





The metamotivation approach: Insights into the regulation of motivation and beyond

Kentaro Fujita¹  | Phuong Q. Le¹  | Abigail A. Scholer²  |
David B. Miele³ 

¹Department of Psychology, The Ohio State University, Columbus, Ohio, USA

²Frank Batten School of Leadership and Public Policy, University of Virginia, Charlottesville, Virginia, USA

³Department of Counseling, Developmental, and Educational Psychology, Boston College, Chestnut Hill, Massachusetts, USA

Correspondence

Kentaro Fujita, Department of Psychology, The Ohio State University, Columbus, OH, USA.
Email: fujita.5@osu.edu

Funding information

Social Sciences and Humanities Research Council of Canada, Grant/Award Number: #435-2017-0184; James S. McDonnell Foundation, Grant/Award Number: #220020483; National Science Foundation, Grant/Award Number: #1626733

Abstract

Researchers across theoretical traditions have long recognized the need for people to monitor and modulate certain aspects of their subjective experiences (such as their thoughts and feelings) in response to situational challenges that interfere with the attainment of important goals. Comparatively less attention has been devoted to understanding the beliefs and mechanisms necessary to regulate motivational states—i.e., metamotivation, even though motivational states are often integral to people's subjective experiences of events. As particular types of motivational states are more adaptive in some contexts than in others, flexibly instantiating the right motivational state at the right time may be key to achieving one's goals. The current paper reviews the principles of the metamotivational approach to studying motivation regulation and briefly reviews supporting research. In addition, we highlight metamotivation research conducted in the context of self-affirmation theory to demonstrate the generative potential of this approach for researching phenomena that have traditionally been treated as separate from self-regulation. We conclude by discussing some of the novel questions that the metamotivational approach has prompted, both in and outside of the self-regulatory domain.

This is an open access article under the terms of the [Creative Commons Attribution-NonCommercial-NoDerivs](https://creativecommons.org/licenses/by-nc-nd/4.0/) License, which permits use and distribution in any medium, provided the original work is properly cited, the use is non-commercial and no modifications or adaptations are made.

© 2024 The Authors. Social and Personality Psychology Compass published by John Wiley & Sons Ltd.

KEYWORDS

metamotivation, metamotivational beliefs, motivation regulation, self-affirmation

1 | INTRODUCTION

Researchers have long been interested in how people monitor and modulate the cognitive and affective aspects of their experiences. For example, research on rumination explores how people can re-direct their thinking when they find themselves repetitively, but unproductively, thinking about some event (e.g., Nolen-Hoeksema et al., 2008). Emotion regulation research examines how people up- and down-regulate emotions to fit with current goals (e.g., Gross, 1998; Tamir, 2016). Comparatively less research, however, has examined how people regulate their motivational states (c.f., Sansone & Thoman, 2005; Schwinger & Stiensmeier-Pelster, 2012; Wolters, 2003). This is surprising given that motivational states are the impetus for and source of many aspects of people's subjective experiences, including thoughts and feelings. Despite recognizing its importance, the social psychological tradition of motivation science, at large, has not directly addressed how people regulate their motivation in daily life (Fishbach, 2021). Emerging research on metamotivation—the beliefs and processes that underlie the monitoring and modulation of motivational states—attempts to address this question (e.g., Fujita et al., 2019; Miele et al., 2020; Miele & Scholer, 2018; Scholer et al., 2018).

This paper provides an overview of this work. Critically, we highlight its relevance not only for understanding self-regulation, but also for other phenomena that have not traditionally been associated with goal pursuit. We spotlight our work on self-affirmation as a case study (Reeves et al., 2023), and discuss the utility of the metamotivational approach for generating novel questions and insights.

2 | METAMOTIVATION

The metamotivation approach is rooted in research on metacognition (e.g., Nelson & Narens, 1990), which suggests that psychological processes can be described as operating at two levels: the object-level and the meta-level. We understand the object-level as referring to any dynamic process (whether it be cognitive, affective, or motivational) that both informs and is controlled by some other psychological process, which is said to operate at the meta-level. Therefore, we use the term metamotivation to refer to psychological processes that monitor and modify *motivational states*; in contrast, to metacognition, which focuses on processes involved in the regulation of cognitive functioning. Although there is no consensus on what “motivational states” are, our own interpretation is informed by Higgins's (2012) definition of “what it means to be motivated,” which is “to have preferences directing choices” (p. 24). That is, when given autonomy, those who are motivated try to impact the world in ways that reflect their preferences for particular outcomes and for particular means of attaining those outcomes. Thus, motivational states have a directive (guide preferences) and dynamic function (a readiness to act in a certain way). Although one could conceptualize metamotivation as a subset of metacognition research (if one considers motivational processes to be part of a broader cognitive system; e.g., Bürgler et al., 2021; Hennecke & Bürgler, 2023; Mischel & Mischel, 1983), establishing metamotivation as a separate line of research affords novel insights that advance motivation and self-regulation research and highlight new meta-level phenomena.

Early research on motivation regulation focused on the strategies people use to modulate the amount of motivation they are experiencing, mainly in educational settings (e.g., Pintrich, 2004; Sansone & Thoman, 2005; Schwinger & Stiensmeier-Pelster, 2012; Wolters, 2003). Metamotivational research extends this work beyond educational settings and advances an integrative framework with which to understand more broadly how people monitor and modulate both how much motivation they have (quantity) and the type of motivation they are experiencing (quality) to achieve valued goals (see Miele & Scholer, 2018; Miele et al., 2020, for reviews). Such regulation entails two reciprocal

processes: metamotivational monitoring—the assessment of one's current motivational states—and metamotivational control—the selection and execution of strategies that bolster or maintain desired motivational states. Critically, the effectiveness of these two processes depends in part on people's beliefs about motivation (i.e., metamotivational knowledge). To position themselves for optimal performance on a goal-directed task, people must understand how much and of what type of motivation the task calls for (i.e., task knowledge), what it is like to experience different types of motivational states (i.e., self-knowledge), and how to sustain or change the motivational states they are experiencing to match task demands (i.e., strategy knowledge).

2.1 | Task-motivation fit

A key principle of the metamotivational approach is the importance of establishing task-motivation fit. Different motivational states involve context-specific trade-offs: optimal performance requires instantiating the right type of motivation at the right time (Gollwitzer, 1990; Higgins, 2000; see; Miele et al., *in press*). Rather than asking *whether* a given motivational state is likely to lead to success, it is more important to ask *when* and in *which* performance contexts it will be effective.

Regulatory focus theory (Higgins, 2000; Scholer & Higgins, 2012), for example, proposes that whereas eager motivational states (enthusiastically seeking opportunities for gains) tend to enhance performance on tasks that require divergent thinking (such as creative brainstorming; e.g., Friedman & Förster, 2001; cf. Baas et al., 2011), vigilant motivational states tend to enhance performance on tasks requiring convergent thinking (such as careful proof-reading, Förster et al., 2003, and logic problems; Beuk & Basadur, 2016; Semin et al., 2005). Construal level theory similarly suggests that adaptive goal pursuit requires modulating regulatory scope (Trope et al., 2021). Tasks such as putting a golf ball require contracting regulatory scope—immersing one's self in the here-and-now to be responsive to local contingencies (e.g., the slope of the green). Self-control, on the other hand, requires expanding regulatory scope—becoming more responsive to concerns that transcend and extend beyond one's immediate circumstances (e.g., dieters prioritizing long-term weight-loss goals over current cravings). Modulating regulatory scope to fit the task at-hand enhances performance (see Fujita et al., 2019, for review). Creating task-motivation fit—instantiating the motivational state demanded by a given task—facilitates effective goal-directed behavior.

