

Paved, graveled, and stony paths to high performance: Theoretical considerations on self-control demands of achievement goals based on implicit and explicit motives



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ABSTRACT

Self-control is associated with several positive outcomes such as high performance in different life domains. The exertion of self-control, however, is experienced as strenuous and aversive. Referring to theoretical approaches from motivation psychology, we assume that striving for performance goals can feel more or less strenuous, because the goal is based on the implicit or on the explicit achievement motive or on both types of motives. We argue that three sources of self-control demands (difficulty of the task, lack of activity-related incentives and motive-goal incongruence) determine whether the process of goal striving feels easy, moderate, or hard, or, in other words, whether the path to high performance is “paved”, “graveled”, or “stony”.

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1. Introduction

The reader might know from his or her own experience that striving for one challenging goal feels more or less strenuous than striving for another goal; sometimes it runs fluently and easily and sometimes self-discipline is needed to overcome barriers within oneself (aversion towards the task, fatigue) or outside oneself

(increasing difficulty of the task). The same is true for one and the same goal across individuals with some people's goal striving seems nearly effortless, whereas others have a hard time attaining their goal by investing self-control. Self-control is defined as the capacity to control one's cognitive, emotional, and behavioral responses in order to bring them into line with the pursuit of long-term goals (Baumeister, Vohs, & Tice, 2007). This paper aims to explain why one and the same goal feels more or less strenuous due to different self-control requirements, or, in more colloquial terms, we want to explain “paved”, “graveled”, or “stony” paths to achievement goal attainment.

Self-control is associated with positive consequences such as different facets of psychological and physiological health and

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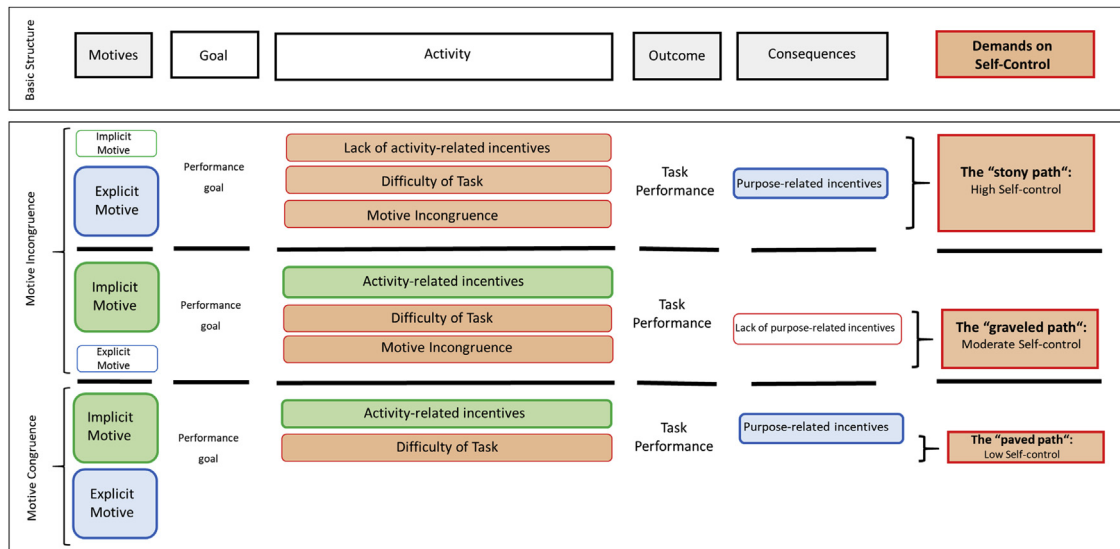


Fig. 1. Illustration of three ways (stony, graveled, and paved path) to high performance with differently strong self-control demands.

life satisfaction (de Ridder, Lensvelt-Mulders, Catrin Finkenauer, Marijn Stok, & Baumeister, 2012; Moffitt et al., 2011). It also fosters performance, for example in academia (Duckworth & Seligman, 2005; Tangney, Baumeister, & Boone, 2004), at the work place (de Ridder et al., 2012), and in sports (Englert, 2017). Thus, at first sight, self-control is a good thing. A second look reveals, however, that the exertion of self-control is experienced as strenuous and aversive (Baumeister, Bratslavski, Muraven, & Tice, 1998; Milyavskaya, Berkman, & De Ridder, 2019; Veilleux et al., 2018) and thus one's immediate well-being at the moment of task performance is reduced (although obviously, the long-term consequences of successful goal striving can be associated with enhanced well-being). It is therefore no surprise that self-control often fails (Baumeister & Heatherton, 1996; Duckworth, Milkman, & Laibson, 2018). People disengage from their goals because they dislike the activities that characterize the process of goal striving.

