The Road Traveled, the Road Ahead, or Simply on the Road? When Progress Framing Affects Motivation in Goal Pursuit

Abstract
The present research examined the dynamic interplay between the framing of one's progress from an initial state toward an end state (i.e., framed as the distance traveled from the initial state to the current state – ‘to-date’ versus framed as the distance left from the current state to the end state – ‘to-go’) and construal level in influencing motivation in goal pursuit. In three studies we found that both state and chronic differences in experienced construal level modulate the impact of progress framing on motivation at a specific stage in goal pursuit, i.e., when consumers are halfway between the initial and end state, but is less consequential at the initial or end stages. This modulation shows that type of framing only affected motivation of people with an abstract, but not a concrete mindset. Under these conditions, progress framed in terms of to-date produced increased motivation compared to a to-go frame. Moreover, perceived goal distance was found to mediate the impact of progress framing on motivation for individuals with an abstract, but not a concrete mindset.

2 This Chapter is based on Jacob H. Wiebenga and Bob M. Fennis (2014), “The Road Traveled, the Road Ahead, or Simply on the Road? When Progress Framing Affects Motivation in Goal Pursuit,” Journal of Consumer Psychology, 24 (1), 49–62.
Documented commercial loyalty programs have a history of at least 150 years. One of the very first loyalty programs is thought to originate from the B.A. Babbit Company that launched a program in 1852, where consumers could collect points found inside soap packages (Lonto 2004). Today's equivalent might well be the smartphone-based loyalty app Shopkick which is used for essentially the same objective: to collect points (i.e., Kicks) to be redeemed for various rewards. Although most loyalty programs clearly differ in executional style and rewards offered, one thing they all have in common – similar to most other goal pursuit settings – is that they provide information about the consumer's progress in the attainment of the reward. How to do that as effectively and efficiently as possible has challenged marketers throughout the ages. For instance, the Esso Extra program depicts its members' progress in terms of how many points they still need to collect in order to attain a certain gift, which they term ‘the road to reward’. Shell on the other hand focuses on the number of points (i.e., Air Miles) members have already collected, i.e., on the road traveled. Do these subtle differences in how to present progress information matter for consumer motivation in goal pursuit? The question is pertinent given that studies indicate that while many consumers sign-up for loyalty programs, a substantial percentage (approximately 75-80%; Capizzi and Ferguson 2005) drops out about halfway the process. In the present paper, we will address this issue. More specifically, we will focus on how and when such cues on the road traveled versus the road ahead affect consumer motivation at various stages of the goal pursuit process. Moreover, we assess the role of consumers' construal level in this process and will demonstrate that this construct allows for another way in which progress cues can be perceived, i.e., as simply being on the road. In short, we will assess when and how the framing of progress information affects motivation in goal pursuit from the initial to the end state of the goal pursuit process, and when it is largely inconsequential in doing so.

2.1 | Goal Striving and Progress Information

Most behavior starts with goal setting through which consumers get involved in goal pursuit (Locke and Latham 1990). After this initial step progress toward these goals is monitored (Fishbach and Dhar 2005, 2008). This is an essential aspect of goal striving as it enables consumers to adjust their efforts in pursuing goals, or to (temporarily) disengage from further efforts. Progress can be conceived as the distance traveled from the initial state to the current state (i.e., a 'to-date' frame) and/or the remaining distance from the current state toward the end state (i.e., a 'to-go' frame; Carver and Scheier 1998; Koo and Fishbach 2008). Hence, progress in for instance a customer loyalty program can be defined in to-date terms as 'credits collected' or in to-go terms as 'remaining credits'.

Several studies have focused on how to-go information about what remains to be done affects consumer motivation. In particular, research on the classic ‘goal-gradient hypothesis’ (Hull 1932), also termed ‘goal looms larger effect’ (Brendl and Higgins 1996), or ‘work-
The completion hypothesis’ (Garland and Conlon 1998), suggests that motivation increases as people near their goal (Förster, Higgins, and Idson 1998; Kivetz, Urminsky, and Zheng 2006). Conversely, studies on the effects of a to-date frame have shown that increased distance from the initial state fosters motivation to pursue a focal goal (Arkes and Blumer 1985; Cialdini, Trost, and Newsom 1995; Staw 1976). Both streams of literature are united in a dual-source view of motivation where motivation is jointly determined by the expectancy of reaching a goal and the goal’s value (Fishbach and Dhar 2005; Huang, Zhang, and Broniarczyk 2012; Koo and Fishbach 2008). According to this view, motivational strength increases as one approaches goal attainment (i.e., when remaining goal distance decreases), and/or when higher goal value is inferred from accomplished goal actions (i.e., when distance travelled increases). This particularly holds in a single goal pursuit context, when there is one focal goal, as increasing motivation then produces greater overall success (i.e., a goal gradient effect; Fitzsimons and Fishbach 2010; Kivetz, Urminsky, and Zheng 2006). In a multiple goal pursuit context however, it can sometimes be beneficial to take the foot off the accelerator when the focal goal nears and goal attainment is high, as success can then be maximized by focusing on other, less progressed goals (i.e., a coasting effect; Carver and Scheier 1998; Fishbach and Dhar 2008; Koo and Fishbach 2008; Louro, Pieters, and Zeelenberg 2007).

Although a to-date and to-go frame imply one another (more progress from the initial state means less distance to the end state) and thus are logically equivalent, the previous research suggests that their impact on motivation in goal pursuit is dependent on the reference point used to describe progress (Karevold and Teigen 2010; Koo and Fishbach 2012). Recent studies show that progress framing particularly affects motivation at the beginning and end of goal pursuit, because then movement from the start and toward the end is most noticeable and hence motivating. In contrast, when people have progressed about halfway toward a goal, progress information is deemed to be less diagnostic and, as a result, progress framing is assumed to be less consequential for goal pursuit motivation, a phenomenon labeled the ‘stuck-in-the-middle effect’ (Bonezzi, Brendl, and De Angelis 2011; Koo and Fishbach 2012). For instance, Bonezzi et al. (2011) showed that progress framing did not affect participants’ willingness to donate money to charity when the current level of progress toward the charity goal (i.e., to reach a total of $300 worth in donations) was halfway (i.e., $150) compared to when progress was close to the end state (i.e., $245) or just under way (i.e., $55). Similarly, when loyalty program members were halfway collecting a reward, they were more likely to relax goal pursuit compared to the beginning or end situation (Touré-Tillery and Fishbach 2011).