2.2 | Exploring metamotivational beliefs

To explore fit, experimenters traditionally induce motivational states and observe subsequent behavior. The metamotivational framework, by contrast, investigates whether people can create task-motivation fit on their own. Initial research explored whether people's beliefs reflect the requisite metamotivational knowledge to do so. For example, in the domain of regulatory focus (Higgins, 1997), Scholer and Miele (2016) presented participants with tasks for which research suggests performance benefits from eager or vigilant motivation (e.g., brainstorming vs. proof-reading, respectively). Participants then reported how beneficial engaging in various recall activities might be for performance on those tasks. Some of these recall activities promote eagerness (“Write about a time in the past when you felt you made progress toward being successful in life”), whereas others promote vigilance (“Write about a time in the past when being careful enough avoided getting you in trouble”). In line with theory and prior research, participants, on average, indicated that eagerness-inducing recall activities would be more effective than vigilance-inducing activities for enhancing performance on eager tasks, but indicated the vigilance-inducing activities would be more effective for enhancing performance on vigilance tasks. Thus, it appears that participants were able to distinguish eager versus vigilance tasks (i.e., normatively accurate task knowledge), and able to identify strategies that should induce the respective motivational states (i.e., normatively accurate strategy knowledge). Similar findings emerge in the context of construal level theory: participants appear to understand that performance on

some tasks requires expanding rather than contracting regulatory scope, and recognize a variety of strategies that can be used to modulate scope accordingly (e.g., high-level vs. low-level construal, respectively; Nguyen et al., 2019). This knowledge of how to create task-motivation fit, moreover, appears to generalize across cultural contexts, with Japanese participants generally exhibiting similar beliefs as North American participants with respect to regulatory focus (Nguyen et al., 2022) and regulatory scope (Nguyen et al., 2020). Thus, on average, people appear to have the requisite knowledge to modulate motivational states to create task-motivation fit.

Critically, there appear to be notable individual differences in metamotivational knowledge, and those with more (vs. less) normatively accurate knowledge tend to evidence better outcomes. For example, dieters with more normatively accurate beliefs about the benefits of expanding regulatory scope for self-control tended to have lower body mass index, suggesting better self-control outcomes (MacGregor et al., 2017). Students who correctly understood when and how to expand versus contract regulatory scope (Nguyen et al., 2023), or who had normatively accurate beliefs about eager and vigilant motivation (Ross et al., 2023), earned higher grades in an Introductory Psychology course, after controlling for GPA and other traditional predictors of academic performance. In short, task and strategy knowledge may be important precursors to effective regulation of one's motivational states to achieve goals.

2.3 | Regulating the motivation of others

Metamotivational beliefs may also impact how people manage the motivation of others. Coaches, teachers, mentors, and parents are often tasked with helping others to regulate their motivation to optimize performance on goal-directed tasks. Jansen et al. (2022) analyzed the language that managers used when trying to motivate their subordinates for a variety of eager and vigilant tasks. Managers tended to use more eager relative to vigilant language when subordinates were assigned to complete eager relative to vigilant tasks. Moreover, when these motivational messages were presented to third-party raters, managers who created task-motivation fit through their language were perceived as more effective than those who did not. Thus, the metamotivational approach may provide insights not only about how people can successfully regulate their own motivational states, but also how they can successfully regulate others' motivational states.

2.4 | The importance of identifying metamotivational misbeliefs

Although the work above suggests that people's metamotivational beliefs are generally consistent with prior research and theory, there are notable instances in which they are not. For example, people appear to underestimate the impact of intrinsic rewards on motivation (e.g., Murayama et al., 2016; Woolley & Fishbach, 2015). This may lead people to over-emphasize the importance of extrinsic rewards to motivate themselves and others, overlooking more effective ways to motivate behavior over time (e.g., bolstering intrinsic rewards; Woolley & Fishbach, 2017). Even when people's beliefs on average are normatively accurate, many individuals hold non-normative beliefs. For example, in one study, when presented with a self-control task, although 56% of participants preferred a preparatory exercise that induced high-level construal (which research suggests should enhance performance), 44% preferred an exercise that induced low-level construal (Nguyen et al., 2019). Educational efforts to correct misbeliefs about motivation may be one way to enhance motivation regulation and goal success.

3 | SELF-AFFIRMATION AS A METAMOTIVATIONAL STRATEGY TO COUNTER SELF-THREATS

To exemplify how the metamotivation approach can advance research not traditionally associated with self-regulation, we next review work on metamotivation beliefs about self-affirmation as a strategy to reduce defensive motivational states that impede the pursuit of valued goals (Reeves et al., 2023). People are motivated to view themselves

positively (e.g., self-enhancement; Sedikides & Strube, 1997, Tesser, 2000): when information paints the self in a negative light (i.e., self-threats), people attempt to restore positive self-images. Unfortunately, efforts to do so are often myopic and interfere with the pursuit of other important ends. For example, when confronted with information that suggests that their behavior may put their health at risk, people dismiss this information rather than change their behavior (e.g., Sherman et al., 2000). Although such behavior can protect self-esteem in the short-term, it can have deleterious impact for important goal-related outcomes, including social relationships, health, and academic performance (e.g., Sherman & Cohen, 2006).¹

Self-affirmation—the restoration of a global sense that one is a moral and competent individual—may be a more adaptive response to self-threats (e.g., Sherman & Cohen, 2006; Steele, 1988). When an aspect of the self is highlighted in a negative manner, focusing on other more global positive aspects of the self (vs. trying to enhance the specific aspect of the self under threat) may help restore one's broader sense of self-worth. A well-studied strategy of self-affirmation is value affirmation: identifying and elaborating on a personally important value (e.g., Fein & Spencer, 1997). Value affirmation appears to effectively reduce defensive reactions to self-threats (e.g., Cohen & Sherman, 2014; Sherman & Cohen, 2006; Steele, 1988). For example, coffee drinkers are more likely to accept the health risks of caffeine after affirming their values (e.g., Sherman et al., 2000; see also Epton et al., 2015). Self-affirmation may therefore serve as an effective strategy for inducing less defensive motivational states to advance important goals.

There may be individual differences in the tendency to use of self-affirmation as a strategy to counter self-threats (e.g., Brady et al., 2016; Emanuel et al., 2018; Harris et al., 2019). It is unclear, however, why some do so whereas others do not. The metamotivation approach suggests that exploring people's beliefs about whether self-affirmation is an effective strategy for instantiating less defensive motivational states may provide fruitful insights, with implications for theory and intervention.

To do so, we (Reeves et al., 2023) first examined *situation differentiation beliefs*: beliefs about the usefulness of self-affirmation in dealing with self-threat compared to other negative situations (i.e., metamotivational task knowledge). Consistent with theory, people on average believed that self-affirmation represents an effective strategy for dealing with self-threats relative to frustrations and physical pain. We also examined *comparative efficacy beliefs*: beliefs about the usefulness of self-affirmation compared to other strategies that research suggests may be detrimental to coping with self-threats (i.e., metamotivational strategy knowledge): affirming in the threatened domain (Blanton et al., 1997; Tesser, 2000) and recounting the details of the threatening situation (Ayduk & Kross, 2010; Glynn et al., 2002; Lee et al., 2019). Participants reported that these alternative strategies were no more or less effective than self-affirmation in response to various self-threats. In other words, they fail to recognize the superiority of self-affirmation relative to other strategies in addressing self-threats. Critically, individual differences in these beliefs predicted how participants chose to respond to an experienced self-threat in the lab: those with more normatively accurate comparative efficacy beliefs were more likely to choose to self-affirm rather than recount.

