



The course of motivation

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7 November 2010; 8 February 2011; 19 April 2011

Abstract

This article explores the course of motivation in pursuing various goals. We distinguish between two dimensions of motivation: the motivation to attain a focal goal (outcome-focused dimension) and the motivation to “do things right” in the process of reaching that goal (means-focused dimension). We identify the conditions under which the motivation to reach a focal goal increases versus decreases over the course of goal pursuit. We then propose that the motivation to “do things right” follows a u-shaped pattern, such that it is higher at the beginning and end of goal pursuit than in the middle.

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Keywords: Self-regulation; Motivation; Goal-gradient; Dynamics; Depletion; Self-signaling

In the course of pursuing their ordinary and extraordinary goals, people often need to perform a series of actions over time. For example, preparing a fancy meal might involve following a multi-step recipe for a few hours, and mastering a new musical piece might require practicing a series of measures over the course of several weeks. For goals requiring the completion of multiple sequential actions over time, an important question arises: how (and why) does motivation change over the course of pursuing such goals? For example, how motivated are the cook and the pianist to perform goal-related tasks at the beginning, middle, or end of their gourmet and musical pursuits?

We define a goal as a cognitive representation of a desired state (Fishbach & Ferguson, 2007; Kruglanski, 1996) and study the strength of motivation over the course of goal pursuit. Classic motivation research, which has long taken an interest in the course of motivation, has documented that people have a strong motivation to finish what they have started, particularly when they are close to finishing it (Brown, 1948; Hull, 1932, 1934; Zeigarnik, 1927). More recently, research has provided some new insights into this classic problem by identifying

factors that influence the slope of motivation, causing it to increase, decrease, or follow other patterns over the course of goal pursuit. In addition, recent research has taken a closer look at motivation and elaborated on its various dimensions.

Motivation refers to the psychological force that enables action (Lewin, 1935). We suggest that motivation can manifest itself by increased effort and persistence aimed at reaching a goal’s desired state (*outcome-focused motivation*; see, e.g., Brehm & Self, 1989; Locke & Latham, 1990; Miller, Galanter, & Pribram, 1960; Powers, 1973). Motivation can also manifest itself by an increased desire to use proper means in the process of goal pursuit (*means-focused motivation*; see, e.g., Higgins, Idson, Freitas, Spiegel, & Molden, 2003; Steele, 1988). For example, a student pursuing a sequence of assignments toward completing her course requirements might invest high or low amounts of energy in these assignments, complete them slowly or quickly, attend to the details of her work (e.g., by using her best handwriting) or cut corners (e.g., by copying another student’s answers). Each of these criteria would reflect a different aspect of her motivation and could fluctuate in different ways over the course of a term.

In the present article, we explore such changes in the strength of motivation over the course of goal pursuit. We start with an analysis of the course of outcome-focused motivation. In the first section, we discuss the classic goal-gradient effect and

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related findings, which predict an increase in motivation near a goal's end state. In the second section, we discuss variables responsible for decreasing patterns of motivation strength, including the decline in goal accessibility, the presence of multiple goals and the amount of effort invested in goal-related tasks. We then suggest that the nature of inferences drawn from prior goal-related actions—as evidence of commitment or progress—can moderate the course of motivation, leading it to either increase or decrease after initial goal pursuit. In the third section, we explore the means-focused dimension of motivation. We propose that the motivation to do things in a way that maintains one's desired self-concept is independent of the motivation to achieve a goal's outcome and tends to follow a u-shaped course. In Table 1, we summarize our main propositions regarding the variables that influence the course of motivation. Finally, we discuss some implications of these findings for goal pursuit in consumption contexts.

Increasing motivation

The notion that motivation to reach a goal's end state (outcome-focused motivation) increases as distance to the goal decreases is rooted in the origins of psychological research. Researchers refer to this phenomenon as “the goal-gradient hypothesis” or “goal looms larger effect” and find that people (and other animals) exert more effort and persistence as they get closer to a goal's end state (Brown, 1948; Förster, Higgins, & Idson, 1998; Heath, Larrick, & Wu, 1999; Hull, 1932; Kivetz, Urminsky, & Zheng, 2006; Nunes & Dreze, 2006). In one of the original tests of this hypothesis, rats in a straight alley progressively increased their running speed as they proceeded from the beginning of the alley toward the food at the end of the alley (Hull, 1934). More recently, Kivetz et al. (2006) demonstrated goal-gradient effects for a variety of human behaviors. They found, for example, that participants who rated songs online to obtain reward certificates increased their efforts as they approached the reward goal. Specifically, as they got closer to receiving the reward, participants increased the frequency of their visits to the rating site, rated more songs per visit, and were less likely to abandon uncompleted rating efforts.

Table 1
A summary of variables that influence the courses of motivation.