We based the present paper on the core assumption that high performance (e.g., in academia, in sports) can be achieved by different ways that require more or less self-control. We will introduce three sources of self-control demands (see below) that individuals can be faced with when striving for achievement goals with the aim to achieve high performance. We focus on the achievement domain, but the motivational principles, which we will outline in the following, are assumed to be also true for other domains such as the affiliation domain (e.g., affiliation goals with the aim to establish and maintain friendships) and the power domain (e.g., power goals with the aim to achieve impact on others).

2. Self-control demands: an overview

Fig. 1 functions as an outline guiding through our theoretical considerations on self-control demands at high performance. It illustrates that we assume three sources of self-control demands. Experts in motivation psychology will soon notice that these sources are derived from different approaches in motivation research. The reason for this "mixture" is that we aim to explain a phenomenon (why sometimes goal striving feels more or less strenuous) by using those theoretical approaches that in our opinion explain this phenomenon best. The first source of self-control will be addressed under the next headline and is highlighted in Fig. 1 as "Difficulty of the task". Whereas in the terminology of Sokolowski (1997) a difficult task is an "outer barrier" that requires self-control, there are also "inner barriers" that challenge one's self-control.

We discuss two inner barriers that have been extensively discussed in motivation research (e.g., Kehr, 2004b; Kuhl, 2001; Kuhl & Fuhrmann, 1998; McClelland, Koestner, & Weinberger, 1989) as additional demands of self-control (see Fig. 1). One is the absence of incentives that interact with characteristics of a person to predict motivation (Heckhausen & Heckhausen, 2018; McClelland, 1985a, Rheinberg, 1989, Rheinberg & Engeser, 2010). This source of self-control demands is indicated as "Lack of activity-related incentives" in Fig. 1. The third source of self-control demands is an incongruence - or non-fit - between a person's implicit and explicit achievement motives (for overviews about motive-incongruence see, Brunstein, 2010, 2018), indicated as "Motive incongruence" in Fig. 1.

In order to structure these sources of self-control demands, we located them into a sequence of phases in motivation research that have been previously used to describe and explain behavior (e.g., Cognitive model of motivation and its extensions, see H. Heckhausen, 1977; Rheinberg, 2002; Rheinberg & Engeser, 2010): Motives and Goals (actions are elicited by motives mediated by concrete goals) → Action (the action leads to an outcome) → Outcome (an outcome has consequences for the individual) → Consequences. This basic structure is illustrated in the upper part of Fig. 1. Please note that we simplified those frameworks (e.g., omitted phases of deliberation as stated in the Rubicon Model; see discussion below) to obtain a simple basic structure for Fig. 1. This basic structure serves us to illustrate different self-control balances: The overall self-control demands for an easy ("paved path"), a moderate ("graveled path"), and a difficult ("stony") path to high performance.

3. Self-control demand: difficulty of the task

The claim that difficult tasks require more self-control is not only intuitively plausible but supported by early theoretical considerations and empirical evidence such as the difficulty law of motivation (Ach, 1935; Hillgruber, 1921) as well as by more recent theoretical approaches such as the strength model of self-control (Baumeister et al., 1998, 2007), conflict models of self-control (Botvinick, Braver, & Barch, 2001), and motivational intensity theory (Brehm & Self, 1989). Motivational intensity theory, for example, explains effort mobilization in goal pursuit and assumes that the higher the difficulty of the task is, the higher the amount of required resources and the effort that has to be invested will be (for a review about empiri-

cal support for motivational intensity theory, see Richter, Gendolla, & Wright, 2016).

The relationship between task difficulty and self-control requirements (Baumeister et al., 1998) is true for difficult short-term tasks in the laboratory or in real life (e.g., a difficult math problem in academia or a difficult gymnastics exercise in sports), as well as for long-term goals such as completing one's study program successfully or practicing for a marathon race. Long-term goals naturally consist of periods, in which goal striving seems nearly effortless (e.g., academia: hearing one's favorite lecture; sports: easy running training in sunshine) and periods when goal striving becomes difficult (e.g., a demanding interval training session after an exhausting day's work). Thus, most people would agree that bringing one to attend a class with overwhelming course contents or a long-distance run in the rain could feel quite exhausting. In a nutshell, short-term and longer-term targets always seem to require periods of self-control that depend on the difficulty of the task and the circumstances in which the task has to be performed.