Thus, although people generally believe that self-affirmation is a relatively effective strategy for reducing the deleterious impact of self-threat on the pursuit of valued ends, they may not use this strategy to the extent that they believe that other strategies (e.g., recounting) are equally or more effective. Beyond advancing theory, this work might inform the ongoing debate about the replicability and generalizability of self-affirmation interventions (e.g., Dee, 2015; Hanselman et al., 2017; Protzko & Aronson, 2016). For example, self-affirmation interventions may at times be ineffective because they fail to account for inaccurate comparative efficacy beliefs. Interventions may need to address erroneous beliefs about the efficacy of alternative strategies that individuals may initially prefer over self-affirmation.

4 | ADDITIONAL DIRECTIONS FOR METAMOTIVATION RESEARCH

The metamotivation approach not only helps to advance self-regulation research, but can also lead to new insights in other research domains (e.g., our self-affirmation work). We next highlight additional self-regulation constructs, as well as other constructs not typically thought of in relation to self-regulation, that could be constructively investigated

using a metamotivational approach. This discussion is illustrative rather than exhaustive, with the hope of inspiring others to extend the metamotivation approach in novel directions.

4.1 | Constructs from the self-regulation literature

4.1.1 | Goal-switching

At any given moment, people may be pursuing multiple goals (e.g., Kung & Scholer, 2021). As it is often difficult to pursue these goals simultaneously, a key challenge is knowing *when* to pursue each goal. This requires flexibility. Assuming that two goals have the same priority (in terms of importance and urgency), it may make sense to start with the goal that would benefit most from (or least impaired by) the affordances of the current context. For example, working parents may generally find it more effective to pursue career goals at the office (when their children are at school) and to then turn their attention to their parenting goals upon returning home in the evening (rather than vice-versa). However, when children are sent home from school because of illness, they may instead find it more productive to work at home in the evening—especially after children have gone to bed early because of the sickness. Our understanding of goal-switching has generally focused on the requisite cognitive processes such as executive functioning and cognitive inhibition (e.g., Mc Culloch et al., 2008; Miyake & Friedman, 2012; Monsell, 2003; Shah et al., 2002). The metamotivation approach, however, offers a different lens for understanding this issue.

The metamotivation approach suggests that people must discern what goal affordances are available in a given context and regulate their motivational states accordingly. For example, an individual may want to discuss work politics with friends yet find that the last thing their work friends want to do at a weekend social is talk about work. The individual in this situation may be better off down-regulating their desire to discuss work politics and instead up-regulating their desire to get along with friends. Understanding whether and when people recognize a situation as being one that affords one goal relative to another is an important first question to address.

As part of metamotivational monitoring, what cues do people use to determine that a situation's affordances call for switching to another goal? The metamotivation approach proposes that they may rely on *metamotivational feelings*—subjective states that inform the state of one's current motivations (Miele et al., 2020; Miele & Scholer, 2018). Experiences of disfluency or frustration may suggest that one is pursuing the wrong goal at the wrong time, and that it may be time to switch. Alternatively, feelings of boredom or fatigue may similarly suggest that there is a lack of correspondence between one's current pursuits and the opportunities available in the environment (Kurzman et al., 2013; Tam et al., 2021). Moreover, people's beliefs about what those metamotivational feelings signal may also be an important question to explore. For example, some may believe that feelings of disfluency suggest a need to invest further effort into the goal they are pursuing ("when the going gets tough, the tough get going"), thus leading them to maladaptively double-down on that goal rather than switching to another. In these and other ways, the metamotivational exploration of goal switching may be a fruitful and generative area for future research.

4.1.2 | Phases of goal pursuit

Goal pursuit may be divided into distinct phases. One popular approach distinguishes goal-setting (deciding what goals to pursue) versus goal-striving (implementing goals to which one has committed; e.g., Gollwitzer, 1990; Mann et al., 2013). Goal-setting requires people to engage in balanced consideration of the pros and cons of committing to a goal (Taylor & Gollwitzer, 1995). For example, people considering marathon training would benefit from engaging in even-handed consideration of both the potential benefits and costs. However, sustaining goal commitment in the face of the setbacks—an important task of goal-striving—may require more biased processing (e.g., Taylor &

Gollwitzer, 1995; see also Myrseth et al., 2009). Marathon runners may be able to better sustain motivation when encountering discomfort on the race course to the extent that they attend to the pros rather than cons of finishing. Thus, successful goal pursuit may require flexibly implementing the right strategy to the distinct challenges posed by each goal phrase.

Research on how people navigate various goal phases has relied on experimenters manipulating the self-regulatory context to observe what strategies participants implement (see Gollwitzer, 1990, for review). The metamotivational approach, however, encourages researchers to explore whether people can identify the challenges associated with each goal phase as well as the strategies with which to address those challenges. For example, one might explore people's beliefs about the functions of biased processing in various goal phases, and whether these beliefs predict successful goal pursuit (for related work, see Baulke et al., 2021). One could also ask similar questions about other processes that support goal pursuit at various stages, including action versus state orientation (Kuhl, 1987), locomotion versus assessment regulatory modes (Higgins et al., 2003), and expanding and contracting regulatory scope (Trope et al., 2021). For instance, some recent work suggests that runners who use wide versus narrow attention in long races to manage their motivation run more miles weekly (Balcetis et al., 2021).

4.1.3 | Feedback

Feedback—information about how people are doing in relation to where they want or need to be—is a critical factor that facilitates motivation and goal success. Both positive and negative feedback can increase motivation, depending on the circumstances (e.g., Deci & Ryan, 2000; Schmidt & DeShon, 2007). In particular, the type of feedback that is most motivating may depend on people's level of goal commitment (e.g., Fishbach et al., 2010). For those uncertain about their goal commitment, positive feedback tends to bolster goal commitment and increase motivation; in contrast, for those who are committed to their goals, this feedback may highlight their past accomplishment and suggest that they can now afford to “coast” (i.e., invest less subsequent effort in the focal goal; Carver & Scheier, 1990). Negative feedback, too, has different effects among those who are high versus low in certainty about goal commitment. For those uncertain about their goal commitment, negative feedback can serve as a signal to withdraw effort and disengage; for those certain about their goal commitment, however, negative feedback can signal that they have not invested enough into the goal and increase their motivation to work harder.

Given these dynamics, the metamotivational approach suggests that people may choose to recall or expose themselves to positive versus negative feedback to regulate their motivation (i.e., feedback may be leveraged as a strategy for modifying motivation). For example, students who want to bolster their commitment to their major might recall the positive rather than negative feedback they have received from faculty; students who are committed but want to increase their motivation might recall negative rather than positive feedback. Alternatively, students might request positive versus negative feedback from faculty mentors, depending on their level of commitment. These strategic behaviors require that people understand the impacts that different types of feedback have on motivation at different points in the goal pursuit process—questions that future research might address.

Note too that feedback sources are often interpersonal: teachers, mentors, coaches, and parents provide feedback to motivate others. The metamotivational approach suggests that the efficacy of these feedback providers in motivating others may depend on their metamotivational beliefs. For example, people recognize that there are benefits to receiving negative/critical feedback (feedback that one has not yet reached a goal or standard) when it comes to identifying and targeting weaknesses for growth and improvement (e.g., Trope & Neter, 1994; Zenger & Folkman, 2014). Yet, feedback providers often do not feel comfortable providing negative feedback (e.g., Cannon & Witherspoon, 2005). This may stem from a belief that negative feedback is demotivating or demoralizing. Further, feedback providers are especially likely to withhold negative feedback from people who are members of marginalized groups (Harber et al., 2010)—out of concerns with appearing prejudiced—leading these individuals to not receive the feedback they need to improve and advance (Cecchi-Dimeglio, 2017), exacerbating inequities. Thus, beyond needing

to understanding that negative feedback can sometimes motivate people and help them improve, providers may also need to know how to provide such feedback “wisely” (e.g., Cohen et al., 1999; Yeager et al., 2014) to avoid miscommunication and other pitfalls. In these and other ways, the metamotivational approach may extend and advance research on feedback.