Type of motivation	Course of motivation	Preconditions
Outcome-focused	Increasing pattern:	<ul style="list-style-type: none"> • Goal with clear and proximal end state • Goal-related actions signal commitment
	Decreasing pattern:	<ul style="list-style-type: none"> • Diminishing goal accessibility • Multiple goal context • Goal-related actions are effortful • Goal-related actions signal progress
Means-focused	U-shaped pattern:	<ul style="list-style-type: none"> • Goal with clear beginning and end states

These lines of research on the goal-gradient (or goal-looms-larger) effect typically conceive of the construct of motivation in terms of physical and mental effort and measure it by the speed, strength, and perseverance with which people perform actions. Thus Hull (1934) measured how much faster rats ran when they got closer to the food at the end of an alley. Kivetz et al. (2006) measured how much consumers in a frequent-buyer program accelerated their rate of purchases as they progressed toward earning a reward (i.e., decreasing their inter-purchase interval), and how much participants increased their persistence at song-rating tasks. Heath et al. (1999) also used persistence as a measure of motivation. In their study, participants expected an actor with a goal of doing 30 sits-up to persist more (e.g., by doing 5 more sit-ups) when he was closer to (vs. farther from) his goal.

Researchers consider the pulling force of a goal's end state to be one of the basic characteristics of goal-driven processes. Thus Förster et al. (2005) found that active goals enhance the accessibility of goal-related constructs, and that such accessibility persists until goal fulfillment, at which point it is reduced or inhibited. Once the goal is attained, motivation drops below baseline. In one study, participants searched through several sequential blocks of pictures with the goal of finding a picture of glasses followed by a picture of scissors. Lexical decision tasks participants performed after each block of pictures indicated that the accessibility of goal-related words (i.e., words related to “glasses”) was greater prior to finding the target pictures and lower after finding them.

We identify several explanations for the pattern of increasing motivation as the distance to the goal decreases. First, early work on Gestalt psychology suggests that the desire for closure might underlie this effect. Specifically, according to the Zeigarnik effect, people are highly motivated to finish what they start. Such motivation accounts for their better recall of uncompleted tasks compared to completed ones. For example, in Zeigarnik's (1927) original study, participants performed 20 short tasks, half of which they did not get a chance to complete because the experimenter purposefully interrupted them. At the end of the study, when asked to recall as many of the tasks as possible, participants recalled more uncompleted than completed tasks. Zeigarnik attributed this superior recall of uncompleted activities to the goal-focused notion of “closure” or the need to finish what one starts. In this conceptualization, an incomplete task corresponds to an unfulfilled goal and leads to a lack of closure. This lack of closure, in turn, produces cognitive activity and memory traces related to the goal, resulting in better recall of the uncompleted tasks. By contrast, a finished task corresponds to a completed goal, which provides closure and switches off any goal-related cognitive effort.

Another account for the increase in motivation as the goal's end state nears refers to the perceived contribution of each successive goal-related action to the completion of the goal. Indeed, the marginal impact of a single successful step (progress) toward goal achievement appears to increase over the course of goal pursuit. In turn, this greater perceived impact of each new progress increases the motivation to make more progress toward the focal goal (Higgins & Brendl, 1995; Koo & Fishbach, 2010). Specifically, if the completion of a goal requires a given number

of identical steps, each new step would reduce a larger proportion of the remaining distance to the goal and therefore would appear more impactful. To illustrate, consider the goal to proofread a 10-page document. Proofreading the first page would reduce the distance to the goal by 10% (1 out of 10 remaining pages), proofreading the seventh page would reduce that distance by 25% (1 of 4 remaining pages), and completing the last page would reduce goal distance by 100% (1 out of 1 remaining pages). Hence, psychologically, the marginal value of each new action towards goal completion increases over the course of goal pursuit, leading to an increase in motivation as the remaining distance to the goal decreases.

A third account of why motivation increases with proximity to a goal's end state conceives of the end state as a "reference point" and assumes that the value of each action depends on its distance from this reference point (Heath, Larrick, & Wu, 1999). According to prospect theory, the value of outcomes follows an S-shaped function (Kahneman & Tversky, 1979). Therefore, outcomes of goal pursuit that fall short of the goal (i.e., losses) have a greater marginal impact when they are closer to the goal's end state (i.e. reference point)—at points where the loss function is steep—than when they are distant from the end state. This diminishing sensitivity principle suggests falling short of a goal when one is close to (vs. far from) the end state would be more painful (i.e., perceived as a greater loss). For example, failing to proofread a 100-page manuscript within a given deadline should feel worse when one was on the 90th versus 40th page. To avoid the negative emotional impact of failing to reach a proximal goal, people should be willing to exert more effort as they approach the end state than when they are further away from the goal.

Decreasing motivation

Although supported by ample evidence, the increase in motivation over the course of goal pursuit is by no means universal. Rather, several variables lead to a motivational decrease over the course of goal pursuit. In the present section, we review factors that cause such a decrease.