The previous findings suggest that – particularly in a single goal pursuit context – progress framing is mainly influential for motivation at the beginning and end of the goal pursuit process, but appears largely inconsequential when consumers have progressed halfway in goal attainment. However, in the present research we argue there is ample reason to reconsider this ‘stuck-in-the-middle effect’ and to forward that there are specific conditions, unaccounted for in previous studies, under which progress information is highly consequential even in
this middle stage of goal pursuit. In short, the present paper builds on previous research by examining when and how progress cues affect motivation in goal pursuit throughout the goal pursuit process. We show in three studies that such cues not only matter at the initial and end stages, but that halfway goal pursuit directional effects of progress framing on motivation are still observable, particularly when people’s mindset promotes construing such information in relation to reference points that are distant from the here and now. Additionally, we propose and demonstrate that such a mindset is less consequential in modulating the impact of progress framing at the beginning and end of goal pursuit. A better understanding of the effects of progress information in these various stages promotes a more comprehensive insight in the dynamics of goal pursuit throughout the entire goal striving process. Moreover, it sheds light on the psychological processes that play a role in the large ‘grey’ area in the middle between start and finish that has received relatively little research attention.

2.2 | Progress Information and Construal Level

In essence, information on goal progress, either presented as work done, or as remaining work, can only be perceived as diagnostic when it is construed in relation to an initial state that is removed from the presence and some future end state that is not yet attained. Information on progress may affect motivation in goal pursuit, because it informs consumers on the already covered and still remaining distance and thus on the attainability of the end state and on the goal-congruent investments already made in order to attain it (Fishbach and Dhar 2008; Koo and Fishbach 2008). However, in order to be informative this requires consumers to actively relate cues about where they are now to an initial state and/or to an end state, both of which are distant from the here and now in a temporal, physical, social, or hypothetical sense (Bar-Anan, Liberman, and Trope 2006).

We propose that this tendency to actively relate progress information to distal states removed from the presence will be a function of consumers’ construal level (Liberman and Trope 1998; Trope and Liberman 2003, 2010; Trope, Liberman, and Wakslak 2007). Construal level theory holds that people’s mental representations can vary in level of abstraction, and that individuals build a low level concrete representation of states that are near and present, while building a high level, abstract representation of states that are removed from the current state. Conversely, the construal level framework also suggests that an increased level of abstraction helps people to see beyond the present state and its proximal cues, and to consider these cues as part of broader, superordinate goals they may hold (Dhar and Kim 2007). That is, people with an abstract mindset perceive information in a more global perspective (i.e., they ‘see the forest’) and hence process information in a top-down fashion, actively relating proximal information to distal goals whereas people with a concrete mindset perceive information in a more narrow,
local perspective, focusing on specific features without associating them with a superordinate goal structure (i.e., they ‘see the trees’; Trope and Liberman 2010)).

Indeed, several studies have found support for these notions (Freitas, Gollwitzer, and Trope 2004; Fujita 2008; Kyung, Menon, and Trope 2010). For example, Freitas et al. (2004) found that distal goals were more accessible for people induced with an abstract rather than concrete mindset. In addition, research underscores that high construal levels facilitate actively relating specific information (e.g., about products) to higher order goals (e.g., promoting consumer welfare; Torelli and Kaikati 2009). Moreover, this research also showed that lower construal levels interfered with this process as it directed attention away from the relationship between the proximate product information and distal goals, and instead promoted a focus on concrete product features.

In sum, these studies suggest that people may infer progress from the distance traveled from the initial state and/or the distance left to attain the end state. Perceiving such goal distances as meaningful in goal pursuit requires people to actively transcend the here and now to relate these cues to either the initial and/or an end state. It follows that if progress framing has an effect on motivation in goal pursuit, it will mainly have so under high rather than low construal level conditions when people have an abstract rather than concrete mindset and when such goal distances are perceived to be relatively substantial and/or diagnostic.

2.3 | Construal Level and Goal Distance

Interestingly, research on construal level not only points to when but also to how progress information will affect motivation in goal striving. More in particular, construing information on different levels of abstraction is thought to affect how consumers subjectively perceive the distance from something that is removed from the here and now (Trope and Liberman 2010). More specifically, processing information in high level terms causes people to move beyond the here and now and prompts people to perceive psychological distances as greater than when construal level is lower (Fiedler 2007; Kanten 2011; Stephan, Liberman, and Trope 2010). The construal level framework contends that this abstraction – distance link is overlearned, such that this association remains even in the absence of the initial reason that gave rise to its activation (Trope and Liberman 2010). By implication, an abstract mindset results in a bias toward overestimation of distances to states removed from the here and now compared to a concrete mindset.

Indeed, Liberman et al. (2007) found that the activation of an abstract compared to concrete mindset, by asking people why rather than how they would engage in a future activity, makes people think of this activity to take place in the more distant future. Similarly, Liberman and Förster (2009) showed that after being primed with a high rather than low level mindset participants overestimated the distance between their current location and a distant one (i.e., in their study Amsterdam central station). Finally, Wakslak and Trope (2009) found that
participants judged a variety of everyday life events to be psychologically more distant, and therefore as being less likely, when they were primed with an abstract rather than concrete mindset.

How should progress framing then influence motivation in goal striving at different levels of the goal pursuit process? As noted above, progress information will mainly have an effect when people have an abstract rather than concrete mindset. Moreover, under these conditions, such information will be used to infer (psychological) distance either from the current to the initial state or toward the end state. Furthermore, to-date information will be used to infer such distance to the initial state and to-go information will be used to infer distance to the end state. In addition, since people with an abstract mindset tend to overestimate such distances, it follows that such a mindset may cause a directional effect of progress framing on motivation, even when both to-go and to-date information inform people that they are in the middle phase of goal pursuit. More specifically, even when people with an abstract mindset have progressed halfway, emphasizing the distance between the current and initial state will induce an overestimation of the distance traveled from the start. This distance traveled parallels investments or work done (as in, credits collected, miles flown, products bought, etc.). Looking back on these investments or work done has clear motivational and value enhancing properties, as is known from recent (Aronson 1997; Feather 1990; Norton, Mochon, and Ariely 2012) and more classic research streams (Atkinson and Raynor 1978; Bem 1967; Festinger 1957; Freedman and Fraser 1966). If the extent of this work done is overestimated, then, by implication, people with an abstract mindset will infer higher goal attractiveness from their overestimation of investments done to attain the end goal, and thus, a to-date frame compared to a to-go frame will result in increased motivation. Similarly, the reverse will hold for to-go information. Due to the same bias in the perception of psychological distance, emphasizing the distance between the current and end state (vs. current and initial state) will lead to an overestimation of the distance to be traveled to the end state. Consequently, people with an abstract mindset will overestimate the work or investments to be done to attain the end goal (Atkinson 1957; Vroom 1964), and thus, a to-go frame compared to a to-date frame will lead to decreased motivation. Hence, the effect of progress framing on motivation in goal pursuit when traveled halfway will be modulated by construal level such that a to-date frame will increase motivation compared to a to-go frame for people with an abstract rather than concrete mindset. In contrast, when in a concrete mindset, type of progress information will be less consequential and thus, the aforementioned ‘stuck-in-the-middle effect’ will mainly surface under these conditions rather than when an abstract mindset is salient.