4. The starting point of our motive perspective: implicit and explicit motivational systems

In order to introduce the two further self-control demands that are theoretically based on motive research, we have to introduce the crucial differentiation into implicit and explicit motives. Motive research has shown that motives are important predictors of a broad range of behavior and well-being (Baumann, Kaschel, & Kuhl, 2005; Brunstein & Schmitt, 2004; Hagemeyer & Neyer, 2012; Hofer & Chasiotis, 2003; Hofer, Chasiotis, & Campos, 2006; Job & Brandstätter, 2009; Kazen & Kuhl, 2011; Kehr, 2004b; Schüler, 2010; Schüler, Brandstätter, Wegner, & Baumann, 2015; Schultheiss, Wirth, & Stanton, 2004; Wegner, Bohnacker, Mempel, Teubel, & Schüler, 2014; Woike, Mcleod, & Goggin, 2003).

Most researchers have mainly focused on the affiliation motive (desire for friendly interpersonal relationships), the power motive (desire to have impact on other people), and the achievement motive on which we focus in the present paper. The achievement motive is defined as a "recurrent concern with surpassing standards of excellence" (McClelland, Atkinson, Clark, & Lowell, 1953) and is associated with high performance, for example in learning contexts (e.g., Dahme, Jungnickel, & Rathje, 1993; McKeachie, 1961; O'Connor, Atkinson, & Horner, 1966; Schultheiss & Köllner, 2014), in research laboratories with a broad variety of achievement tasks (Biernat, 1989; Brunstein & Hoyer, 2002; Brunstein & Maier, 2005; Fodor & Carver, 2000; Lowell, 1952; Pang, 2010; Puca & Schmalt, 1999; Thurstone, 1937), and in sports (e.g., Coetzee, Grobbelaar, & Gird, 2006; Elbe & Beckmann, 2006; Gröpel, Wegner, & Schöler, 2016; Unierzyski, 2003; Wegner & Teubel, 2014; Zuber & Conzelmann, 2014) (e.g., for the implicit achievement motive: Gröpel et al., 2016; Wegner & Teubel, 2014).

McClelland et al. (1989) differentiated into an implicit and an explicit motivational system. *Implicit motives* are not consciously represented and are described as the "capacity to experience the attainment of a certain type of incentive as rewarding; as a consequence, this orients the individual towards cues related to the incentive and energizes, and selects behavior aimed at incentive attainment" (Schultheiss & Hale, 2007, p. 13). The *explicit motivational system* represents motivational dispositions that individuals consciously ascribe to themselves; they are part of one's consciously represented self-concept. Implicit and explicit motives differ in the resulting behavior. Implicit motives predict spontaneous behavioral trends over time (also called operant behavior, McClelland et al., 1989), whereas explicit motives predict responses to specific situations that are often based on cognitively elaborated decisions (also called respondent behavior, McClelland et al.,

1989). Because implicit motives are conceptualized as being non-conscious, they have to be measured indirectly using, for example, picture story exercises (Schultheiss & Pang, 2007), whereas the cognitively accessible explicit motives can be directly assessed using questionnaires. Furthermore, implicit and explicit motives differ in terms of the types of incentives, which elicit the motives. How these incentives are related to self-control will be outlined in the following paragraph.

