perspective, they might become reminded of their higher-order values and reasons for choosing that particular goal in the first place (see Eyal et al., 2009). This in turn could make it easier for them to disengage from an unpromising course of action because there are typically many ways of fulfilling abstract, higher-order goals, whereas there are fewer ways of fulfilling concrete, lower-order goals (see also Carver, 1996; Carver & Scheier, 1990; Wrosch, Scheier, Carver, & Schulz, 2003; Wrosch, Scheier, Miller, Schultz, & Carver, 2003). To illustrate, if a dancer facing repeated injury would ask herself why she chose dancing as her profession, she might think "because it makes me happy" or "because it's my way of communicating ideas". Because the higher-order goals of "being happy" or "communicating ideas" can be fulfilled in more ways than the lower-order goal of dancing, she might not only find it easier to discover alternative means to reach those goals, but also to disengage from a profession that has come to cause more harm than good, to incorporate what she might consider a failure into her broader goal structure, and re-engage in personally meaningful activities (Wrosch, Scheier, Carver, & Schulz, 2003; Wrosch, Scheier, Miller, Schultz, & Carver, 2003).

Open Questions and Future Directions

Although the present research provides answers to some questions concerning the cognitive processes involved in dealing with obstacles, there are also questions that went beyond the scope of this dissertation. In the last section of this discussion, I will speculate about possible answers to these questions and will point towards potential next steps in research that will help to further increase our understanding of how people deal with obstacles in daily life.
What is the Role of Negative Affect?

Given that obstacles interfere with smooth progress to our goals, one might wonder why they did not influence mood in the current studies. First, it is possible that simply asking participants "How do you feel right now?" did not suffice to capture very mild changes in mood or changes in specific emotions, such as anger or sadness. Second, because in some studies rather mild forms of obstacles were used (Studies 2.1 to 2.6, Study 3.3) and in other studies participants only had to imagine obstacles to their important social goals (Studies 3.1 and 4.1), personal goals (Study 2.2), or study goals (Study 4.2), it is possible that less intense emotions were elicited compared with encountering (more severe) obstacles in real life. To address these issues, future research could use more implicit measures of mood or measures including specific emotions and examine the cognitive and affective consequences of obstacles in more naturalistic settings.

Third, and perhaps most surprisingly, it is possible that in the current studies both high and low levels of engagement prevented strong emotional responses to arise in the first place. That is, individuals low in engagement might not have experienced strong changes in mood upon facing obstacles because they were not very concerned with the task at hand and thus might not have cared much about whether or not there was an obstacle. By contrast, individuals high in engagement might not have experienced strong changes in mood because of their very concern for the task at hand. In other words, they might have been so engaged in what they were doing that they did not experience or notice any changes in mood. In addition, because greater psychological distance has been shown to decrease distress from negative experiences (Ayduk & Kross, 2010a), the basic cognitive processes elicited by obstacles might have buffered engaged individuals against becoming too entangled in their emotional responses. Obviously, this could be a counterintuitive prediction, because higher engagement (Higgins, 2006) has also been associated with stronger valuation. Therefore, more research is needed to examine the precise relationship between obstacles, engagement, and negative affect.

Given that obstacles do sometimes cause negative affect, which cognitive responses could one expect? What if a scientist cannot help but become angry while reading a negative review of his or her article? What if a social entrepreneur feels dejected about not being effective enough in reaching out to the public and raising funds for his or her cause? One answer to these questions would be that when obstacles elicit strong negative affect, people should not broaden their perspective and look at the
overall situation, because negative arousal signaling threat has been associated with a local processing style and a focus on details (e.g., Cacioppo et al., 1996; Easterbrook, 1959; Förster & Higgins, 2005; Fredrickson, 2001; Fredrickson & Branigan, 2005; Gasper, 2004; Gasper & Clore, 2002; Isen & Daubman, 1984; for a review, see Friedman & Förster, 2010).

However, recent research suggests that negative affective states could nevertheless increase creativity (Baas, De Dreu, & Nijstad, 2008; De Dreu, Baas, & Nijstad, 2008) — provided that they are activating (e.g., anger, fear) rather than deactivating (e.g., dejection, sadness). More specifically, activating negative emotions increase creativity by making people more persistent in generating ideas within one category (see also Van Kleef, Anastasopoulou, & Nijstad, 2010), whereas deactivating negative emotions do not increase creativity. Although the angry scientist might thus initially not generate very original ideas for how to deal with the negative feedback, he or she would be likely to persist until the less creative ideas are exhausted and would generate more creative ideas over time (see also Rietzschel, Nijstad, & Stroebe, 2007). By contrast, the social entrepreneur might not only fail to adopt a more distanced perspective on the overall situation, but also be less likely to think of creative means for advertising and making people interested in his or her cause. Indeed, he or she might do well at analyzing what went wrong because negative moods have been shown to enhance analytical thinking (see Friedman & Förster, 2010). However, the new advertising strategies would hardly be original and stand out from the rest. In such situations, people might benefit from other ways of increasing psychological distance and global processing (see Förster & Dannenberg, 2010; Trope & Liberman, 2010). For example, they could imagine how they would deal with the obstacle in ten years from now, how another person (e.g., their best friend, a stranger) would deal with it, or look at the skyline in the horizon rather than at their computer screen.