Diminishing goal accessibility

The type of goal under consideration can influence the pattern of motivation: whether motivation increases or decreases. Some goals are finite with clearly defined end states (Locke & Latham, 1990), whereas other goals are ongoing and represent motivational states that are never fully completed (Kruglanski, 1996). For example, obtaining a reward from a frequent-buyer program (buy 8 meals to get the 9th meal free of charge), proofreading a 100-page manuscript, and doing 30 sit-ups are goals with clear end states. On the other hand, goals such as "being health-conscious" or "being altruistic" are ongoing and have no predetermined end states unless one sets sub-goals within these broader pursuits (e.g., losing 20 pounds by the end of the year, volunteering 10 hours this month).

We propose that an increase in motivation is unlikely to occur over the course of pursuing "endless" goals, because the

lack of a specific and predetermined end state negates the impact of such factors as a need for closure, the marginal value of actions, and distance from a reference point. Moreover, in the absence of a clear end state, we expect that motivation to pursue ongoing goals will be a function of goal accessibility (e.g., perform better following exposure to high-performance cues). Because goal accessibility declines over time, we further expect motivation that is a function of goal accessibility to decrease. Indeed, the extant literature on goal priming makes a similar point: motivation is at its peak soon after the goal is primed by contextual cues, including images, words, and sounds. And motivation slowly declines after some delay, as people move away from the prime (Bargh, Gollwitzer, Lee-Chai, Barndollar, & Trotschel, 2001; see Fishbach & Ferguson, 2007, for review).

Difficulty of goal-related tasks

Another factor that leads to a decreasing course of motivation is the decline in resources following previous engagement. Achieving goals often requires the completion of effortful tasks that can drain an individual of limited resources over time. Such reduction or exhaustion of physiological (capacity) and psychological resources following the exertion of effort is called "depletion." Research on depletion has studied the issue of diminishing resources and has shown that exerting effort on prior tasks can deplete individuals of their physiological or psychological capacity to exert more effort subsequently. For example, Wright, Martin, and Bland (2003) showed that participants depleted by an initial difficult counting task exerted less effort on a subsequent difficult task than did non-depleted participants. Whereas their study presented participants with two unrelated tasks that presumably served two independent goals, we assume depletion has a similar impact on reducing motivation to pursue a single goal requiring multiple steps.

Other research has demonstrated a reduction in self-control effort after the pursuit of goal actions that require self-control (Baumeister, Bratslavsky, Muraven, & Tice, 1998). For example, exerting self-control by eating an unappetizing vegetable instead of a tempting treat resulted in decreased persistence on a subsequent puzzle task (Baumeister et al., 1998). Other types of effortful acts similarly deplete self-control resources in the course of goal pursuit. For example, thought suppression (e.g., trying not to think of white bears; see Wegner, Schneider, Carter, & White, 1987), self-presentation under challenging circumstances (Vohs, Baumeister, & Ciarocco, 2005), and difficult choices (Vohs, et al., 2008) can all hinder subsequent self-regulation, regardless of whether the person moves to another goal or continues to pursue the same goal.

Notably, whereas some researchers conceive of depletion as a reduction in physiological resources such as blood glucose levels (Gailliot et al., 2007) others document a depletion effect related to reductions in psychological resources, which causes motivational deficits that are independent of physiological resource levels. As an example of a decrease in psychological resources, Tice, Baumeister, Shmueli, and Muraven (2007) found that negative mood exacerbates the effects of ego-

depletion whereas positive mood provides a “motivational boost.” As another example, [Choi and Fishbach \(in press\)](#) found that choices (e.g., of coffee brands, books, or magazines) were depleting when participants considered which items they wanted to purchase (i.e., instrumental choice) but boosted psychological resources when participants considered which options would best express their tastes (i.e., experiential choice). Along the same lines, [Muraven and Slessareva \(2003\)](#) showed that motivational resources can be “mobilized” to counteract the effects of energy depletion, such that when subsequent tasks were deemed “important,” participants depleted by a prior effortful task performed as well as non-depleted participants.

We propose that depletion during an effortful goal pursuit leads to a pattern of decreasing motivation to pursue the goal. When goal pursuit taps into limited but renewable resources, motivation can also take a cyclical down-and-up pattern depending on the length of the pursuit and the type of tasks involved. Indeed, if depletion due to prior efforts leads to lower efforts in a subsequent task then this decreased effort would not interfere with the replenishment of depleted resources, which could potentially result in increased effort in the next task. This pattern of down-and-up motivation could repeat itself until the goal is reached, depending on the number of steps required for goal attainment. Moreover, the duration of the low-motivation (low-resource) stage following depletion would depend on the amount of time required to replenish depleted resources. Highly depleting initial activities might require more recovery time, hence prolonging the low-motivation (low-resource) phase, whereas marginally depleting tasks might require less recovery time, leading to shorter low-motivation (low-resource) stages.