5. Self-control demand: lack of activity-related incentives

Motivation psychology understands behavior as a product of the person (for example a person's implicit and explicit motives) and situation (for example incentives, defined as the outcome that individuals hope to gain from a situation) (for an overview see, Heckhausen & Heckhausen, 2018). As already briefly introduced above, implicit and explicit motives need incentives to come into action. Implicit and explicit motives are incited by different types of incentives, either affective incentives (implicit motives; e.g., pride, positive feelings of mastery) or more rational cognitive incentives (explicit motives; e.g., rewards, social demands). A differentiation that is strongly related to affective and cognitive incentives is Rheinberg (1989) conceptualization of *activity-related incentives* and *purpose-related incentives*. He agrees with incentive approaches regarding the fact that people's behavior is considerably guided by the anticipation of future affective states (e.g., Atkinson, 1957; Beckmann & Heckhausen, 2018; McClelland, 1985a; Vroom, 1964). In a revised version of the extended Cognitive Model of Motivation (Heckhausen, 1977), however, Rheinberg (1989) accentuated that human behavior can also be driven by incentives that are inherent in the activity itself (for activity inherent incentives see also Böhler, 1922; Koch, 1956; Woodworth, 1918) as can also be found in research about flow experience and intrinsic motivation (1990, Csikszentmihalyi, 1975; Rheinberg & Engeser, 2018). These incentives are called *activity-related incentives* (or "intrinsic incentives", Heckhausen & Heckhausen, 2018) and are, for example, the enjoyment and fun while learning in an academic context and training in sport. To be more precise, *enjoyment and fun* can be specified as positive motive-specific emotions (e.g., affiliation, AFF: feeling happy in the presence of friends; power, POW: feeling strong when having impact on others; achievement, ACH: feeling proud while mastering a challenging task) that are experienced during the goal striving process. In contrast, *purpose-related incentives* (or "extrinsic incentives") (Heckhausen & Heckhausen, 2018) result from the consequences of actions and their outcomes and are, for example, evaluations (e.g., grades, competition scores), social expectations (e.g., by teachers, coaches, parents, friends) and external rewards (e.g., social recognition for one's performance).

Activity- and purpose-related incentives interact differently with implicit and explicit motives. Implicit motives are aroused by activity-related incentives. Because people enjoy what they are doing, they do not have to exert self-control, but can become fully involved into the activity. At best, they are completely absorbed by the activity in a seemingly effortless "flow" (for the concept of flow experience see, Csikszentmihalyi, 1990). In contrast, when people set their goals in accordance with their explicit motives, they focus on purpose-related incentives. Because they lack activity-related incentives while goal-striving, they have to force themselves to perform an activity (learning, training) to attain the incentives that are associated with the outcomes of the activity (winning a race, achieving a good grade at the end of the semester). In the case of longer-term goals (training for a marathon race, studying) they have to volitionally control themselves over longer periods of time (e.g., twelve-months preparation phase for the marathon, ten semesters of studying). Summing up, the investment of self-control

in terms of the amount and duration of exerted self-control is much higher for goals that are based on explicit motives than on implicit motives.

For the placement of activity- and purpose-related incentives and for “Lack of activity-related incentives “as a source of self-control demands see Fig. 1. “Lack of purpose-related incentives “is not conceptualized as a source of self-control demands, because at the end of the behavioral sequence self-control is not needed anymore. Self-control is also not needed for subsequent sequences of goal pursuit. An individual with a strong implicit achievement motive is automatically incited by corresponding incentives in his or her environment, such as a task of moderate difficulty, which makes it possible to enjoy the mastery of a challenging task (McClelland, 1985b). This process of implicit motive arousal is not assumed to rely on volitional control (McClelland, 1985a) and the incited motive automatically creates the urge to behave in a certain way, for example, to give one’s best to attain the achievement goal.

6. Self-control demand: motive incongruence

We so far separated implicit and explicit motives from each other in order to best illustrate their interactions with different incentives. However, in reality things are more complex: Implicit and explicit motives exist at the same time, interact with each other (Biernat, 1989; McClelland, 1985b; McClelland et al., 1989) and with goals.

Because the interplay between implicit and explicit motives and goals is important to understand the concept of incongruence, their relationships will be described in the following. All three variables (implicit motives, explicit motives, and goals) play fundamental roles in predicting motivated behavior and well-being, but are located at different levels of abstraction and fulfill different functions. Implicit motives represent highly generalized preferences for incentives and could be described as a more primitive motivational system derived from affective experiences (such as the experience and anticipation of feeling proud in case of the achievement motive). They have an energizing function (McClelland et al., 1989), but do not determine specific ways in which a person satisfies his or her motives in a complex social environment. In brief, implicit motives are too abstract to generate motive-satisfying behavior. “Mid-level “motivational units such as goals (Emmons, 1989), personal projects (Little, 1983), or personal strivings (Emmons, 1989) are needed to bridge the highly abstract level of implicit motives and concrete behavior. Although explicit motives are conscious representations of needs that a person ascribes to him- or herself, they are still quite abstract (e.g., “I am a person for whom high performance is important”) and also need goals as a vehicle to link the self-attributed needs with behavior (Brunstein, Schultheiss, & Grässmann, 1998; Job, Langens, & Brandstätter, 2009). In brief summary (and simplifying more complex self-regulatory processes that motives and goals are involved in), this means that motives mainly fulfill an energizing function, whereas goals mainly fulfill a directing function. They direct behavior towards motive satisfaction (Brunstein et al., 1998).