This leaves open the straightforward question of whether construal level also modulates the effect of progress framing at other stages of the goal pursuit process (i.e., in the beginning or towards the end near goal completion), or whether the effects are specific to the middle stage. On the one hand, given that progress information will mainly have an effect when people have an abstract rather than concrete mindset, it can be argued that the overestimation bias
will lead people with an abstract mindset to always exaggerate the distance traveled (to be traveled), and so a to-date (to-go) frame compared to a to-go (to-date) frame will always lead to increased (decreased) motivation under these conditions, irrespective of whether people are at the beginning, middle, or end of goal pursuit. On the other hand, if the directional effects indeed hinge on overestimating perceived distance between the current state and a reference point (either the initial or end stage) then it stands to reason to expect such modulation effects in particular when such distances are perceived to be relatively substantial (i.e., when progressed halfway) but not when these distances are relatively minimal (i.e., at the beginning or end). In addition, previous research has shown that, regardless of people's construal level, progress framing strongly affects motivation at the beginning and end of goal pursuit (Bonezzi, Brendl, and De Angelis 2011; Koo and Fishbach 2012; Touré-Tillery and Fishbach 2011), since then movement from the start or toward the end is clearly detectible and hence diagnostic for motivation, even for people who construe this information on a low level. By implication, one may argue that particularly then, when progress cues are more blatant and informative about one's goal progress, the qualifying role of construal level may be less influential in affecting the impact of progress framing on motivation. Consequently, this would yield the expectation that the role of construal level is subtle and nonlinear, mainly surfacing at the middle stage but not at other stages of goal pursuit.

In sum, for the beginning and end stages of the goal pursuit process we would then expect to replicate previous research, and show that progress framing has an impact on motivation, irrespective of construal level, such that a focus on the road traveled (a to-date frame) is more motivating at the beginning, as it signals invested effort, and a focus on the road ahead (a to-go frame) is more motivating at the end of goal pursuit, as it signals goal attainability. In the middle stage we would expect to find a modulating role for construal level. More specifically, under these conditions, we expect to replicate the 'stuck-in-the-middle effect' where progress cues are inconsequential, but only for people with a concrete mindset. For people with an abstract mindset, in contrast, progress framing continues to be influential such that a to-date frame increases motivation compared to a to-go frame.

2.4 | Present Research

Next, we present three studies in a single goal pursuit context to test our notions. Studies 1A and 1B start by testing the core postulate of our notions, i.e., that construal level moderates the impact of progress framing on motivation when people have progressed halfway. Study 2 then situates these findings in a more dynamic context, assessing the interplay between progress framing and construal level at the beginning, middle and end stages of goal pursuit. More specifically, our research aims to accomplish several key objectives. First, we test novel predictions on the moderating role of construal level in the impact of progress framing on
motivation in goal pursuit. We hypothesize that the effect of progress framing on motivation would be stronger for consumers induced with an abstract rather than concrete mindset, especially halfway goal attainment. Under these conditions we expect a directional effect of progress framing, such that a to-date frame increases motivation in goal pursuit compared to a to-go frame. Second, we seek to directly test the psychological process assumed to underlie the proposed effects – perceived goal distance. Due to a bias in the estimation of distance, for people with an abstract mindset we expect a directional effect of progress framing halfway goal attainment, such that equal progress in to-date or to-go terms leads to respectively higher and lower levels of motivation. Third, we examine the interplay between progress framing and construal level at other stages of the goal striving process. In particular, we aim to replicate and extend previous findings by assessing whether and to what extent the postulated effects are specific to the mid-stage of goal pursuit (as we propose) or generalize to other stages of the trajectory as well (i.e., the beginning and/or the end stage).

2.5 | Study 1A

2.5.1 | Method
2.5.1 | Design and Participants
This study used a 2 (progress framing: to-date vs. to-go) x 2 (construal level: abstract vs. concrete) between-subjects factorial design. One hundred fourteen undergraduate students from a mid-sized Dutch university (mean age = 19.15; SD = 1.93; 68.4% male) participated in exchange for monetary compensation or partial course credit.

2.5.1.2 | Procedure
Participants were informed that the study consisted of several unrelated parts and were randomly assigned to one of the four conditions. The manipulation of construal level was presented as a first study examining reaction times. Next, the manipulation of progress framing was administered as an evaluation task of a reward program (Koo and Fishbach 2008), followed by measuring participants’ perceived goal distance and motivation in goal pursuit. After having completed this part of the study, participants answered demographic questions, and were thanked, paid and debriefed.

We used a letter identification task (Navon 1977) to vary participants’ construal levels either as an abstract or concrete mindset. In 112 trials, all participants were presented with large letters made up out of smaller letters, with the large letters always being different from the smaller ones (e.g., a large L composed of small T’s). Participants in the abstract mindset condition were asked to indicate as quickly as possible which large letter they were presented with, whereas participants in the concrete mindset conditions were asked to do the same for
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the small, constituent letters. Previous research has shown that this task produces reliable differences in participants' construal levels (Wakslak and Trope 2009).

Next, and in line with the procedure developed by Koo and Fishbach (2008), progress framing was manipulated by asking all participants to imagine they were participating in a reward program of a coffee bar, where they saved to earn a free cup of coffee, tea or hot chocolate after making 10 purchases. Next, they were presented with a picture of a loyalty card. In the to-date condition, progress from the initial state was visualized by presenting participants with a version of the loyalty card where the first 5 out of 10 slots were covered with coffee bean shaped stamps, highlighting the credits that had been collected so far. In the to-go condition, the first 5 out of 10 slots were punched out, thus emphasizing the remaining slots signifying the credits that had yet to be saved before one could collect the free beverage.

After exposure to the loyalty card, participants answered the following questions: “How distant is the reward?” (1 = very close, 7 = very far), and “To what extent does an additional credit makes you feel closer to the end state” (1 = very much, 7 = not at all). Scores were averaged to create an index of perceived distance (r(114) = .34, \( p < .001 \)) with smaller scores indicating smaller perceived distance. Motivation in goal pursuit was measured by asking participants to indicate how much they valued collecting credits for attaining the reward (1 = not at all, 7 = very much).

2.5.2 | Results and Discussion

2.5.2.1 | Motivation in Goal Pursuit

A regression analysis with progress framing (effect coded), construal level (effect coded) and their interaction as independent variables and motivation (standardized; Aiken and West 1991; Friedrich 1982) as the dependent variable did not show main effects of either progress framing (\( \beta = -.15, t(110) = 1.60, \text{n.s.} \)) or construal level (\( \beta = -.11, t(110) = 1.20, \text{n.s.} \)). However, the progress framing by construal level interaction proved to be significant (\( \beta = -.25, t(110) = 2.74, \ p < .01 \)). In line with the predictions, simple slopes analyses (Aiken and West 1991) showed that progress framing only affected motivation for participants with an abstract mindset, such that to-date progress framing compared to to-go progress framing positively affected motivation (\( \beta = -.40, t(110) = 3.08, \ p < .01 \)). For participants with a concrete mindset, progress framing failed to affect goal pursuit (\( t < 1 \)).