Multiple goals pursuit

A proximal end state leads to an increasing pattern of motivation in the context of single-goal pursuits, where all efforts can be allocated to reaching one goal. However, under many circumstances, people pursue several goals simultaneously ([Fishbach & Ferguson, 2007](#); [Kruglanski et al., 2002](#)). In addition, many goals are accomplished over long periods of time, such that other goals inevitably present themselves in the course of pursuing the focal goal. For example, in the course of saving for a house or completing an academic degree, one will most certainly need to attend to other goals.

In the context of multiple-goal pursuits, [Carver and Scheier \(1998\)](#) theorize that when people move toward a goal, they rely on affective cues from their past progress to monitor further effort investment. This theory adopts the cybernetic model of closing a discrepancy toward a goal’s end states, where the motivational system calculates the magnitude of the discrepancy between the present state and the desired end state and guides action toward closing that gap ([Miller, Galanter, & Pribram, 1960](#); [Powers, 1973](#)). In a cybernetic model, the feedback loop consists of four steps, captured in the acronym “TOTE” (Test, Operate, Test, Exit). Specifically, self-regulation starts with a calculation of the distance and effort needed to reach a goal’s end state (Test), which leads to investing a certain amount of

effort toward the goal (Operate). Another assessment of the distance and effort required to reach the goal (Test) follows this effort investment, and the process cycles around recursively until the end state is reached, at which points the process ends (Exit).

According to Carver and Scheier, when the testing function detects that the rate of closing the discrepancy between the current state and the desired end state is different from what the individual anticipated, an error signal occurs in the form of affect. Exceeding an anticipated rate of progress (e.g., positive discrepancy) creates positive affect, which suggests that the rate of closing the gap between the current state and the desired end state is faster than expected. This positive affective state thus leads individuals to reduce their efforts on the focal goal or “coast” and redirect their attention to the pursuit of another goal. By contrast, falling behind on making progress toward an end state (i.e., negative discrepancy) elicits negative affect, which suggests that the rate of closing the gap is lower than expected. As a result, people in this negative affective state increase their effort investment on the focal goal.

A key prediction based on this analysis is that the strength of motivation to reach a focal goal should decrease after successful goal pursuit. Specifically, positive goal-related emotions from successful pursuits decrease the motivation to further invest in the focal goal, and induce the pursuer to direct efforts elsewhere, to an unrelated goal. On the other hand, failing or slow-progressing pursuits and the negative feeling they evoke motivate a person to invest more effort in the focal goal (e.g., [Reed & Aspinwall, 1998](#)). Notably, although it refers to goals with clear end states where increasing motivation was observed, Carver and Scheier’s model typically relates to the pursuit of longer-term goals (e.g., pursuing a 5-year graduate degree) during which other goals inevitably present themselves. The combination of distal end states and multiple concurrent goals in this model encourages people to relax their efforts following successful pursuits.

Within a similar perspective, research on licensing effects has documented that people relax their efforts after recent successful pursuits of ongoing goals, such as health improvement goals and egalitarian or altruistic goals ([Khan & Dhar, 2006](#); [Monin & Miller, 2001](#); [Strahilevitz & Myers, 1998](#)). Licensing effects emerge when prior virtuous actions (e.g., expressing virtuous attitudes) lead to the inference that sufficient progress has been made toward the “virtuous” goal. This inference, in turn, licenses individuals to relax their efforts on the virtuous goal and direct their attention to the pursuit of other, often less virtuous, goals. For example, [Monin and Miller \(2001\)](#) showed that expressing egalitarian attitudes in one context boosts the perception of having high moral credentials and increases the likelihood that individuals will subsequently relax their egalitarian goals and exhibit prejudiced behaviors in another context.

In another demonstration of licensing effects, [Sachdeva, Iliev, and Medin \(2009\)](#) found that participants who wrote about an instance in their lives that revealed their positive traits were subsequently less willing to donate money to charity than participants who wrote about their negative traits. In the context

of consumer behavior, Khan and Dhar (2006) found that participants who committed to a charitable act subsequently felt licensed to indulge by choosing a luxury item (e.g., designer jeans) over a utilitarian one (e.g., vacuum cleaner). This line of research suggests the general motivation to pursue broad (and ongoing) virtuous goals tends to decrease after virtuous (real or imagined) actions indicate that some progress has been made on these virtuous goals.

Based on these findings, we conclude that whenever several goals are activated simultaneously, initial progress on a focal goal will decrease the motivation to pursue that goal (and increase the motivation to pursue another goal). However, when a single goal is activated and its end state is close, initial progress will increase the motivation to pursue it (as in goal-gradient studies). Therefore, depending on the number of goals under consideration and the distance from goal attainment, making progress on closing the gap between the current state and the desired end state may lead to an increase or a decrease in the motivation to pursue a focal goal.