The concept of motive incongruence is based on the assumption of McClelland et al. (1989) that implicit and explicit motives operate independently from each other and thus can be more or less congruent. Meta-analyses showing the statistical independence of both motivational systems support this differentiation (Köllner & Schultheiss, 2014; Spangler, 1992). In the meanwhile, several studies have confirmed the effects of incongruence either between implicit motives and explicit motives (Baumann et al., 2005; Job, Oertig, Brandstätter, & Allemand, 2010; Langan-Fox & Canty, 2010; Schüler, Job, Fröhlich, & Brandstätter, 2009), or between implicit motives and goals (Brunstein, Lautenschlager, Nawroth, Pöhlmann,

& Schultheiss, 1995, 1998; Hofer & Busch, 2017; Hofer & Chasiotis, 2003; Pueschel, Schulte, & Michalak, 2011) on emotional well-being, motivation, and performance. Job et al. (2009) made a consequent suggestion that is fully in line with the assumed functional interplay between implicit and explicit motives and goals as described above. They examined the incongruence between explicit motives and goals as predictors of well-being. Weak associations between explicit motives and goals (Elliot & McGregor, 2001; Emmons & McAdams, 1991) indicate that people not always set goals that are in line with their explicit motives. If explicit motives (“I am a person for whom time spent with my friends is highly important”) and goals (“I want to invest much time in training for a marathon race”) point to different end states, incompatible behavioral tendencies result and motive satisfaction becomes less probable. It seems irrational that people can consciously reflect about their explicit motives and their goals, but then set goals that are incongruent with their explicit motives. An explanation is that people can act externally-regulated in the sense of solely being motivated by their attempt to achieve rewards or avoid punishments from the social environment without considering their self-concepts (external regulation according to Self Determination Theory, Deci & Ryan, 1985). In sum, similar to the incongruence between implicit motives and explicit motives and implicit motives and goals, respectively, the incongruence between explicit motives and goals also causes behavioral tendencies that create a conflict, which needs to be resolved. This, in turn, is assumed to require self-control (2004b, Baumann et al., 2005; Brunstein, 2010; Kehr, 2004b; Kuhl, 2001; McClelland et al., 1989).

In Fig. 1, we illustrated the interplay between all three key motivational variables: implicit motives, explicit motives, and goals. Because this paper aims to explain why one and the same goal can lead to a “paved”, “graveled”, or even “stony” goal striving process, we hold the achievement goal constant and vary between the different types of (in)congruence. First, the achievement goal can be congruent with the explicit motive, but incongruent with the implicit motive. This also implies incongruence between implicit and explicit motives. Second, the achievement goal can be congruent with the implicit motive, but incongruent with the explicit motive. This also implies incongruence between implicit and explicit motives. Third, the achievement goal can be congruent with the implicit and explicit motive, which also means congruence between the motives.

7. Take stock on self-control demands: paved, graveled, and stony paths to performance

In the following, we will sum up the main assumptions of the theoretical considerations outlined above and put them in one figure that illustrates the self-control balance of different paths to high performance (Fig. 1).

The first row in Fig. 1 shows the “path” for people whose goals are in accordance with their explicit motives, but not in accordance with their implicit achievement motive. In this case, the implicit and explicit motives are also incongruent. An example is a student who has a self-concept of being highly achievement-motivated and who strives for achievement-related goals such as achieving top grades or high sport goals in order to gain social recognition. However, because his or her implicit achievement motive is only weak, the goal striving process is not accompanied by affective incentives (lack of activity-related incentives). Additionally, the opportunity costs are high: Spending much time and effort on achievement goal striving interferes with the satisfaction of one’s other, stronger motives, for example, one’s affiliation motive (e.g., “I spend so much time learning at the desk although I don’t really like it. I have the urge to spend time with my friends.”).