4.2 | Extending the scope of metamotivation research

4.2.1 | Fixed versus growth mindsets

Beliefs about whether personal characteristics such as intelligence are malleable or not—i.e., growth versus fixed mindsets—exert a powerful influence on people's psychological experiences and outcomes (see Burnette et al., 2013 for review; see also Dweck, 2006). For example, because the growth mindsets imply that people can address their deficiencies over time, these mindsets tend to motivate individual to persist in the face of challenges (Blackwell et al., 2007; Burnette et al., 2013; Dweck, 1999) and to learn from negative feedback (Nussbaum & Dweck, 2008; see also Trope et al., 2003). In contrast, fixed mindsets imply that nothing can be done to remedy low levels of ability (“you either have it or you don’t”) and thus people who hold such beliefs tend to give up after failures and to dismiss or derogate negative feedback. These different patterns of behavior in response to negative feedback can lead to differences in the academic outcomes of students with growth versus fixed mindsets (e.g., Paunesku et al., 2015; Yeager et al., 2019; Burnette et al., 2023; c. f., Yi & Bates, 2019; Macnamara & Burgoyne, 2023).

Although most research highlights the benefits of endorsing growth over fixed mindsets, there may be important trade-offs involved. Growth mindsets, for example, lead people to be less understanding of those who exhibit slower than expected improvement (Ryazanov & Christenfeld, 2018), presumably because perceivers assume targets have not invested sufficient effort. This can be problematic for stigmatized individuals (e.g., those with obesity, lower social-economic class individuals) as a lack of perceived progress can lead to blame (e.g., Hoyt & Burnette, 2020). Theoretically, one might also propose that whereas growth mindsets encourage individuals to stay engaged in a domain despite negative feedback, fixed mindsets may help people disengage and move onto other goals (e.g., goal disengagement).

To the extent that such tradeoffs exist, the metamotivational approach suggests that people may adjust their relative endorsement of growth versus fixed mindsets depending on the context to flexibly support goal engagement versus disengagement. Although people may be unlikely to switch between growth versus fixed mindsets in an absolute sense, their beliefs may include latitudes of acceptance that leave some room for movement (e.g., Eagly & Telaak, 1972; Peterson & Koulack, 1969; Sherif, 1963). For example, although people might endorse a 5 on a 7-point bipolar scale, their true belief may vary from 4 to 6. This latitude may allow for relative shifts in mindset endorsement in response to different circumstances. For example, teachers might adopt relatively stronger growth mindsets to encourage student engagement among students who are struggling, but adopt relatively more fixed mindsets to avoid judging harshly any perceived lack of progress. Individuals highly committed to their goals might endorse more of a growth mindset to keep themselves engaged in the goal despite setbacks (Leith et al., 2014), whereas those who have decided to pursue other ends may endorse a more of a fixed mindset to help them disengage. The metamotivation approach suggests that studying people's beliefs about the benefits of these mindsets in different situations and how this impacts their flexible shifts in mindset endorsement in practice might be a fruitful direction for future research, with implications for both theory and interventions.

4.2.2 | Nostalgia

Nostalgia—a sentimental longing for one's past—is a complex human emotion that is characterized by narratives associated with greater positivity than negativity and that feature the self as the protagonist embedded within a

social context (e.g., Sedikides et al., 2008). Nostalgia appears to play an important role in coping with negative states that might interfere with the motivation to pursue valued ends (for reviews, see Sedikides & Wildschut, 2020, 2023). For example, nostalgia can enhance positive self-regard and serve as an effective counter to self-threats (Routledge et al., 2008; Vess et al., 2012; Wildschut et al., 2006). Nostalgia can also promote a sense of social belonging and may help people to address loneliness (Wildschut et al., 2006; Zhou et al., 2008).

The metamotivational approach suggests that nostalgia may be a metamotivational strategy that people use to address various negative experiences when they interfere with the motivation to pursue valued ends. A preliminary step to address this possibility might be to explore people's metamotivational beliefs about nostalgia—similar to our approach to self-affirmation (Reeves et al., 2023). For people who do not recognize that nostalgia can serve as an adaptive response to these negative states, there may be value in creating educational interventions that address this misbelief. It may also be interesting to explore whether people who believe that nostalgia is beneficial are more likely to engage in nostalgic reminiscences and experience positive well-being and goal outcomes.

Most contemporary research has documented nostalgia's adaptive functions; nevertheless, nostalgia through its association with pain through longing has historically been linked to mental illness (Sedikides et al., 2008). The metamotivational approach suggests that these divergent views of nostalgia may reflect inherent trade-offs of nostalgia as a strategy, and that exploring such trade-offs may be fruitful. One cost of nostalgia may be that by focusing attention on the connection between the past and present, it may render people less amenable to change (e.g., Reyna et al., 2022). Although there is research that nostalgia may promote creativity by enhancing people's openness to experience (Van Tilburg et al., 2015), to the extent that changes to the status quo threaten the ability to connect the present to the past, nostalgia may motivate resistance and backlash (e.g., Alter & Zürn, 2020). To avoid such potential backlash, people may instead want to flexibly adopt alternative strategies in some situations—for example, using self-affirmation in response to self-threats rather than nostalgia.

5 | CONCLUSION

The metamotivational approach embraces the notion that people can flexibly regulate their motivational states, and provides a framework with which to understand the beliefs and processes that such regulation entails. The potential contributions of the metamotivational approach may, moreover, extend beyond psychological constructs that have typically been examined in the self-regulation literature to other motivational constructs and phenomena, such as self-affirmation, mindsets, and nostalgia. We hope this paper inspires others to think about the broad implications of the metamotivational perspective and to explore the kinds of new questions that the approach illuminates.

AUTHOR CONTRIBUTIONS

Kentaro Fujita: Conceptualization, writing-original draft, writing-review, and editing. **Phuong Le:** Conceptualization, writing-original draft, writing-review, and editing. **Abigail Scholer:** Conceptualization, writing-review, and editing. **David Miele:** Conceptualization, writing-review, and editing.

ACKNOWLEDGEMENTS

This work was supported by funding from the National Science Foundation (awarded to KF, Grant #1626733), the Social Sciences and Humanities Research Council of Canada (awarded to AAS; Grant #435-2017-0184), and from the James S. McDonnell Foundation (awarded to DBM: Collaborative Grant #220020483).

CONFLICT OF INTEREST STATEMENT

None.

DATA AVAILABILITY STATEMENT

Data sharing is not applicable to this article as no new data were created or analyzed in this study.

ORCID

Kentaro Fujita  <https://orcid.org/0000-0002-3527-6002>

Puong Q. Le  <https://orcid.org/0000-0001-8514-7025>

Abigail A. Scholer  <https://orcid.org/0000-0001-8531-4436>

David B. Miele  <https://orcid.org/0000-0001-8280-0797>

ENDNOTE

- ¹ Maintaining positive self-images may address important psychological functions (Taylor & Brown, 1988). Nevertheless, this tendency may have detrimental consequences when people fail to recognize self-injurious or other negative behaviors in which they are engaged (e.g., Colvin & Block, 1994; Sherman et al., 2000; Trope, 1986).