2.5.2.2 | Perceived Distance

A similar regression analysis with (standardized) perceived goal distance as criterion did not yield a main effect of progress framing (\( t < 1 \)) or construal level (\( \beta = .10, t(110) = 1.09, \text{n.s.} \)). Of particular interest for our reasoning, however, was the finding that the progress framing by construal level interaction was significant (\( \beta = .23, t(110) = 2.50, \ p = .01 \)). Simple slopes analyses showed that progress framing only affected perceived goal distance for participants with an abstract mindset, such that participants in the to-date condition perceived smaller
goal distance compared to participants in the to-go condition ($\beta = .27$, $t(110) = 2.09$, $p = .04$).
For participants with a concrete mindset, progress framing did not affect perceived distance ($\beta = -.19$, $t(110) = 1.45$, n.s.).

2.5.2.3 | Mediation Analysis
To assess the mediating role of perceived distance in driving the interaction effect between progress framing and state construal level on motivation in goal pursuit, a mediated moderation analysis was conducted (Muller, Judd, and Yzerbyt 2005). That is, we assessed whether perceived goal distance mediated the interaction effect on motivation. As reported previously, the progress framing by construal level interaction was significant on both motivation and perceived goal distance. Furthermore, perceived goal distance, the proposed mediator, significantly predicted motivation ($\beta = -.52$, $t(112) = 6.35$, $p < .001$). In a third regression analysis treating the progress framing by construal level and progress framing by perceived distance interactions and all main effects as predictors, perceived distance significantly predicted motivation ($\beta = -.48$, $t(108) = 5.68$, $p < .001$), whereas the previously significant interaction effect between progress framing and construal level shrunk to non-significance ($\beta = -.14$, $t(108) = 1.69$, n.s.). A subsequent test of the conditional indirect effect of progress framing on motivation through perceived goal distance using a bootstrapping procedure with 5000 resamples (Preacher, Rucker, and Hayes 2007) showed that progress framing only affected motivation for participants with an abstract mindset (the bias corrected [BC] 95% confidence interval [CI] did not include zero, -.266 to -.001), but not a concrete mindset (BC 95% CI did include zero, -.019 to .201).

These findings replicate and extend previous research by showing that halfway goal pursuit type of progress framing does affect motivation in goal pursuit, but only for people with an abstract mindset. In line with the predictions, under these specific conditions to-date progress framing positively affected motivation in goal pursuit compared to to-go progress framing. For people with a concrete mindset, progress framing proved inconsequential in affecting motivation levels. In addition, the present study demonstrated that halfway goal pursuit the impact of progress framing on motivation for participants with an abstract mindset was driven by perceived goal distance, and more specifically the extent to which they overestimated either the distance traveled from the initial to the current state (in the to-date condition) or the distance to be traveled from the current to the end state (in the to-go condition).

Study 1B was designed to provide converging evidence for our notions. More specifically, in order to rule out the alternate account that our findings were attributable to the specific manipulations involved, Study 1B employed a different set of stimulus materials and included a manipulation check. We also aimed to replicate the proposed underlying mechanism driving our results and again assessed the mediating role of perceived goal distance. We altered the sequence with which we administered our motivation and distance measures to rule out order effect as an alternative explanation of the previous findings. In addition, to extend the previous findings, we focused on chronic individual differences in construal level rather than
the state manipulation used in Study 1A. Moreover, we tested the robustness of our notions on a representative sample of (Dutch) consumers.

2.6 | Study 1B

2.6.1 | Method

2.6.1.1 | Design and Participants

In this study a design was used with progress framing (to-date vs. to-go) as a between-subjects factor, and construal level as a continuous individual difference variable. One hundred twenty-four consumers (mean age = 42.62; SD = 13.66; 37.2% male) drawn randomly from an online consumer panel voluntarily participated in this study.

2.6.1.2 | Procedure

Participants learned that the research consisted of two unrelated studies. The first part pertained to the manipulation of progress framing, presented as an evaluation task of a reward program, albeit with a different set-up and structure than the one used in Study 1A. This was followed by measures of motivation and perceived goal distance. For the second part, participants completed the trait construal level measure and demographic questions before being thanked and debriefed.

All participants were asked to imagine they were participating in a reward program for which credits could be collected. When they accumulated 1000 credits they could freely choose a reward from a gift catalogue. This task ensured that motivation was not a function of a specific type of reward. Furthermore, the scenario stressed that the current program lasted for eight weeks and participants were currently halfway. After having read the scenario, participants continued to the next screen which portrayed a website devoted to the program and showing the progress made by the participants. The website showed a vertical bar running from 0 to 1000. Participants who were randomly assigned to the to-date condition saw one arrow pointing at the initial state (i.e., 0 points) and a second one at the current state (i.e., 502 points), thus highlighting the distance traveled from the initial state to the current state. In contrast, in the to-go condition, one arrow was pointing at the current state (i.e., 502 points) and a second one at the end state (i.e., 1000 points), emphasizing the distance yet to travel to reach the end state. In service of a perception of realism, the current state was slightly off the exact midpoint of the progression bar.

Next, and similar to Study 1A, motivation in goal pursuit was measured by asking participants to indicate how much they valued collecting credits to redeem a reward (1 = not at all, 7 = very much). Participants were then asked to indicate perceived goal distance. As in Study 1A, a two-item measure rated perceived distance to the reward (1 = very close, 7 = very far) and the extent to which participants felt that earning an additional credit created progress toward
the end state (1 = very much, 7 = not at all). Scores were averaged to create an index of perceived distance ($r(124) = .55, p < .001$) with smaller scores indicating smaller perceived distance.

To ensure that our manipulation of progress framing was successful, participants were then presented with a dichotomous question asking whether their attention was focused either on what had been accomplished versus what was left in order to reach the reward. We expected participants in the to-date condition to show a more pronounced tendency to indicate a focus on what had been accomplished versus what was left and a reversed tendency for participants in the to-go condition.

Finally, and in extension of Study 1A, construal level was treated as an individual difference variable (Freitas, Salovey, and Liberman 2001; Vallacher and Wegner 1987) and measured using Vallacher and Wegner’s (1989) Behavior Identification Form (BIF; see Liberman and Trope 1998, Study 1). All participants were requested to complete the BIF, which presents participants with 25 actions, each followed by two alternative descriptions. For example, ‘locking a door’ is described as either ‘putting a key in a lock’ or ‘securing the house’. Hence, one of the descriptions captures the action in concrete terms, the other in abstract terms. For each action, participants were asked to choose one of two descriptions that they believed best described each action. Preference for the concrete description of an item was coded 0, while preference for the abstract description was coded 1. An index of trait construal level (Cronbach’s $\alpha = .78$) was created by summing the total number of abstract descriptions selected resulting in a 0 to 25 construal level score ($M = 15.61, SD = 4.46$) with higher scores indicating a more abstract chronic mindset.