With regard to incentives, these people are driven by purpose-related incentives. The reward (e.g., social recognition) – which is expected at the end of a successful goal striving process (a university degree, crossing the finishing line after a marathon race) – attracts the individual and motivates him or her to act in accordance with the achievement goal. In contrast to goals based on implicit motives (see below), this goal striving process lacks activity-related incentives, in terms of absence of fun and flow. Although the performance outcome (high performance) might not differ from the other paths, we expect a person following this first path to experience his or her life as a student or sportsperson as strenuous. The overall self-control demand balance is the highest of all three paths, because all three sources of self-control (difficulty of the task, lack of activity-related incentives, motive incongruence) come together. If well-being is reduced over a longer period of time (at worst during one's whole studies/training), an action crisis might occur, which increases the risk of disengaging from the performance goal (Brandstätter & Herrmann, 2016).

The second row in Fig. 1 shows the “graveled path” for participants who act in accordance with their implicit achievement motive, but not in accordance with their explicit achievement motive. Although a person with this motive-incongruence constellation might benefit from the affective rewards during goal striving, he or she permanently acts in discordance with his or her self-concept (e.g., “I am an affiliation-motivated person and don't care about performance. This does not feel to fit with the fact that I really like spending so much time learning at my desk/training for the marathon.”). Job et al. (2009) argued that according to self-affirmation theory (Steele, 1999; Taylor & Sherman, 2008), the congruence of explicit motives and goals should be related to higher levels of positive affect, whereas incongruence should impair well-being. In a series of four cross-sectional and longitudinal studies, the authors confirmed their hypotheses with regard to positive affect, positive affective experiences, and further facets of subjective well-being. Referring to these theoretical considerations and empirical findings, we assume that also this type of motive-goal incongruence functions as a hidden stressor (Baumann et al., 2005) that requires self-control.

With regard to incentives, for these people, training for a marathon race or studying to master challenging academic goals is accompanied by activity-related incentives. As introduced above, an athlete or a student, who enjoys mastering challenging tasks and has fun with outperforming him or herself, does not need to exert self-control in many situations during his training or studies. However, also for this person goal striving sometimes becomes strenuous due to too high task difficulty and due to incongruence with the explicit motive. He or she is expected to mostly like his or her life as a student or sportsperson, mixed with more strenuous periods during goal-striving. We termed it the “graveled” path to performance, because it requires a moderate amount of self-control.

The third path to high performance (third row in Fig. 1, “paved” path), when achievement goals are based on strong implicit and explicit motives is “easy” because the goal striving process benefits from both, activity- and purpose-related incentives. Furthermore, exertion of self-control due to stressful motive incongruence is no longer necessary. People following this “paved” path are expected to mainly enjoy their life as a student or sportsperson, only seldom overshadowed by strenuous periods of goal striving caused by task difficulty. A feeling of flow may be accompanied in this path of goal striving (Kehr, 2004a). In our terminology, this is the “paved”, easy way to performance.

To avoid misunderstandings, we assume that the types of congruence and incongruence and their associations with self-control requirements are also true for short-term goals (e.g., goal to perform well in an achievement task in the laboratory). Here, the

consequences for well-being are expected to occur immediately and the periods of self-control exertion are shorter.

8. Related theoretical frameworks and final thoughts

Taking a critical view on the three paths to performance, Fig. 1 shows that these simplifications best illustrate our line of arguments, but also raises issues that we aim to address now. First, we cannot avoid the question how people following the “stony path” (first row of Fig. 1) manage to stay on track and reach their performance goals at all? We hold that high trait self-control can compensate for a lack of motive-relevant incentives (see, Schüler et al., 2019) and that applying strategies that support staying on track, such as *planning* (Gollwitzer, 1999; Sniehotta, Schwarzer, Scholz, & Schüz, 2005), and *mentally contrasting* the purpose-related incentives are associated with goal attainment with the present reality (model of fantasy realization, Oettingen, 2000), can be used to face the high self-control demands of goal striving. Also more general self-control trainings that aim at building up one's self-control capacities (Job, Friese, & Bernecker, 2016; Muraven, 2010) might be useful to attain goals that are not accompanied by activity-related incentives.

A question that is even more important because it goes to the very root of the problem is how the incongruence between motives and goals can be avoided right from the beginning. Previous research has shown that congruence can be enhanced by trainings that are based on *goal imagery* in which people focus on the affective experiences while imagining goal striving (see also Job & Brandstätter, 2009; Schultheiss & Brunstein, 1999) or educating people about their motives to create awareness of their implicit motivational needs (Roch, Rösch, & Schultheiss, 2017). As far as we know, however, strategies that aim to improve the congruence of goals to explicit motives are missing so far.