The meaning of actions determines the course of motivation

Recent research on the dynamics of self-regulation has explored when motivation increases versus decreases after initial goal pursuit (Fishbach & Dhar, 2005; Fishbach, Dhar, & Zhang, 2006; Fishbach, Zhang, & Koo, 2009). This research posits that people ask themselves one of two questions when deciding whether to invest resources in a goal: “Is the goal worth pursuing?” or “Is the pace of pursuing the goal adequate?” These questions correspond to whether the actions express *commitment* or *progress*, respectively. By commitment, we refer to the sense that a goal is valuable and that the expectancy of attaining the goal is high as a result of the initial pursuit (Fishbein & Ajzen, 1974; Vroom, 1964). By progress, we refer to the perception of moving forward on a goal and reducing the discrepancy between the current state and the desired state (Carver & Scheier, 1998; Higgins, 1987). These two representations of goal pursuit (i.e., commitment and progress) apply to both finite and endless goals, for example, completing a given task versus achieving some general fitness goal.

According to the dynamics of self-regulation framework, when people interpret their goal-related actions as a sign of commitment to the goal, they tend to highlight the pursuit of that goal by prioritizing it and subsequently engaging in actions consistent with it. On the other hand, when people interpret their goal-related actions as a sign of progress toward the goal, they tend to balance between this focal goal and other pursuits by relaxing their efforts on the focal goal. Thus motivation increases when actions signal commitment but decreases when the same actions signal that sufficient progress has been made on the pursuit of a focal goal.

Several factors influence the meaning of goal actions, that is, whether they elicit the perception of goal commitment or progress. One such factor refers to the questions people answer when they wish to explain their actions to others or to themselves. When people ponder whether pursuing a goal

makes them feel more committed to the goal, they tend to draw commitment inferences that increase their motivation to pursue the goal. On the other hand, when people wonder whether pursuing a goal makes them feel they are making progress toward the goal, they think of prior goal actions as indicators of progress, which decreases their motivation to pursue similar actions (Fishbach & Dhar, 2005).

Another factor that influences the meaning of goal actions and thus the course of motivation is a person’s initial level of commitment to a goal. When their commitment to a goal is low or uncertain, people tend to construe any goal actions as expressing commitment, whereas when their commitment to a goal is already high or certain, people do not wonder about their commitment and instead tend to construe actions as indicating progress. To illustrate, Koo and Fishbach (2008) explored intentions to study among students taking an exam they considered either unimportant or important. When commitment was low (i.e., unimportant exam), considering their completed work so far motivated students to study for the exam, because they inferred from past actions that they were more committed to studying. Conversely, when commitment was high (i.e., important exam), focusing on completed actions decreased the motivation to study for an important exam because students inferred that they had made sufficient progress.

The meaning of actions can also depend on whether people focus on the low- versus high-level construal of their actions, for example whether they refer to an activity as reading an article versus obtaining knowledge. When people focus on the abstract meaning of goal-related actions, they tend to construe actions as expressing commitment, which increases their motivation to pursue similar goal-related actions. However, when people focus on the concrete meaning of their actions, they tend to infer progress, which decreases their motivation to engage in further similar actions (Fishbach et al., 2006). For example, an action such as applying sunscreen would increase the motivation to take other goal-consistent steps (e.g., wearing a sun hat) if a person considers her action in the abstract context of “being health conscious,” but the same action would likely decrease such motivation if the person focuses only on the concrete act of applying sunscreen.

Similarly, the structure of a choice set can influence the meaning of choice—whether it conveys commitment to or progress toward a goal. When people draw from a choice set that clearly separates options associated with different goals, they tend to construe their choice as an indication of goal commitment, which increases motivation and leads to subsequent goal-consistent choices. For example, choosing a healthy entrée from a menu that separates healthy and unhealthy options leads to commitment inferences and increases the motivation to make subsequent healthy choices. However, when selecting from a mixed choice set of options associated with different goals, people construe their choice as indicating progress, which decreases motivation (i.e., leading to goal-inconsistent choices). As such, choosing a healthy entrée from a mixed menu of healthy and unhealthy options leads to progress inferences and decreases the motivation to make subsequent healthy choices (Fishbach & Zhang, 2008). In summary, research on the

dynamics of self-regulation attests that whether motivation increases versus decreases after pursuing a goal often depends on the meaning of actions—whether they signal greater commitment or sufficient progress—and variables that influence such meaning will determine the course of motivation.

Means-focused motivation: doing it right

Goal research often focuses on mental and physical effort (e.g., speed, strength) and persistence (e.g., time spent persevering on a difficult or laborious task) as proxies for motivation. Within this perspective, researchers consider a person who exhibits higher levels of effort and persistence to be more motivated. Although accurate, this conception of motivation is incomplete. Rather, people derive value from two distinct dimensions of goal pursuit (see also, Higgins, Idson, Freitas, Spiegel, & Molden, 2003): the first dimension relates to the outcomes or consequences of goal-related actions (the outcome-focused dimension), whereas the second dimension involves the means used to produce those outcomes (the means-focused dimension).