### 2.6.2 Results and Discussion

#### 2.6.2.1 Manipulation Check

A series of chi-square tests on the dichotomous measure were performed to assess the manipulation of progress framing. More specifically, in the to-date condition a significantly higher percentage of participants was focused on what was accomplished (62.7%) than on what was left (37.3%; $\chi^2 (df = 1, N = 65) = 3.81, p = .05$). In contrast, of the participants in the to-go condition a higher percentage was focused on what was left (63.1%) than on what had been accomplished (36.9%; $\chi^2 (df = 1, N = 59) = 4.45, p = .03$). These results indicate that the progress framing manipulation was successful.

#### 2.6.2.2 Motivation in Goal Pursuit

A regression analysis with progress framing (effect coded), construal level (standardized) and their interaction on motivation (standardized) yielded no main effect of progress framing ($t < 1$) or construal level ($\beta = -.12, t(120) = 1.29, n.s.$). However and similar to Study 1A, the progress framing by construal level interaction proved to be significant ($\beta = -.22, t(120) = 2.39, p = .02$). Simple slopes analyses showed that progress framing only affected motivation for participants with a chronic abstract mindset, such that to-date progress framing compared to to-go progress framing positively affected goal pursuit ($\beta = -.30, t(120) = 2.39, p = .02$). Also paralleling the
previous results, progress framing failed to affect motivation in goal pursuit for participants with a chronic concrete mindset ($\beta = .15, t(120) = 1.09, \text{n.s.}$). 

2.6.2.3 | Perceived Distance

An analysis with (standardized) perceived goal distance as the dependent variable did not yield a main effect of progress framing ($t < 1$). The main effect of trait construal level, however, was (marginally) significant, and indicated that, as expected, people with a more abstract mindset perceived larger distances compared to people with a more concrete mindset ($\beta = .17, t(120) = 1.80, p = .07$). More importantly, the analysis yielded a significant interaction effect of progress framing and construal level ($\beta = .23, t(120) = 2.52, p = .01$). Simple slopes analyses showed that participants with a chronic abstract mindset perceived smaller goal distance in the to-date compared to the to-go condition ($\beta = .34, t(120) = 2.68, p < .01$), whereas progress framing failed to affect perceived goal distance of participants with a chronic concrete mindset ($t < 1$).

2.6.2.4 | Mediation Analysis

As noted previously, the progress framing by construal level interaction was significant on both motivation and perceived goal distance. Furthermore, perceived goal distance significantly predicted motivation ($\beta = -.69, t(122) = 10.62, p < .001$). As in Study 1A, we tested for mediated moderation by regressing motivation on the two interactions (i.e., the progress framing by construal level and progress framing by perceived distance interactions) and all main effects. The analysis yielded a significant main effect of perceived distance ($\beta = -.68, t(118) = 9.72, p < .001$), whereas the previously significant interaction effect between progress framing and trait construal level disappeared ($t < 1$). A subsequent analysis of the conditional indirect effect of progress framing on motivation through perceived goal distance using the same 5000 iterations bootstrapping procedure as used in Study 1A indicated that the mediating effect of perceived goal distance was significant for high construal level individuals ($\text{BC 95\% CI}, -.41$ to $.06$), but not for low construal level individuals ($\text{BC 95\% CI}, -.09$ to $.26$).

Together, these results build on the findings of Study 1A. First, using a different set of stimulus materials, we were able to replicate our earlier finding that halfway goal pursuit motivation is affected by progress framing for people with an abstract but not concrete mindset, such that for the former group of participants a to-date frame positively affected motivation compared to a to-go frame. Second, this study confirmed the mediating role of perceived goal distance – the psychological mechanism assumed to underlie the moderated effect of progress framing on motivation in goal pursuit. Third, using a more heterogeneous sample of consumers, we showed

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3 All participants in Study 1B were presented with the Regulatory Focus Questionnaire (Higgins et al. 2001). Neither the promotion focus scale (Cronbach’s α = .75) nor the prevention focus scale (Cronbach’s α = .86) affected motivation directly ($t_{\text{promotion focus}} (120) = 1.54, \text{n.s.}; t_{\text{prevention focus}} (120) = 1.55, \text{n.s.}$) or indirectly by modulating the role of progress framing ($t_{\text{promotion focus}} (120) = 1.20, \text{n.s.}; t_{\text{prevention focus}} < 1$).
that the previous findings were not tied to the specific state manipulation used in Study 1A, but generalized to stable individual differences in construal level as well.

The objective of Study 2 was to extend our findings regarding the framing effects under conditions of an abstract and concrete mindset beyond the 50% progress state. More specifically, we wanted to test the robustness of our results from Studies 1A and 1B by showing a directional effect of progress framing when people have progressed halfway and construe the information on a high rather than low level, and to examine whether progress framing and construal level also interact at the beginning and end of goal pursuit. In addition, in Study 2 we focused on actual, overt goal pursuit behavior as a proxy for motivation, since it can be argued that the self-report measure of motivation used in Studies 1A and 1B measured one component of motivation, i.e., goal value, disregarding the role of goal attainment. We also aimed to replicate our findings from Studies 1A and 1B in a realistic goal pursuit context in which participants pursue a real, existing reward.

2.7 | Study 2

2.7.1 | Method
2.7.1.1 | Design and Participants
A sample of 156 undergraduate students was initially recruited to participate in this study in exchange for 3 euros. After excluding two students of non-Dutch nationality who could not understand the Dutch materials, two students who withdrew from the study, two students who indicated that they had already participated in Study 1A, and four students who failed to comply with experimental instructions (Oppenheimer, Meyvis, and Davidenko 2009), the final sample consisted of 146 students (mean age = 19.67; SD = 1.53; 63.7% male). This study employed a 2 (progress framing: to-date vs. to-go) x 2 (construal level: abstract vs. concrete) x 3 (progress stage: beginning vs. middle vs. end) mixed factorial design with progress framing and construal level as between-subjects factors and progress stage as a within-subjects factor.

2.7.1.2 | Procedure
The participants learned that this research contained two unrelated studies of different research teams. The first task concerned the construal level manipulation, and was presented as a study to measure reaction time. For the second task, which entailed the progress stage and progress framing manipulations, participants learned that they could earn an additional reward by completing a word-comparison task. We measured motivation in goal pursuit as participants’ eagerness to return to working on a task to attain an attractive goal. Finally, participants answered demographic questions, and were thanked, paid, and debriefed.