REFERENCES

- Alter, K. J., & Zürn, M. (2020). Conceptualising backlash politics: Introduction to a special issue on backlash politics in comparison. *The British Journal of Politics & International Relations*, 22(4), 563–584. <https://doi.org/10.1177/1369148120947958>
- Ayduk, Ö., & Kross, E. (2010). Analyzing negative experiences without ruminating: The role of self-distancing in enabling adaptive self-reflection. *Social and Personality Psychology Compass*, 4(10), 841–854. <https://doi.org/10.1111/j.1751-9004.2010.00301.x>
- Baas, M., De Dreu, C. K., & Nijstad, B. A. (2011). When prevention promotes creativity: The role of mood, regulatory focus, and regulatory closure. *Journal of Personality and Social Psychology*, 100(5), 794–809. <https://doi.org/10.1037/a0022981>
- Balcetis, E., Guenther, C., Pasantes, J., & Cole, S. (2021). Where you look and how far you go: The relationship between attentional styles and running performance. *Current Research in Ecological and Social Psychology*, 2, 100014. <https://doi.org/10.1016/j.cresp.2021.100014>
- Bäulke, L., Daumiller, M., & Dresel, M. (2021). The role of state and trait motivational regulation for procrastinatory behavior in academic contexts: Insights from two diary studies. *Contemporary Educational Psychology*, 65, 101951. <https://doi.org/10.1016/j.cedpsych.2021.101951>
- Beuk, F., & Basadur, T. (2016). Regulatory focus, task engagement and divergent thinking. *Creativity and Innovation Management*, 25(2), 199–210. <https://doi.org/10.1111/caim.12182>
- Blackwell, L. S., Trzesniewski, K. H., & Dweck, C. S. (2007). Implicit theories of intelligence predict achievement across an adolescent transition: A longitudinal study and an intervention. *Child Development*, 78(1), 246–263. <https://doi.org/10.1111/j.1467-8624.2007.00995.x>
- Blanton, H., Cooper, J., Silkumik, I., & Aronson, J. (1997). When bad things happen to good feedback: Exacerbating the need for self-justification with self-affirmations. *Personality and Social Psychology Bulletin*, 23(7), 684–692. <https://doi.org/10.1177/0146167297237002>
- Brady, S. T., Reeves, S. L., Garcia, J., Purdie-Vaughns, V., Cook, J. E., Taborsky-Barba, S., Tomasetti, S., Davis, E. M., & Cohen, G. L. (2016). The psychology of the affirmed learner: Spontaneous self-affirmation in the face of stress. *Journal of Educational Psychology*, 108(3), 353–373. <https://doi.org/10.1037/edu0000091>
- Bürgler, S., Hoyle, R. H., & Hennecke, M. (2021). Flexibility in using self-regulatory strategies to manage self-control conflicts: The role of metacognitive knowledge, strategy repertoire, and feedback monitoring. *European Journal of Personality*, 35(6), 861–880. <https://doi.org/10.1177/0890207021992907>
- Burnette, J. L., Billingsley, J., Banks, G. C., Knouse, L. E., Hoyt, C. L., Pollack, J. M., & Simon, S. (2023). A systematic review and meta-analysis of growth mindset interventions: For whom, how, and why might such interventions work? *Psychological Bulletin*, 149(3–4), 174–205. <https://doi.org/10.1037/bul0000368>
- Burnette, J. L., O'boyle, E. H., VanEpps, E. M., Pollack, J. M., & Finkel, E. J. (2013). Mind-sets matter: A meta-analytic review of implicit theories and self-regulation. *Psychological Bulletin*, 139(3), 655–701. <https://doi.org/10.1037/a0029531>
- Cannon, M. D., & Witherspoon, R. (2005). Actionable feedback: Unlocking the power of learning and performance improvement. *Academy of Management Perspectives*, 19(2), 120–134. <https://doi.org/10.5465/ame.2005.16965107>
- Carver, C. S., & Scheier, M. F. (1990). Origins and functions of positive and negative affect: A control-process view. *Psychological Review*, 97(1), 19–35. <https://doi.org/10.1037/0033-295X.97.1.19>
- Cecchi-Dimeglio, P. (2017). *How gender bias corrupts performance reviews, and what to do about it*. Harvard Business Review. Retrieved from <https://hbr.org/2017/04/how-gender-bias-corrupts-performance-reviews-and-what-to-do-about-it>
- Cohen, G. L., & Sherman, D. K. (2014). The psychology of change: Self-affirmation and social psychological intervention. *Annual Review of Psychology*, 65(1), 333–371. <https://doi.org/10.1146/annurev-psych-010213-115137>
- Cohen, G. L., Steele, C. M., & Ross, L. D. (1999). The mentor's dilemma: Providing critical feedback across the racial divide. *Personality and Social Psychology Bulletin*, 25(10), 1302–1318. <https://doi.org/10.1177/0146167299258011>
- Colvin, C. R., & Block, J. (1994). Do positive illusions foster mental health? An examination of the Taylor and Brown formulation. *Psychological Bulletin*, 116(1), 3–20. <https://doi.org/10.1037/0033-2909.116.1.3>

- Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11(4), 227–268. https://doi.org/10.1207/S15327965PLI1104_01
- Dee, T. S. (2015). Social identity and achievement gaps: Evidence from an affirmation intervention. *Journal of Research on Educational Effectiveness*, 8(2), 149–168. <https://doi.org/10.1080/19345747.2014.906009>
- Dweck, C. S. (1999). Caution--praise can be dangerous. *American Educator*, 23(1), 4–9.
- Dweck, C. S. (2006). *Mindset: The new psychology of success*. Random House.
- Eagly, A. H., & Tetaak, K. (1972). Width of the latitude of acceptance as a determinant of attitude change. *Journal of Personality and Social Psychology*, 23(3), 388–397. <https://doi.org/10.1037/h0033161>
- Emanuel, A. S., Howell, J. L., Taber, J. M., Ferrer, R. A., Klein, W. M., & Harris, P. R. (2018). Spontaneous self-affirmation is associated with psychological well-being: Evidence from a US national adult survey sample. *Journal of Health Psychology*, 23(1), 95–102. <https://doi.org/10.1177/1359105316643595>
- Epton, T., Harris, P. R., Kane, R., van Koningsbruggen, G. M., & Sheeran, P. (2015). The impact of self-affirmation on health-behavior change: A meta-analysis. *Health Psychology*, 34(3), 187–196. <https://doi.org/10.1037/hea0000116>
- Fein, S., & Spencer, S. J. (1997). Prejudice as self-image maintenance: Affirming the self through derogating others. *Journal of Personality and Social Psychology*, 73(1), 31–44. <https://doi.org/10.1037/0022-3514.73.1.31>
- Fishbach, A. (2021). Society for the Science of Motivation Presidential Address: Can we harness motivation science to motivate ourselves? *Motivation Science*, 7(4), 363–374. <https://doi.org/10.1037/mot0000243>
- Fishbach, A., Eyal, T., & Finkelstein, S. R. (2010). How positive and negative feedback motivate goal pursuit. *Social and Personality Psychology Compass*, 4(8), 517–530. <https://doi.org/10.1111/j.1751-9004.2010.00285.x>
- Förster, J., Higgins, E. T., & Bianco, A. T. (2003). Speed/accuracy decisions in task performance: Built-in trade-off or separate strategic concerns? *Organizational Behavior and Human Decision Processes*, 90(1), 148–164. [https://doi.org/10.1016/S0749-5978\(02\)00509-5](https://doi.org/10.1016/S0749-5978(02)00509-5)
- Friedman, R. S., & Förster, J. (2001). The effects of promotion and prevention cues on creativity. *Journal of Personality and Social Psychology*, 81(6), 1001–1013. <https://doi.org/10.1037/0022-3514.81.6.1001>
- Fujita, K., Scholer, A. A., Miele, D. B., & Nguyen, T. (2019). On metamotivation: Consumers' knowledge about the role of construal level in enhancing task performance. *Journal of the Association for Consumer Research*, 4(1), 57–64. <https://doi.org/10.1086/700839>
- Glynn, L. M., Christenfeld, N., & Gerin, W. (2002). The role of rumination in recovery from reactivity: Cardiovascular consequences of emotional states. *Psychosomatic Medicine*, 64(5), 714–726. <https://doi.org/10.1097/01.PSY.0000031574.42041.23>
- Gollwitzer, P. M. (1990). Action phases and mind-sets. *Handbook of Motivation and Cognition: Foundations of Social Behavior*, 2(53–92), 2.
- Gross, J. J. (1998). The emerging field of emotion regulation: An integrative review. *Review of General Psychology*, 2(3), 271–299. <https://doi.org/10.1037/1089-2680.2.3.271>
- Hanselman, P., Rozek, C. S., Grigg, J., & Borman, G. D. (2017). New evidence on self-affirmation effects and theorized sources of heterogeneity from large-scale replications. *Journal of Educational Psychology*, 109(3), 405–424. <https://doi.org/10.1037/edu0000141>
- Harber, K. D., Stafford, R., & Kennedy, K. A. (2010). The positive feedback bias as a response to self image threat. *British Journal of Social Psychology*, 49(1), 207–218. <https://doi.org/10.1348/014466609X473956>
- Harris, P. R., Griffin, D. W., Napper, L. E., Bond, R., Schütz, B., Stride, C., & Brearley, I. (2019). Individual differences in self-affirmation: Distinguishing self-affirmation from positive self-regard. *Self and Identity*, 18(6), 589–630. <https://doi.org/10.1080/15298868.2018.1504819>
- Hennecke, M., & Bürgler, S. (2023). Metacognition and self-control: An integrative framework. *Psychological Review*, 130(5), 1262–1288. <https://doi.org/10.1037/rev0000406>
- Higgins, E. T. (1997). Beyond pleasure and pain. *American Psychologist*, 52(12), 1280–1300. <https://doi.org/10.1037/0003-066X.52.12.1280>
- Higgins, E. T. (2000). Making a good decision: Value from fit. *American Psychologist*, 55(11), 1217–1230. <https://doi.org/10.1037/0003-066X.55.11.1217>
- Higgins, E. T. (2012). *Beyond pleasure and pain: How motivation works*. Oxford University Press.
- Higgins, E. T., Kruglanski, A. W., & Pierro, A. (2003). Regulatory mode: Locomotion and assessment as distinct orientations. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 35, pp. 293–344). Elsevier Academic Press. [https://doi.org/10.1016/S0065-2601\(03\)01005-0](https://doi.org/10.1016/S0065-2601(03)01005-0)
- Hoyt, C. L., & Burnette, J. L. (2020). Growth mindset messaging in stigma-relevant contexts: Harnessing benefits without costs. *Policy Insights from the Behavioral and Brain Sciences*, 7(2), 157–164. <https://doi.org/10.1177/2372732220941216>
- Jansen, E. J., Miele, D. B., Fujita, K., & Scholer, A. A. (2022). Managing the motivation of others: Do managers recognize how to manage regulatory focus in subordinates? *Motivation Science*, 8(4), 330–345. <https://doi.org/10.1037/mot0000273>
- Kuhl, J. (1987). Action control: The maintenance of motivational states. In *Motivation, intention, and volition* (pp. 279–291). Springer Berlin Heidelberg.

- Kung, F. Y., & Scholer, A. A. (2021). Moving beyond two goals: An integrative review and framework for the study of multiple goals. *Personality and Social Psychology Review*, 25(2), 130–158. <https://doi.org/10.1177/1088868320985810>
- Kurzban, R., Duckworth, A., Kable, J. W., & Myers, J. (2013). An opportunity cost model of subjective effort and task performance. *Behavioral and Brain Sciences*, 36(6), 661–679. <https://doi.org/10.1017/S0140525X12003196>
- Lee, D. S., Orvell, A., Briskin, J., Shrapnell, T., Gelman, S. A., Ayduk, O., Ybarra, O., & Kross, E. (2019). When chatting about negative experiences helps—And when it hurts: Distinguishing adaptive versus maladaptive social support in computer-mediated communication. *Emotion*, 20(3), 368–375. <https://doi.org/10.1037/emo0000555>
- Leith, S. A., Ward, C. L. P., Giacomin, M., Landau, E. S., Ehrlinger, J., & Wilson, A. E. (2014). Changing theories of change: Strategic shifting in implicit theory endorsement. *Journal of Personality and Social Psychology*, 107(4), 597–620. <https://doi.org/10.1037/a0037699>
- MacGregor, K. E., Carnevale, J. J., Dusthimer, N. E., & Fujita, K. (2017). Knowledge of the self-control benefits of high-level versus low-level construal. *Journal of Personality and Social Psychology*, 112(4), 607–620. <https://doi.org/10.1037/pspp0000130>
- Macnamara, B. N., & Burgoyne, A. P. (2023). Do growth mindset interventions impact students' academic achievement? A systematic review and meta-analysis with recommendations for best practices. *Psychological Bulletin*, 149(3–4), 133–173. <https://doi.org/10.1037/bul0000352>
- Mann, T., de Ridder, D., & Fujita, K. (2013). Self-regulation of health behavior: Social psychological approaches to goal setting and goal striving. *Health Psychology*, 32(5), 487–498. <https://doi.org/10.1037/a0028533>
- Mc Culloch, K. C., Aarts, H., Fujita, K., & Bargh, J. A. (2008). Inhibition in goal systems: A retrieval-induced forgetting account. *Journal of Experimental Social Psychology*, 44(3), 857–865. <https://doi.org/10.1016/j.jesp.2007.08.004>
- Miele, D. B., & Scholer, A. A. (2018). The role of metamotivational monitoring in motivation regulation. *Educational Psychologist*, 53(1), 1–21. <https://doi.org/10.1080/00461520.2017.1371601>
- Miele, D. B., Scholer, A. A., & Fujita, K. (2020). Metamotivation: Emerging research on the regulation of motivational states. In A. Elliot (Ed.), *Advances in motivation science* (Vol. 7, pp. 1–42). Academic Press. <https://doi.org/10.1016/bs.adms.2019.10.001>
- Miele, D. B., Scholer, A. A., & Higgins, E. T. (in press). Exploring performance tradeoffs associated with qualitatively distinct motivations: A dynamic systems approach. In D. Carlston & K. L. Johnson (Eds.), *The Oxford handbook of social cognition* (2nd ed.). Oxford University Press.
- Mischel, H., & Mischel, W. (1983). The development of children's knowledge of self-control strategies. *Child Development*, 54(3), 603–619. <https://doi.org/10.2307/1130047>
- Miyake, A., & Friedman, N. P. (2012). The nature and organization of individual differences in executive functions: Four general conclusions. *Current Directions in Psychological Science*, 21(1), 8–14. <https://doi.org/10.1177/0963721411429458>
- Monsell, S. (2003). Taskswitching. *Trends in Cognitive Sciences*, 7(3), 134–140. [https://doi.org/10.1016/s1364-6613\(03\)00028-7](https://doi.org/10.1016/s1364-6613(03)00028-7)
- Murayama, K., Kitagami, S., Tanaka, A., & Raw, J. A. (2016). People's naiveté about how extrinsic rewards influence intrinsic motivation. *Motivation Science*, 2(3), 138–142. <https://doi.org/10.1037/mot0000040>
- Myrseth, K. O. R., Fishbach, A., & Trope, Y. (2009). Counteractive self-control: When making temptation available makes temptation less tempting. *Psychological Science*, 20(2), 159–163. <https://doi.org/10.1111/j.1467-9280.2009.02268.x>
- Nelson, T. O., & Narens, L. (1990). Metamemory: A theoretical framework and new findings. In G. H. Bower (Ed.), *Psychology of learning and motivation* (pp. 125–173). Academic Press. [https://doi.org/10.1016/S0079-7421\(08\)60053-5](https://doi.org/10.1016/S0079-7421(08)60053-5)
- Nguyen, T., Carnevale, J. J., Scholer, A. A., Miele, D. B., & Fujita, K. (2019). Metamotivational knowledge of the role of high-level and low-level construal in goal-relevant task performance. *Journal of Personality and Social Psychology*, 117(5), 876–899. <https://doi.org/10.1037/pspa0000166>
- Nguyen, T., Scholer, A. A., Miele, D. B., Edwards, M. C., & Fujita, K. (2023). Predicting academic performance with an assessment of students' knowledge of the benefits of high-level and low-level construal. *Social Psychological and Personality Science*, 14(2), 195–206. <https://doi.org/10.1177/19485506221090051>
- Nguyen, T., Togawa, T., Scholer, A. A., & Fujita, K. (2020). A cross-cultural investigation of metamotivational knowledge of construal level in the United States and Japan. *Motivation Science*, 6(4), 386–400. <https://doi.org/10.1037/mot0000178>
- Nguyen, T., Togawa, T., Scholer, A. A., Miele, D. B., & Fujita, K. (2022). A cross-cultural investigation of metamotivational beliefs about regulatory focus task-motivation fit. *Personality and Social Psychology Bulletin*, 48(5), 807–820. <https://doi.org/10.1177/01461672211025423>
- Nolen-Hoeksema, S., Wisco, B. E., & Lyubomirsky, S. (2008). Rethinking rumination. *Perspectives on Psychological Science*, 3(5), 400–424. <https://doi.org/10.1111/j.1745-6924.2008.00088.x>
- Nussbaum, A. D., & Dweck, C. S. (2008). Defensiveness versus remediation: Self-theories and modes of self-esteem maintenance. *Personality and Social Psychology Bulletin*, 34(5), 599–612. <https://doi.org/10.1177/0146167207312960>
- Paunesku, D., Walton, G. M., Romero, C., Smith, E. N., Yeager, D. S., & Dweck, C. S. (2015). Mind-set interventions are a scalable treatment for academic underachievement. *Psychological Science*, 26(6), 784–793. <https://doi.org/10.1177/0956797615571017>