Whereas the outcome dimension of goal pursuit has received most of the attention in the literature, popular sayings such as “the end does not justify the means” or “doing things the right way” suggest that the means used in the course of goal pursuit play an important role in motivation. We define means as any activity that contributes to the attainment of a goal (Shah & Kruglanski, 2003) and propose that people derive value from pursuing goals with the “right” means: means that agree with established rules, normative principles, or personal characteristics. For example, means are most valuable when they bring fairness to a decision process (Thibaut & Walker, 1975; Tyler & Lind, 1992), match an individual’s regulatory orientation (regulatory fit, Higgins, 2000; Higgins et al., 2003), justify people’s prior decisions (Pennington & Hastie, 1988; Tetlock, 1991; Tversky & Shafir, 1992), or adhere to personal standards: the rules or principles individuals use as a basis for judging their own and others’ behavior.

Furthermore, this value from using proper means is independent from that of the outcomes of goal pursuit (Merton, 1957). Research finds that individuals differ in the extent to which they focus on assessing and selecting appropriate means (assessment), as well as in the extent to which they have a desire for movement toward goal outcomes (locomotion), and that these two individual differences are entirely orthogonal (see, Kruglanski et al., 2000). In this section, we examine the co-existence of the outcome- and means-focused dimensions of motivation in the course of goal pursuit and explore whether the means-focused dimension of motivation follows a course independent of that of the outcome-focused dimension.

Proper means and self image

People may prioritize the means over the outcome of goal pursuit for several reasons. Using proper means might be important for learning new skills or mastering old ones (Ames & Archer, 1988; Dweck & Leggett, 1988). In the context of

learning or mastery goals, the outcome is often secondary to the learning process. For example, a student in a pottery class might prioritize learning a correct technique and mastering the tools over creating a desired product.

Other times, people believe that some means fit certain goals better than others. Indeed, a main prediction of regulatory fit theory is that using these “right” means matters. Prior research on regulatory focus theory distinguishes between two foci of goal attainment: promotion focus and prevention focus. Promotion focus is characterized by an interest in the attainment of aspirations and accomplishments (ideals), and seeking positive outcomes. By contrast, prevention focus involves a concern for the attainment of responsibilities and safety (oughts), and avoiding negative outcomes (Higgins, 1987). On the basis of regulatory focus theory, regulatory fit theory predicts that people prefer approach means for promotion-focus goals and avoidance means for prevention-focus goals.

For example, in one study, Förster, Higgins, and Idson (1998) asked participants to complete an anagram task in which they presented some anagrams as approach means (to gain points) and others as avoidance means (to avoid losing points). Promotion-focused participants persisted more on approach anagrams closer to the goal, but prevention-focused participants persisted more on avoidance anagrams closer to the goal. These findings demonstrate that the increase in motivation with proximity to a goal occurs only when people are pursuing the goal using means that “feel right” to them, that is, means that match their regulatory orientations (see also, Förster et al., 2001).

We propose that the use of proper means and, in particular, those that adhere to personal standards of conduct further has implications for people’s self-image. Relaxing standards by using the “wrong” means (e.g., unethical acts, sub-standards actions, and illegal substances) can have a negative impact on one’s self-image (Baumeister & Newman, 1994; Eidelman & Biernat, 2007; Gollwitzer, Wicklund, & Hilton, 1982; Steele, 1988). Indeed, people learn about themselves by drawing attitudinal and dispositional self-inferences from observing their own behaviors (Bem, 1972), and relaxing standards can signal to one that one has low standards. Because people are motivated to maintain positive views of themselves by thinking of themselves as having high standards, negative self-inferences drawn from relaxing standards can be detrimental to self-image.

However, relaxing standards often carries obvious benefits for the outcome-focused dimension of motivation: saving time and energy or gaining valuable resources (e.g., money). These benefits explain why, despite the potentially negative psychological impact of relaxing standards, people still engage in sub-standard behavior in a variety of contexts (e.g., ethical, performance, religious, etc.). Research on ethics shows that to resolve the potential conflict between preserving positive self-views and benefiting from standard relaxation, people employ “strategies” that allow them to act unethically while maintaining the illusion of being moral. These strategies involve avoiding comparisons between questionable behaviors and known moral standards or conveniently redefining standards in ways that make questionable behaviors seem acceptable.