As in Study 1, we used a letter identification task (Navon 1977) to vary participants’ construal levels either as an abstract or concrete mindset (Wakslak and Trope 2009).
In the second part of the study, and following the procedure used by Touré-Tillery and Fishbach (2012), participants were asked to complete a series of nine trials in which they were presented with five (non-existing) word pairs per trial. The randomly ordered words were between eight and 12 letters long, and each pair consisted of words that were only one letter apart. For each pair of words participants had to identify the word with the most letters and were asked to do so as quickly and also as accurately as possible (e.g., “Rzoahxab” vs. “Wicfequcw”). They were told that they could earn one point per trial by correctly identifying at least three out of five times the word with the most letters. In addition, participants learned that they could earn 2 euros extra on top of the normal compensation for participation in this study by collecting all 9 points. After completing the word-comparison task participants received feedback on the number of points they had collected in total, and hence whether they had earned the reward (46% of the participants did so). To align our analyses with previous research on the ‘stuck-in-the-middle effect’ (Bonezzi, Brendl, and De Angelis 2011; Koo and Fishbach 2012; Touré-Tillery and Fishbach 2011), we focused on three stages in the goal pursuit process, i.e., trials 2 (beginning), 5 (middle) and 8 (end).

To manipulate progress framing a diagram shown above the word pairs indicated participants’ progress on the task. In the to-date condition, participants initially saw an empty row, to which one blue dot was added from left to right after a word pair was completed signifying completed word pairs. In contrast, in the to-go condition, participants initially saw a row of blue dots, from which one icon would disappear from left to right after a word pair was completed highlighting the remaining word pairs (Bonezzi, Brendl, and De Angelis 2011).

We measured motivation to work toward the end state by assessing the speed with which participants moved from one trial to the next. More specifically, before each trial started, participants learned that they could move to the next trial at their own pace, and that they could take a short break when needed. Since high motivation causes people to seek opportunities to work toward goal attainment (in this case, working on the task; Aarts, Gollwitzer, and Hassin 2004; Locke and Latham 1990), motivation was assessed by the length of the break, as shorter breaks allowed participants to return to the task faster. Previous research has established that break times serve as a valid measure of motivation (Custers and Aarts 2005; Koo and Fishbach 2012; Touré-Tillery and Fishbach 2011).

At the end of the study participants were presented with two Likert statements assessing whether their attention during the word-comparison task was focused on the word pairs that had been completed/ that were left (1 = do not agree, 7 = agree). We expected participants in the to-date (to-go) condition to show a more pronounced tendency to indicate that their attention was focused on what had been accomplished (what remained to be done) than participants in the to-go (to-date) condition.
2.7.1.3 | Validation Study

To ensure that shorter breaks between trials could indeed be considered a valid measure of motivation we conducted an auxiliary validation study. We also assessed goal value in line with Studies 1A and 1B to provide a complete picture of our motivation measures. Our point of departure is the well-established notion that greater attractiveness of an incentive produces higher levels of motivation to attain it (Aarts, Gollwitzer, and Hassin 2004; Atkinson 1957; Heyman and Ariely 2004). Hence, in this validation study we varied the attractiveness of a reward, and assessed its impact on goal value (Studies 1A and 1B) and in line with the main study (Study 2) on break times. If our reasoning is correct we should find an effect of reward attractiveness on both motivation measures, such that greater attractiveness of an incentive leads to higher perceived goal value and to shorter inter-trial break times. Moreover, the findings of both measures should converge in case they assess the same underlying factor, i.e., motivation.

For this study 48 students served as participants (mean age = 21.81; SD = 4.69; 60% male). Using a similar procedure and instructions as used in the main study, all participants were asked to complete a word-comparison task and were told that they could win a backpack by collecting all nine points. The reward, the backpack, was either presented in generic terms (low attractiveness condition) or presented as an item of a coveted A-level Italian designer brand (i.e., “Diadora”, the high attractiveness condition). Next, goal value was measured by asking participants to rate the perceived value of the backpack (in euros). After completion of the word-comparison task, participants answered demographic questions, were debriefed, and, if applicable, received their reward (60% of the participants did so).

Throughout the word-comparison task we measured the speed with which participants moved from one trial to the next. As in the main study and consistent with previous research, we excluded per trial the full observations of participants with inter-trial break times that were three standard deviations or more above the mean of the inter-trial break time (on average 1.1% per trial; for the main study 1.5% per trial) since these substantially lower the signal-to-noise ratio and so obscure group patterns of results (Judd, McClelland, and Ryan 2009; Touré-Tillery and Fishbach 2011). Inter-trial break times were averaged with lower scores indicating shorter breaks between trials.

A one-way ANOVA on inter-trial break time indicated that break length was, as expected, shorter for participants exposed to the designer branded backpack (M = 2.78 seconds, SD = 1.53) than for participants exposed to the generic branded backpack (M = 3.95 seconds, SD = 1.93; F(1, 41) = 4.86, \( p = .03 \)). Moreover, a similar analysis on perceived goal value showed that participants assigned a higher value to the designer branded backpack (M = 41.86 euros, SD = 20.48) than the generic branded backpack (M = 27.91 euros, SD = 11.75; F(1, 41) = 7.59, \( p < .01 \)). Finally, a correlation analysis indicated that both motivation measures converged and that participants who returned to the task faster also perceived the backpack as being more valuable (r(43) = -.32, \( p = .03 \)). In sum, this validation study provides evidence for our notion that people take shorter breaks between trials when they are motivated to attain the reward, and
confirms that both goal value (Studies 1A and 1B) and inter-trial break times (Study 2) are valid proxies for motivation.

2.7.2 | Results and Discussion

2.7.2.1 | Manipulation Check

Our manipulation check confirmed that participants adopted different perspectives to monitor progress in both progress framing conditions. Specifically, participants in the to-date condition were more focused on what had been accomplished in the word-comparison task ($M_{to-date} = 4.45$ vs. $M_{to-go} = 3.95$; $t(126) = 1.69$, one sided $p = .04$), whereas participants in the to-go condition were more focused on what remained to be done to reach the end state ($M_{to-date} = 4.18$ vs. $M_{to-go} = 4.74$; $t(126) = 1.94$, one sided $p = .03$).

2.7.2.2 | Motivation in Goal Pursuit

A 2 (progress framing) x 2 (construal level) x 3 (progress stage) mixed ANCOVA was conducted on our motivation measure. Following previous research, we controlled for idiosyncratic variance and possible habituation effects (by including the sum of inter-trial break times of the non-target trials as a covariate; Fazio 1990; Touré-Tillery and Fishbach 2011). The analysis revealed a main effect of progress stage ($F(2, 246) = 35.68$, $p < .001$), indicating that inter-trial times decreased as participants moved from the beginning via the middle to the end ($M_{beginning} = 3.89$, $SD = 3.99$; $M_{middle} = 2.18$, $SD = 1.64$; $M_{end} = 1.53$, $SD = .84$). Furthermore, the main effect of progress framing proved to be significant ($F(1, 123) = 5.56$, $p = .02$) such that inter-trial breaks were shorter for to-date participants ($M = 2.20$, $SD = 2.30$) than for to-go participants ($M = 2.87$, $SD = 2.22$). The main effect of construal level was marginally significant ($F(1, 123) = 3.45$, $p = .07$), and indicated that participants with an abstract mindset moved to the end state faster ($M = 2.27$, $SD = 2.36$) than participants with a concrete mindset ($M = 2.79$, $SD = 2.13$). In addition, the analysis revealed the predicted progress framing by progress stage interaction ($F(2, 246 = 3.87$, $p = .02$). More specifically, when at the beginning of the word-comparison task to-date participants were more motivated to progress to the end state ($M = 3.06$, $SD = 5.40$) than to-go participants ($M = 4.74$, $SD = 5.24$; $F(1, 123) = 6.36$, $p = .01$). Conversely, at the end of the goal pursuit process to-go participants were (marginally) more motivated to finish the task ($M = 1.39$, $SD = 1.27$) than to-date participants ($M = 1.68$, $SD = 1.30$; $F(1, 123) = 3.30$, $p = .07$). Motivation in the middle of the task did not differ between the progress framing conditions ($M_{to-date} = 2.06$, $SD = 2.31$ vs. $M_{to-go} = 2.30$, $SD = 2.23$; $F < 1$), thus replicating the ‘stuck-in-the-middle effect’. There were no two-way interactions of progress framing and construal level.