A further issue that we have not addressed so far is the *strength of incentives*. We do not know, for example, whether weak activity-related incentives might be more attractive than strong purpose-related incentives. Furthermore, it has to be tested empirically if activity- and purpose-related incentives can easily be added up as we argued for the paved path (research on the joint effects of intrinsic and extrinsic incentives speaks in favor of this assumption, Cerasoli, Nicklin, & Ford, 2014). We used another simplification in order to present a clear and simple structure in Fig. 1. We assume that task difficulty is in its own a self-control demand that exists independently from inner motivational states. We introduced task difficulty as an outer barrier in goal striving that requires self-control and that we clearly separated from the inner barriers that are related to intrapsychic conflicts (motive incongruence). There are, however, arguments in favor and against this position. As already mentioned above, motivational intensity theory (Brehm & Self, 1989) stated that effort is a direct function of task difficulty. Several experiments, in which task difficulty was systematically varied, confirmed that an objectively measurable task difficulty enhanced participants' effort indicating greater self-control requirements (Richter et al., 2016). This speaks in favor of the position that task difficulty is a self-control demand in itself. Muenks, Miele, and Wigfield (2016) assume two distinguishable sources of effort that are comparable to our approach. They assume task-elicited effort as being prompted by the demands of a task (task difficulty) and self-initiated effort as being initiated by a person's motivation (e.g., urge to perform well). In contrast to these approaches, research on flow experience suggests that objectively difficult tasks are performed seemingly effortless. People report to be fully involved in a joyful activity rather than experiencing the exertion of strenuous self-control (Csikszentmihalyi, 1990). This speaks in favor of the position that task difficulty might not per se

require self-control, which can be separated from the inner motivational states of the individual. Moreover, Csikszentmihalyi (1975) put forward that motivation and subsequent performance may benefit from a fit between task difficulty and an individual's skill level. It was also shown that motivation and subsequent performance are low when task difficulty is not challenging (Heckhausen, 1972). Moreover, challenge-skill fit is more likely to produce high motivation states in non-important tasks (Engeser & Rheinberg, 2008). In important tasks, high performance athletes may rather experience flow motivation when task difficulty is slightly lower than personal skill level. Moreover, in complex motor tasks (like you find in high-performance sports), it is assumed that a certain degree of automatization of the skill is needed in order to experience flow states (Rheinberg & Manig, 2003). More systematic research is needed to disentangle objective task difficulty and subjectively experienced task difficulty and their relationships to self-control demands.

Furthermore, focusing on self-control, we fully neglected sources of control and support from outside. *Social support* with regard to one's goals (e.g., friends at university or in one's jogging group, family members) can foster successful goal striving (e.g., health-related goals) (Carron, Brawley, & Widmeyer, 1998; Kahn et al., 2002; Martire & Schulz, 2007), might compensate for one's own flaws of self-control and therefore also contribute to making self-control more or less easy.

A further issue is that we focused on goal realization, but theoretically neglected other *action phases*, as, for example, defined in the *Rubicon Model of Action Phases* (Heckhausen & Gollwitzer, 1987). Thus, we do not know the demands of self-control in the *pre-decisional phase*, *pre-actional phase*, and in the *post-actional phase*. In the pre-decisional phase, for example, wishes produced by motives have to be tested for feasibility and this deliberation process might require more self-control when goals are incongruent rather than congruent. In the pre-actional phase, incongruent goals might require more planning. For the post-actional phase one might ask if goal attainment for motive-congruent and incongruent goals are evaluated differently and how much volitional resources are available after goal attainment. These and many more questions that might occur to the reader need more empirical testing to be answered.

Another theoretical framework that is directly linked to motives and self-control are Kuhl's considerations on self-control and self-regulation (Kuhl, 2000). In this framework, striving for goals that fit either one's implicit motives, one's explicit motives, or both motives are differently easy ways of self-regulating one's behavior. This is partly reflected in Kuhl's distinction of "self-regulation" and "self-control" (2001, Kuhl & Fuhrmann, 1998; Kuhl, 2000). Kuhl (2000) describes *self-control* as the conscious and effortful attempt to achieve a goal also at the price of the repression of other desires and needs, calling it also "inner dictatorship". This conceptualization is similar to the definition of self-control as understood by researchers from other theoretical backgrounds as "[...] the overriding or inhibiting of automatic, habitual, or innate behaviors, urges, emotions, or desires that would otherwise interfere with goal-directed behavior" (Muraven & Slessareva, 2003). Recent studies also pointed to the fact that one has to carefully distinguish between acting self-controlled (a specific mode of action regulation) and self-ascribed self-control strength (a self-concept of one's self-control strength) (Grund & Carstens, 2019). Both self-control forms seem to be unrelated (Saunders, Milyavskaya, Etz, Randles, & Inzlicht, 2018). Self-ascribed self-control does not necessarily mean that one actually applies self-control in a difficult task. Self-ascribed self-control is rather linked to a preference for achievement-oriented tasks (Grund & Senker, 2018). However, whether a person indeed acts self-controlled is a different question.