For example, Batson, Thompson, Seufferling, Whitney, and Strongman (1999) found that a large proportion of participants falsely reported the favorable outcome of a coin flip unless moral standards were salient enough to promote behavior-standard comparisons. Mazar, Amir, and Ariely (2008) documented people's tendency to cheat "just a little bit": just enough to benefit from relaxing standards (e.g., getting more money from an experiment) but not enough to encode their behavior as immoral, thus preserving their positive self-image. In these experiments, participants claimed much less money than they could have had they cheated more. In addition, Zhong, Bohns, and Gino (2010) find that dimly (vs. brightly) lit settings are more conducive to unethical acts because people have an illusory sense of anonymity and perceive their actions as less noticeable.

These findings show that people are motivated to use means in ways that allow them to view themselves in a positive light. Researchers have labeled the process of engaging in (or abstaining from) an action in part to infer personal characteristics or dispositions "self-signaling" (see Prelec & Bodner, 2003) or self-presentation to the *self* (Greenwald & Breckler, 1985; Hogan, Jones, & Cheek, 1985; Schlenker, 1985).

The course of means-focused motivation: slacking in the middle

In the context of goal pursuits with clear beginning and end states, we propose that self-signaling concerns and the resulting means-focused motivation are greater at the beginning and end (vs. middle) of a sequence of actions toward a goal. Specifically, people adhere to their standards, including, ethical, moral and performance (i.e., quality of work) standards, more closely at the beginning and end of goal pursuit, and relax their standards in the middle. We attribute the u-shaped course of means-focused motivation to the greater (self-) signaling value of actions at the beginning and end (vs. middle) of goal pursuit, that is, to the fact that beginning and end (vs. middle) actions are seen as more diagnostic for dispositional inferences about the self and others (Touré-Tillery & Fishbach, 2011).

Consistent with the notion of slacking in the middle, research on sequences has demonstrated that beginning and end positions are more distinctive than middle ones (i.e., they stand out from the rest). According to Murdock (1960), this differential distinctiveness of sequential stimuli explains primacy and recency effects, whereby people tend to remember the first few items (primacy effect) and last few items (recency effect) better than the items in the middle of a sequence of stimuli (e.g., words; see Greene, 1986 for review). Furthermore, research has shown salience produces exaggerated perceptions that the salient (vs. non-salient) item is more influential and diagnostic (Pryor & Kriss, 1977; Taylor & Fiske, 1978).

In the context of goal pursuit, the greater salience of beginning and end (vs. middle) actions increases the actions' perceived diagnosticity for dispositional inferences about self and others. For example, in one of our studies, participants judged themselves as more skilled at a task consisting of five identical sub-tasks when they received positive performance feedback on the first or last (vs. middle) sub-task—even in the

absence of information on their performance at the other four sub-tasks. In another set of studies, participants judged others as more dishonest or less religious for relaxing ethical or religious standards at the beginning or end (vs. middle) of goal pursuit.

The greater perceived diagnosticity of beginning and end (vs. middle) actions for self- and interpersonal inferences, in turn, leads to a u-shaped pattern of means-focused motivation, evidenced by greater adherence to ethical and performance standards at the beginning and end (vs. middle) of a sequence of goal related-actions. In one study, participants completed a word-recognition task privately and had the opportunity (and incentive) to cheat at the beginning, middle, and end of the task by claiming to know the meaning of a fake word. A greater number of participants claimed to know a fake word and recognize a fake definition of the word (dishonest answer) when the word appeared in the middle than when it appeared at the beginning or end of the sequence.

In another study, participants privately flipped a coin 10 times to assign themselves randomly to a series of 10 long or short proofreading tasks. We found that they were more likely to (falsely) report the favorable outcome of the coin flip and assign themselves to the short passage for tasks in the middle than for those at beginning or end. In yet another study, participants had the opportunity to take advantage of the experimenter's "forgetfulness" and get undeserved credit for a task they did not complete. Consistent with our previous studies, a higher number of participants accepted the unearned credit in the middle than at the beginning or end of the seven-task sequence. Across a variety of tasks, we documented a u-shaped pattern for adherence to ethical standards in the course of goal pursuit and found that this pattern extends to performance standards. Indeed, in a study in which participants completed a shape-cutting task at their own pace, we found that out of the six identical shapes provided for the task, participants produced higher-quality cutting for the first and last shapes, and literally "cut corners" in the middle.

In addition, adherence to religious standards (traditions) exhibited the same u-shaped pattern. In a field experiment, we documented that Jewish participants were more likely to engage in the Hanukah ritual of lighting menorah candles on the first and last (vs. middle) nights of the eight-night Jewish holiday. Moreover, this study revealed a high correlation between participants' religiousness and their adherence to religious standards at the beginning and end of Hanukah, but not in the middle, which supported the contention that beginning and end actions are seen as stronger self-signals. Indeed, religious participants (i.e., those who should care most about protecting their religious self-image) were more likely to adhere to their standards at the beginning and end of Hanukah—but behaved like less religious participants in the middle.