Altogether, this suggests that people's cognitive responses to obstacles might not only depend on whether obstacles elicit negative affect, but also on what kind of negative affect is elicited. Indeed, the aim of the present research was to examine the cognitive effects of obstacles per se rather than the cognitive effects of negative emotions elicited by obstacles. However, as the above speculations show, future research on the cognitive effects of obstacles would clearly benefit from taking into account various negative affective responses. This would not only increase our theoretical understanding of how people deal with obstacles in daily life, but also help to develop interventions for people who have difficulties finding creative means to overcome them.
What are The Functions of Stepping Back?

Drawing on Lewin’s (1935) theorizing and more recent findings (for reviews, see Förster & Dannenberg, 2010; Trope & Liberman, 2010), one assumption of the present research was that adopting a more global, distanced perspective could be a useful cognitive response to obstacles. In line with the fact that global processing (Friedman et al., 2003) and psychological distance (Förster, et al., 2004; Jia, et al., 2009) have been shown to increase creativity, Chapter 4 indeed revealed that the cognitive processes elicited by obstacles promote a search for more creative means. But, one might wonder, do these processes have functions beyond increasing creativity? Are there more direct ways to assess functionality? Does mentally stepping back and looking at the bigger picture guarantee success at dealing with obstacles?

There are several ways to address these questions. For example, researchers might examine whether obstacles influence other variables related to global processing and psychological distance in similar ways as they influence creativity. For example, one could examine whether obstacles would activate higher-order goals and values among highly engaged individuals, but not among less engaged ones (Eyal et al., 2009; Kivetz & Tyler, 2007; see also Fujita et al., 2008) and whether highly engaged negotiators would be more likely than less engaged ones to reach integrative agreements upon facing an obstacle (see Henderson, 2011; Henderson, et al., 2006; Giacomantonio, De Dreu, & Manneti, 2010; De Dreu, Giacomantonio, Shalvi, & Sligte, 2009). However, a critical test of functionality would likely involve manipulating global versus local processing or psychological distance versus proximity and assessing whether such manipulations increase or decrease performance on tasks in which an obstacle was encountered. In this context, it is worthwhile mentioning that functionality might not always result in greater persistence and eventual goal attainment. For example, when obstacles are insurmountable for an individual, endless persistence could even be dysfunctional or maladaptive. If mentally stepping back and looking at the bigger picture is a truly functional response to obstacles, it should therefore also lead people to evaluate the likelihood of success given sustained effort (e.g., Carver, 1996; Carver & Scheier, 1990; Jostmann & Koole, 2009) and to adapt their subsequent behavior accordingly (e.g., search for alternative goals or activities that serve the same higher-order goal; see also Wrosch et al., 2003a, 2003b).

Finally, because psychological distance has been associated with procrastination (McCrea, Liberman, Trope, & Sherman, 2008; Liberman, Trope, McCrea, & Sherman, 2007), one might wonder whether engaged individuals would prefer to postpone
choosing the best means from the alternatives they have generated and resuming action towards their goals after facing an obstacle. Indeed, the present research is silent about this possibility. However, if engaged individuals are truly concerned with the task at hand, then local processing and greater proximity, which are associated with taking action, right here and now, might naturally follow a global processing style and psychological distance. In other words, although mentally stepping back and looking at the big picture may be a useful first response to obstacles, people still need to choose the best means (see also Rietzschel, Nijstad, & Stroebe, 2010) and act on their goals, for which local processing and psychological proximity might be needed (see Fujita et al., 2007; Gollwitzer, 1990; Heckhausen & Gollwitzer, 1987; Förster et al., 2010). Might there be a funneled sequence, in which (engaged) individuals first respond to obstacles by looking at the entire situation from a more distanced perspective, but then narrow their perspective in order to consider more concrete action plans and move on once solutions have become apparent? To address this question, future research might examine the dynamics of people’s cognitive response to obstacles over time.

**Conclusion**

How do people deal with obstacles to their goals? How do the basic ways in which we perceive and process information from our environment change when we are trying to squeeze exercise, time with friends, and time to read or travel into our busy work schedules? How do we come to think of creative solutions to such problems? The results from this dissertation suggest that the first thing engaged people do is to mentally step back and look at the big picture. This in turn sparks goal-related creativity, allowing them to think of more creative means to their goals. However do people also choose the best means from the ones they have generated and take the right action? Est-ce qu’ils sautent mieux après reculer? Future research will hopefully tell.