Acting self-controlled is linked to feelings of effort and aversion (Grund & Carstens, 2019).

Besides self-control, Kuhl (2000) suggested a second way that reduces the interferences with goal-directed behavior right from the beginning. This form of self-control (which is called "self-regulation" in Kuhl's terminology) operates as an "inner democracy" by regulating people's actions in harmony with their needs, motives, values, or interests. One example of such a harmonious form of self-regulation is striving for goals that are in accordance with one's implicit motives (Baumann et al., 2005). Although, at first sight, self-regulation seems to be the better and "truer" volitional mode (because it is closer to one's affective experiences), Kuhl (2010, p. 311-312) warned against overlooking the advantages of self-control: "It is the classic mode of (potentially conscious) volition, and permits many forms of adaptive behavior that are difficult to realize in the more liberal volitional mode of self-regulation. "Self-regulation by contrast could be accompanied by conflicts like accepting goals that are not in line with core values of one's general self-concept (Rheinberg & Engeser, 2010). Training on capacities such as mindfulness may help individuals already in the pre-decisional action phase to select goals that are congruent to their implicit motives and thus allow for a less demanding self-regulation of performance (Grund, Fries, & Rheinberg, 2018).

A further theoretical framework that would probably interpret the stony, graveled, and paved paths different from our conception, is the *Organismic Integration Theory*, a sub-theory within *Self-determination Theory* (SDT, Deci & Ryan, 1985, 2000). Here it is also assumed that people can and must engage in behavior in their everyday life even when interest and enjoyment are absent. To do so, they need extrinsic motivation that in turn is assumed to vary in its degree of autonomy in self-regulation. *External regulation* is the least autonomous form of self-regulation in which people are only motivated to avoid punishment or to earn a reward. *Introjected regulation* means that people are motivated to engage in behavior to avoid feelings of shame and guilt or to gain self-esteem. These two forms of regulation are not captured in our model, because even on the stony path the goal is congruent with a person's motivational self-concept (explicit motives). Therefore, in terms of SDT, our model only begins with *identified regulation*, in which people endorse the personal value and significance of a behavior and at least experience a sense of freedom in setting their goals. The stony path, however also shows parallels with SDT's forth form of regulation which is *integrated regulation*. SDT researchers assume that here people form a "coherent and unified sense of self" (Vansteenkiste, Niemiec, & Soenens, 2010, p. 116). If this "sense of self" is based on conscious self-reflection, it represents (from our theoretical perspective) an explicit motivational process. Thus, behavior that is based on integrated regulation means in our terminology acting in accordance with one's explicit motives. In the graveled and paved paths in our model the implicit motive is involved which is accompanied by activity-related incentives such as fun, enjoyment, and a high sense of autonomy. According to SDT, these paths could best be described as intrinsic forms of regulation. Summing up, this paper does not present new thoughts in motivation psychology, but aimed to contribute to this field of research by summarizing theoretical approaches in motivation psychology in such a way that we gain a better understanding why one and the same high performance goal may lead to paved, graveled, or stony paths of self-control. The conditions we identified in the present paper refer to (1) task difficulty, (2) lack of activity-related incentives, and (3) implicit-explicit-motive incongruence. To close with the metaphor used in the headline, for the stony paths, literally speaking, one needs special technical equipment such as high-profile tires to arrive at one's destination. Figuratively speaking, high amounts of self-control and the willingness to invest effort are needed to attain goals that are incongruent to one's implicit motives.

Less self-control (less profiled tires) are needed for goals that are incongruent with one's explicit motives, but still, driving on this path does not feel easy and fluently. We recommend choosing the paved path (setting goals that fit one's implicit and explicit motives) that allows lower investment in terms of strenuous self-control (in profiled tires) and makes a smooth-running goal-striving process more likely.

Declaration of Competing Interest

No conflicts of interest.

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