Taken together, the findings reviewed above demonstrate that the means-focused dimension of motivation can either stem from a background goal, or be an integral part of the focal goal itself. For example, the concern with using proper means while completing a series of assignments can reflect the presence of a background goal to "be honest", whereas

engaging in Menorah-lighting rituals reflects pursuit of a focal goal to adhere to religious rituals. Regardless of its status, the means-focused motivation to “do things right” follows a u-shaped pattern for self-relevant goals, such that it is higher at the beginning and end of goal pursuit than in the middle.

Simultaneous activation of outcome- and means-focused motivations

The means-focus dimension of motivation operates independently from its outcome-focused counterpart and often tends to follow a different pattern. Thus, whereas means-focused motivation follows a u-shaped pattern, outcome-focused motivation might follow increasing or decreasing courses (or some cyclical combination of both) depending on the context. The coexistence of these two dimensions of motivations has important implications for goal pursuit. When, for example, outcome-focused motivation follows an increasing pattern, we expect both dimensions of motivations to be high toward the end of goal pursuit. In this case, toward the end state, people might experience a stronger conflict between their increasing need to attain the goal (outcome-focus) and their increasing desire to do things the right way (means-focus). This conflict might be particularly strong in situations in which focusing on reaching the outcome quickly would require slacking on the means or in which focusing on the means would interfere with reaching the outcome faster.

To illustrate this internal conflict, consider Kivetz et al.’s (2006) study with online consumers who rated songs in exchange for reward certificates. The results show that consumers increased the frequency of their visits to the rating site, rated more songs per visit, and were less likely to abandon rating efforts as they approached the reward goal. A different analysis might uncover participants’ motivation to do things right and their internal conflict between wanting to get their reward quickly (outcome-focus) and wanting to properly rate the songs (means-focus). Focusing on means would lead participants to spend more time on each song (e.g., play it twice) or give more thought to each song to ensure the ratings are “done right,” which could delay the reward (outcome). By contrast, focusing primarily on outcomes would lead participants to rate more songs toward the end, but rate each song more quickly and potentially less carefully (means), which could negatively affect their self-views.

As a general point, most studies on goal pursuit pose some degree of internal conflict between the means- and outcome-based dimensions of motivations. Depending on how motivation is measured, different patterns might be uncovered. In particular, the findings reviewed here suggest that measuring motivation in terms of effort (speed or strength) and persistence might produce different patterns than measuring it in terms of adherence to standards of ethics or performance. Understanding the different patterns these two aspects of motivation follow will allow researchers to draw predictions for when conflicts would arise between these two dimensions of motivation as opposed to when one type would clearly dominate the other.

Summary and implications

In this article, we explored some possible courses of motivation during goal pursuit. We distinguished between two dimensions of motivations. First, we examined the outcome-focused motivation to reach a goal’s outcomes, and reviewed findings suggesting that this dimension of motivation can fluctuate based on several factors. Next, we reviewed work on the means-focused motivation to use proper means in the process of pursuing a goal, which shows this dimension of motivation follows a u-shaped pattern.

In our review, we addressed findings from consumer research and social psychology, which have important implications for understanding and modifying consumers’ behaviors in the pursuit of their various consumption goals. Motivation to pursue these consumption goals should fluctuate based on the factors discussed in this review. Findings on the outcome-based dimension of motivation would predict, for example, that toward the end of a charity fundraising goal, consumers would be more likely to increase their monetary contributions (i.e., goal-gradient effect). However, after spending some time properly sorting and recycling their garbage, consumers inferring progress on environmental goals might be more likely to toss an empty Coke can in the regular trash bin (i.e., dynamics of self-regulation, licensing effect).

Similarly, findings on the means-focused dimension of motivation also lead to several predictions in the pursuit of consumption goals. Indeed, we would expect consumers to succumb more easily to the temptation to relax their standards, for example, act less ethically or apply themselves less, in the middle of their many consumption goals (i.e., frequent-buyer program, shopping, providing feedback, etc.). For instance, while shopping, consumers might slack in the middle by spending less time considering various options and might be more likely to use mental or physical shortcuts such as selecting default or easily accessible options. This last prediction suggests that grocery store layouts in which unhealthy items such as chips, soda and candies are in the center aisles might unwittingly lead to less thoughtful selections of such items, hence possibly, more unhealthy choices.

Furthermore, since beginning and end (vs. middle) positions are often arbitrarily determined—especially in consumption contexts—reducing the length of the middle by dividing long goal pursuits into sub-goals requiring shorter sequences of actions should increase the likelihood that consumers will adhere to their standards. For example, a frequent-buyer programs that requires only four purchases to get a reward should discourage misuse to a greater extent than one requiring eight purchases, since the former has fewer points in which consumers would experience being in the middle of goal pursuit. These examples are only a few of some of the predictions that emerge from the present analysis. Our goal in this analysis is to provide an overall framework of the course of motivation, which will foster the generation and investigation of new hypotheses in future research.

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