- Peterson, P. D., & Koulack, D. (1969). Attitude change as a function of latitudes of acceptance and rejection. *Journal of Personality and Social Psychology*, 11(4), 309–311. <https://doi.org/10.1037/h0027342>
- Pintrich, P. R. (2004). A conceptual framework for assessing motivation and self-regulated learning in college students. *Educational Psychology Review*, 16(4), 385–407. <https://doi.org/10.1007/s10648-004-0006-x>
- Protzko, J., & Aronson, J. (2016). Context moderates affirmation effects on the ethnic achievement gap. *Social Psychological and Personality Science*, 7(6), 500–507. <https://doi.org/10.1177/1948550616646426>
- Reeves, S. L., Nguyen, T., Scholer, A. A., Fujita, K., & Spencer, S. J. (2023). Examining beliefs about the benefits of self-affirmation for mitigating self-threat. *Personality and Social Psychology Bulletin*, 49(11), 1615–1632. <https://doi.org/10.1177/01461672221120612>
- Reyna, C., Harris, K., Bellovary, A., Armenta, A., & Zarate, M. (2022). The good ol'days: White identity, racial nostalgia, and the perpetuation of racial extremism. *Group Processes and Intergroup Relations*, 25(3), NP81–NP103. <https://doi.org/10.1177/13684302211057454>
- Ross, J., Nguyen, T., Fujita, K., Miele, D. B., Edwards, M. C., & Scholer, A. A. (2023). The relationship between metamotivational knowledge and performance. *Frontiers in Psychology*, 14, 1124171. <https://doi.org/10.3389/fpsyg.2023.1124171>
- Routledge, C., Arndt, J., Sedikides, C., & Wildschut, T. (2008). A blast from the past: The terror management function of nostalgia. *Journal of Experimental Social Psychology*, 44(1), 132–140. <https://doi.org/10.1016/j.jesp.2006.11.001>
- Ryazanov, A. A., & Christenfeld, N. J. (2018). Incremental mindsets and the reduced forgiveness of chronic failures. *Journal of Experimental Social Psychology*, 76, 33–41. <https://doi.org/10.1016/j.jesp.2017.12.003>
- Sansone, C., & Thoman, D. B. (2005). Interest as the missing motivator in self-regulation. *European Psychologist*, 10(3), 175–186. <https://doi.org/10.1027/1016-9040.10.3.175>
- Schmidt, A. M., & DeShon, R. P. (2007). What to do? The effects of discrepancies, incentives, and time on dynamic goal prioritization. *Journal of Applied Psychology*, 92(4), 928–941. <https://doi.org/10.1037/0021-9010.92.4.928>
- Scholer, A. A., & Higgins, E. T. (2012). Too much of a good thing? Trade-Offs in promotion and prevention focus. In R. M. Ryan (Ed.), *The oxford handbook of human motivation* (pp. 65–84). Oxford University Press.
- Scholer, A. A., & Miele, D. B. (2016). The role of metamotivation in creating task-motivation fit. *Motivation Science*, 2(3), 171–197. <https://doi.org/10.1037/mot0000043>
- Scholer, A. A., Miele, D. B., Murayama, K., & Fujita, K. (2018). New directions in self-regulation: The role of metamotivational beliefs. *Current Directions in Psychological Science*, 27(6), 437–442. <https://doi.org/10.1177/0963721418790549>
- Schwinger, M., & Stiensmeier-Pelster, J. (2012). Effects of motivational regulation on effort and achievement: A mediation model. *International Journal of Educational Research*, 56, 35–47. <https://doi.org/10.1016/j.ijer.2012.07.005>
- Sedikides, C., & Strube, M. J. (1997). Self-evaluation: To thine own self be good, to thine own self be sure, to thine own self be true, and to thine own self be better. In M. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 29, pp. 209–269). Academic Press.
- Sedikides, C., & Wildschut, T. (2020). The motivational potency of nostalgia: The future is called yesterday. In A. J. Elliot (Ed.), *Advances in motivation science* (pp. 75–111). Elsevier Academic Press. <https://doi.org/10.1016/bs.adms.2019.05.001>
- Sedikides, C., & Wildschut, T. (2023). Nostalgia as motivation. *Current Opinion in Psychology*, 49, 101537. <https://doi.org/10.1016/j.copsyc.2022.101537>
- Sedikides, C., Wildschut, T., Arndt, J., & Routledge, C. (2008). Nostalgia: Past, present, and future. *Current Directions in Psychological Science*, 17(5), 304–307. <https://doi.org/10.1111/j.1467-8721.2008.00595.x>
- Semin, G. R., Higgins, T., De Montes, L. G., Estourget, Y., & Valencia, J. F. (2005). Linguistic signatures of regulatory focus: How abstraction fits promotion more than prevention. *Journal of Personality and Social Psychology*, 89(1), 36–45. <https://doi.org/10.1037/0022-3514.89.1.36>
- Shah, J. Y., Friedman, R., & Kruglanski, A. W. (2002). Forgetting all else: On the antecedents and consequences of goal shielding. *Journal of Personality and Social Psychology*, 83(6), 1261–1280. <https://doi.org/10.1037/0022-3514.83.6.1261>
- Sherif, C. W. (1963). Social categorization as a function of latitude of acceptance and series range. *Journal of Abnormal and Social Psychology*, 67(2), 148–156. <https://doi.org/10.1037/h0043022>
- Sherman, D. K., & Cohen, G. L. (2006). The psychology of self-defense: Self-affirmation theory. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 38, pp. 183–242). Elsevier Academic Press. [https://doi.org/10.1016/S0065-2601\(06\)38004-5](https://doi.org/10.1016/S0065-2601(06)38004-5)
- Sherman, D. K., Nelson, L. D., & Steele, C. M. (2000). Do messages about health risks threaten the self? Increasing the acceptance of threatening health messages via self-affirmation. *Personality and Social Psychology Bulletin*, 26(9), 1046–1058. <https://doi.org/10.1177/01461672002611003>
- Steele, C. M. (1988). The psychology of self-affirmation: Sustaining the integrity of the self. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 21, pp. 261–302). Academic Press.
- Tam, K. Y., van Tilburg, W. A., Chan, C. S., Igou, E. R., & Lau, H. (2021). Attention drifting in and out: The boredom feedback model. *Personality and Social Psychology Review*, 25(3), 251–272. <https://doi.org/10.1177/10888683211010297>
- Tamir, M. (2016). Why do people regulate their emotions? A taxonomy of motives in emotion regulation. *Personality and Social Psychology Review*, 20(3), 199–222. <https://doi.org/10.1177/1088868315586325>