4 Inter-trial break time correlated moderately with other motivation measures, such that participants with a shorter inter-trial break time performed better, i.e., provided more correct answers ($r(128) = -.39$, $p < .001$) and used less time within trials ($r(128) = .41$, $p < .001$).
framing and construal level (F < 1) or of construal level and progress stage (F(2, 246) = 1.61, n.s.) on motivation.\(^4\)

More importantly, the expected three-way interaction of progress framing, construal level, and progress stage was significant (F(2, 246) = 3.52, \(p = .03\)). To probe the interaction, progress framing x construal level ANOVAs within each of the three progress stage conditions were performed.\(^5\) Results showed that only in the middle stage of the word-comparison task the progress framing by construal level interaction was significant (F(1, 123) = 4.37, \(p = .04\)), but neither at the beginning (F < 1) nor at the end (F(1, 123) = 1.41, n.s.; see Figure 2.1). Simple effects analyses revealed for participants with an abstract mindset higher motivation to reach the end state when they received to-date information (M = 1.72, SD = 3.42) compared to to-go information (M = 2.56, SD = 3.31; F(1, 123) = 3.96, \(p = .05\)), but this effect was absent for participants with a concrete mindset (M\(_{\text{to-date}}\) = 2.41, SD = 3.10 vs. M\(_{\text{to-go}}\) = 2.06, SD = 3.02; F < 1).

![Motivation in goal pursuit (break times in seconds) as a function of construal level and progress framing at three progress stages (Study 2).](image)

Figure 2.1 | Motivation in goal pursuit (break times in seconds) as a function of construal level and progress framing at three progress stages (Study 2).

\(^4\) As in Study 1B, we measured participants’ regulatory focus using the Regulatory Focus Questionnaire (Higgins et al. 2001). Both scales (Cronbach’s \(\alpha\) _promotion focus_ = .65; Cronbach’s \(\alpha\) _prevention focus_ = .82) failed to affect motivation directly (ts < 1.40) or indirectly (ts < 1.53), regardless of whether participants were at the beginning, halfway, or end of goal pursuit.

\(^5\) Although the modulating role of construal level throughout the goal pursuit process is posited to be nonlinear, the state of the science is currently not sufficient to confidently propose a hypothesis on the specific shape of this nonlinearity. Nevertheless, a trend analysis including all trials showed that the progress stage by progress framing interaction fitted a linear pattern replicating the previously reported cross-over interaction (F(1, 124) = 9.09, \(p < .01\)). For the progress stage by construal level interaction a quadratic pattern was marginally significant (F(1, 124) = 3.19, \(p < .08\)), suggesting that the role of construal level was indeed more pronounced in the middle than at the beginning or end stages of goal pursuit.
The results of Study 2 build on our results from Studies 1A and 1B. First, we demonstrated the robustness of our findings by replicating our results from Studies 1A and 1B. That is, we found a directional effect of progress framing for participants with an abstract mindset, but not for participants with a concrete mindset, such that a to-date frame compared to a to-go frame positively affected motivation. Second, Study 2 extends the results regarding the framing effects under conditions of an abstract and concrete mindset beyond the 50% progress state, as it revealed that the interplay between progress framing and construal level was particularly relevant when people had progressed halfway, but that close to the initial and end state the role of construal level shrinks. As such, we not only replicated the well-established progress framing effects at the beginning and end stages of goal pursuit, but also the earlier findings on the 'stuck-in-the-middle effect' where progress framing appears inconsequential for motivation. We extended this effect by demonstrating that it is subtle and qualified, only surfacing for individuals with a concrete mindset. When in an abstract mindset, though, the 'stuck-in-the-middle effect' vanishes and to-date information was found to be more motivating than to-go information. Third, we extended our earlier findings by showing that the results were not confined to hypothetical scenarios but generalized to a realistic, actual goal pursuit context. Moreover, we used a different measure of motivation, i.e., participants’ actual behavior throughout goal pursuit. Study 2 is also important from a practical perspective, as it provides insight in when different types of progress feedback at different stages of goal pursuit are effective in eliciting motivation, and on how to overcome the 'stuck-in-the-middle effect'.

2.8 | General Discussion

The present work extends previous research by assessing when and how cues on progress from an initial state via a current state toward an end state affect motivation reach the end state. We hypothesized that – in a single goal pursuit context – progress framing (i.e., cues presented as to-date vs. to-go) would not only affect motivation at the beginning and end of goal pursuit, such that to-date cues are more motivating close to the initial state and to-go cues close to the end state, but also when people are halfway and have an abstract rather than a concrete mindset. More specifically, under these conditions, people are more likely to actively relate progress information to an initial state and/or to an end state (Trope and Liberman 2010), both of which are relatively distant from the presence and thus we expected that under conditions of an abstract mindset, people overestimate distance, and the concomitant work or investments done, yielding a directional effect of progress framing such that a to-date frame would promote higher levels of motivation compared to a to-go frame.

In three studies we found support for our notions. They were found for both hypothetical (Studies 1A and 1B) and real goals (Study 2), for different types of progress framing, either when participants were primed with an abstract or concrete mindset (Studies 1A and 2) or
when construal level was measured as a trait variable (Study 1B), and both for a student sample (Studies 1A and 2) and a more heterogeneous sample of consumers (Study 1B). More specifically, Study 1A varied construal level by inducing either an abstract or concrete mindset and found that progress framing mainly affected motivation for participants with an abstract mindset. For them, a loyalty card, requiring ten purchases in order to receive a free gift, resulted in a higher motivation when the first 5 out of 10 slots were covered with stamps (i.e., highlighting the progress to-date) compared to when the first 5 out of 10 slots were punched out (i.e., highlighting the road to-go). Hence, for these individuals, emphasizing the ‘road traveled’ from the initial state proved more motivating than emphasizing the ‘road ahead’ toward the end state, a distinction less consequential for people with a concrete mindset. Studies 1B and 2 replicated these results for different types of goals and using different types of progress cues. Again, for people with an abstract (rather than concrete) mindset, motivation to pursue a reward was higher when progress cues emphasized work accomplished than work left. Additionally, Study 2 highlighted the role of construal level and progress framing throughout the goal pursuit process and showed that when close to the initial state or end state people’s mindset is less influential in affecting the impact of progress framing on motivation. Hence, close to the initial state motivation was higher when progress information highlighted the ‘road traveled’ whereas close to the end state motivation was higher when the ‘road ahead’ was highlighted, irrespective of whether people were in a concrete or abstract mindset.