- Taylor, S. E., & Brown, J. D. (1988). Illusion and well-being: A social psychological perspective on mental health. *Psychological Bulletin*, 103(2), 193–210. <https://doi.org/10.1037/0033-2909.103.2.193>
- Taylor, S. E., & Gollwitzer, P. M. (1995). Effects of mindset on positive illusions. *Journal of Personality and Social Psychology*, 69(2), 213–226. <https://doi.org/10.1037/0022-3514.69.2.213>
- Tesser, A. (2000). On the confluence of self-esteem maintenance mechanisms. *Personality and Social Psychology Review*, 4(4), 290–299. https://doi.org/10.1207/S15327957PSPR0404_1
- Trope, Y. (1986). Self-enhancement and self-assessment in achievement behavior. In R. M. Sorrentino & E. T. Higgins (Eds.), *Handbook of motivation and cognition: Foundations of social behavior* (pp. 350–378). Guilford Press.
- Trope, Y., Gervy, B., & Bolger, N. (2003). The role of perceived control in overcoming defensive self-evaluation. *Journal of Experimental Social Psychology*, 39(5), 407–419. [https://doi.org/10.1016/S0022-1031\(03\)00035-0](https://doi.org/10.1016/S0022-1031(03)00035-0)
- Trope, Y., Ledgerwood, A., Liberman, N., & Fujita, K. (2021). Regulatory scope and its mental and social supports. *Perspectives on Psychological Science*, 16(2), 204–224. <https://doi.org/10.1177/1745691620950691>
- Trope, Y., & Neter, E. (1994). Reconciling competing motives in self-evaluation: The role of self-control in feedback seeking. *Journal of Personality and Social Psychology*, 66(4), 646–657. <https://doi.org/10.1037/0022-3514.66.4.646>
- Van Tilburg, W. A., Sedikides, C., & Wildschut, T. (2015). The mnemonic muse: Nostalgia fosters creativity through openness to experience. *Journal of Experimental Social Psychology*, 59, 1–7. <https://doi.org/10.1016/j.jesp.2015.02.002>
- Vess, M., Arndt, J., Routledge, C., Sedikides, C., & Wildschut, T. (2012). Nostalgia as a resource for the self. *Self and Identity*, 11(3), 273–284. <https://doi.org/10.1080/15298868.2010.521452>
- Wildschut, T., Sedikides, C., Arndt, J., & Routledge, C. (2006). Nostalgia: Content, triggers, functions. *Journal of Personality and Social Psychology*, 91(5), 975–993. <https://doi.org/10.1037/0022-3514.91.5.975>
- Wolters, C. A. (2003). Regulation of motivation: Evaluating an underemphasized aspect of self-regulated learning. *Educational Psychologist*, 38(4), 189–205. https://doi.org/10.1207/S15326985EP3804_1
- Woolley, K., & Fishbach, A. (2015). The experience matters more than you think: People value intrinsic incentives more inside than outside an activity. *Journal of Personality and Social Psychology*, 109(6), 968–982. <https://doi.org/10.1037/pspa0000035>
- Woolley, K., & Fishbach, A. (2017). Immediate rewards predict adherence to long-term goals. *Personality and Social Psychology Bulletin*, 43(2), 151–162. <https://doi.org/10.1177/0146167216676480>
- Yeager, D. S., Hanselman, P., Walton, G. M., Murray, J. S., Crosnoe, R., Muller, C., Tipton, E., Schneider, B., Hulleman, C. S., Hinojosa, C. P., Paunesku, D., Romero, C., Flint, K., Roberts, A., Trott, J., Iachan, R., Buontempo, J., Yang, S. M., Carvalho, C. M., ... Duckworth, A. L. (2019). A national experiment reveals where a growth mindset improves achievement. *Nature*, 573(7774), 364–369. <https://doi.org/10.1038/s41586-019-1466-y>
- Yeager, D. S., Purdie-Vaughns, V., Garcia, J., Apfel, N., Brzustoski, P., Master, A., Hesser, W. T., Williams, M. E., & Cohen, G. L. (2014). Breaking the cycle of mistrust: Wise interventions to provide critical feedback across the racial divide. *Journal of Experimental Psychology: General*, 143(2), 804–824. <https://doi.org/10.1037/a0033906>
- Yi, Y., & Bates, T. C. (2019). You can't change your basic ability, but you work at things, and that's how we get hard things done: Testing the role of growth mindset on response to setbacks, educational attainment, and cognitive ability. *Journal of Experimental Psychology: General*, 148(9), 1640–1655. <https://doi.org/10.1037/xge0000669>
- Zenger, J., & Folkman, J. (2014). *Your employees want the negative feedback you hate to give*. Harvard Business Review. Retrieved from <https://hbr.org/2014/01/your-employees-want-the-negative-feedback-you-hate-to-give>
- Zhou, X., Sedikides, C., Wildschut, T., & Gao, D. G. (2008). Counteracting loneliness: On the restorative function of nostalgia. *Psychological Science*, 19(10), 1023–1029. <https://doi.org/10.1111/j.1467-9280.2008.02194.x>

AUTHOR BIOGRAPHIES

Kentaro Fujita is a Professor of Psychology at The Ohio State University.

Phuong Le is a PhD student in the Department of Psychology at The Ohio State University.

Abigail Scholer is Batten Family Bicentennial Distinguished Leadership Professor of Public Policy at the Frank Batten School of Leadership and Public Policy at University of Virginia.

David Miele is an Associate Professor of Educational Psychology at Boston College.

How to cite this article: Fujita, K., Le, P. Q., Scholer, A. A., & Miele, D. B. (2024). The metamotivation approach: Insights into the regulation of motivation and beyond. *Social and Personality Psychology Compass*, e12937. <https://doi.org/10.1111/spc3.12937>