In addition, the present research also provides insight in how progress framing differentially affects motivation for high construal level individuals when halfway goal attainment. That is, Studies 1A and 1B demonstrated that perceived goal distance is the underlying psychological process that drove these effects both when differences in construal level were temporary (Study 1A) or chronic (Study 1B). The results on the mediating role of perceived goal distance show that halfway goal pursuit emphasizing the distance between the initial and current state and current and end state induces an overestimation of distance. Due to this bias, to-date information leads to an overestimation of distance traveled and consequently work or investments done whereas to-go information leads to an overestimation of distance (work, investments) to be bridged. This results in a directional effect of progress framing when people have progressed halfway such that equal progress framed in terms of to-date or to-go leads to respectively higher and lower levels of motivation (for managerial implications, see also Chapter 5.2).

These findings extend previous work that suggests a linear negative relation between goal distance and motivation in goal pursuit (Carver and Scheier 1998; Locke and Latham 1990). Whereas earlier models predict that motivation is a monotonic function of goal distance (Hull 1932; Lewin 1938), irrespective of whether progress is framed as to-date or to-go and thus considers both frames as substitutable, our findings emphasize they might have different effects on motivation. These findings add to recent findings which show that the effect of either frame on motivation is not straightforward, and is dependent on other factors, such as prior goal commitment (Koo and Fishbach 2008), source of progress (Zhang and Huang 2010), or level...
of (illusory) progress (Kivetz, Urminsky, and Zheng 2006; Nunes and Dreze 2006). Moreover, our findings are also consistent with recent research which shows that motivation during goal pursuit is particularly affected by the consumers’ representation of progress, rather than actual progress (Huang, Zhang, and Broniarczyk 2012; Koo and Fishbach 2012).

Our findings are also intriguing in view of earlier work on the role of construal level in goal pursuit, which has essentially painted a picture of high construal level as promoting strategic and holistic judgment and decision making, shielding the self from self-control failure and generally connoting high quality choices and preferences in the service of long term self-regulation (Fujita et al. 2006; Fujita 2008). The present findings complement this view by highlighting that such a mindset might also evoke a less mindful bias, i.e., failure to acknowledge that both types of progress cues are equivalent with regard to goal attainment and hence, should not differentially affect motivation in goal pursuit.

The present work aligns with research focusing on the joint effects of both types of progress framing that has found that a to-date frame increases motivation (compared to a to-go frame), particularly when people engage in active inference-making about the desirability of a distant goal based on the progress information they received (Koo and Fishbach 2008). This research also indicates that existing goals of high personal importance (e.g., passing an important exam), or goals people become committed to during goal pursuit, may yield opposite results, such that a to-go frame (e.g., study-load framed as the amount of literature yet to be studied) may increase motivation compared to a to-date frame (e.g., literature already studied). Future research might assess whether such effects are more pronounced under higher construal levels, as the present work would suggest.

Prior research has described two different effects of goal progress on motivation: In a single goal pursuit context motivation is shown to increase as people make progress (i.e., goal-gradient effect; Kivetz, Urminsky, and Zheng 2006). Conversely, in a multiple goal pursuit context progress has also been shown to decrease motivation with respect to the focal goal as people then shift attention to less progressed, peripheral goals (i.e., coasting effect; Carver and Scheier 1998). Since we focused on a single goal pursuit context, extensions of the present research could examine our framework in a multiple or dynamic goal pursuit setting when people have the tendency to calibrate and prioritize different goals (Fitzsimons and Fishbach 2010; Louro, Pieters, and Zeelenberg 2007). Under these conditions, the decision to exert further effort in a focal (vs. peripheral) goal may be more likely when progress is framed in terms of to-go cues, i.e., when progress information impacts feelings of distance. Conversely, when progress is framed in terms of to-date cues, people with an abstract mindset may be more likely to reduce motivation in the pursuit of the focal goal, such that it seems that they rest on their laurels, and shift attention to another goal.

In classic theories on motivation (e.g., value-expectancy models; Atkinson 1957; Vroom 1964) motivational strength is jointly determined by a goal’s value, which increases with additional accomplished, congruent goal actions, and the expectancy of reaching the goal, which
increases with proximity to the end state. Although we used a direct measure of motivation in our third study, in Studies 1A and 1B motivation was assessed by using a measure that better reflects goal value. Hence, future research might assess the specific role that perceived goal attainment plays in our framework. In addition, it would be interesting to see whether measures of goal attainability would be more influenced when participants have a concrete as opposed to abstract mindset, as previous research has shown that a concrete mindset is more in line with questioning the feasibility rather than desirability of a goal (Liberman and Trope 1998).

Another, related question concerns the role of people’s regulatory orientation in accounting for our results. Although a variety of psychological factors influence whether people construe information on a high or low level ( Förster and Higgins 2005), it is found that people with a prevention focus are inclined to construe information at a low level, focusing on the feasibility of the goal, whereas people with a promotion focus are likely to construe information at a high level, focusing on the goal’s value ( Förster, Higgins, and Idson 1998). As noted previously, we found that trait regulatory focus could not account for our findings. However, it might be interesting to examine whether the present results are modulated by temporary, rather than chronic activation in promotion and prevention regulatory focus (Higgins 1997), or when alternative psychological factors are included that affect construal level.

Finally, in our research we have assumed that construal level affects the cognitive representation of perceived distance toward the target rather than of the reference scale, in which case an abstract (concrete) mindset would have led to lower (higher) perceived distance ( Maglio and Trope 2011). Although our results are in line with an assimilation effect of construal level and distance, future research could explore when people are inclined to focus on the reference scale rather than the target and hence when a contrast effect of construal level and distance can be expected.

In sum, the present work extends previous research on the motivational impact of goal progress information, by identifying conditions where progress cues affect motivation and when they do not, and on the consequences of progress framing for motivation when people have progressed to different stages of goal pursuit. That is, it shows that at the beginning and end of goal pursuit experienced construal level does not influence the effect of different progress cues on motivation. However, halfway goal pursuit under conditions of an abstract mindset, progress cues become meaningful because they then indicate ‘the road traveled’ or ‘the road ahead’ thus informing people on the investments already done and on the investments to be done to attain the end state. Under conditions of a concrete mindset, in contrast, they do not, and people simply experience being ‘on the road’.