Motivational Dynamics of Self-Control

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How people respond to desires varies substantially across time and situations. Building on recent theoretical developments, we propose that motivation plays a central role in the dynamics of self-control as it unfolds across time. We illustrate the role of motivation in self-control by highlighting evidence that pursuing goals for intrinsic (vs. extrinsic) reasons plays a key role in shaping *when* and *how* people engage in self-control in service to their goals. We then expand this framework by outlining several promising directions for future research, specifically emphasizing the dynamic interplay between motivation and self-control at various stages in the regulation process. Ultimately, we posit that motivation is a key factor in helping people flexibly regulate desires in accordance with situational demands.

Keywords: motivation, self-control, context, flexibility, self-regulation

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Anyone who has tried to change their behavior knows how dynamic goal pursuit can be. You might start the day with a plan but then get derailed by an unexpected obstacle. You might have more time or money some weeks than others. And sometimes you simply feel more motivated than others for reasons you might not understand. When pursuing a goal, myriad factors that fluctuate from moment-to-moment, day-to-day, and week-to-week influence whether a conflicting goal comes to mind in a moment, whether to pursue it and, if so, which strategies to use. This is an exciting time to be studying self-control because a new generation of research is blossoming that more fully embraces the complex and dynamic nature of goal pursuit in daily life. Here, we highlight the important role that motivation plays in influencing *when* and *how* people use self-control as they pursue their goals. We hypothesize that optimal self-control is characterized by the ability to flexibly implement regulatory approaches in accordance with contextual demands [1].

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Self-Control is a Flexible and Dynamic Process

Self-control is the process of resolving conflict (real or anticipated) between competing goals [2] and can be accomplished in many ways [3,4]. Despite the longstanding acknowledgment that no psychological process is beneficial in all contexts [5–7], much research in this area focuses on determining the efficacy of specific strategies. For example, studies document which strategies are used in daily life [8,9] and across domains [10], test potential interventions [11,12], and develop theory-informed measures [4,13]. Building on this empirical foundation, the field has now begun to consider how self-control dynamically fluctuates across time and context [1,14].

A horizon for the field is to understand the dynamic factors that contribute to changes in self-control during goal pursuit. Contextual factors can range from micro-level (e.g., biological, individual) to macro-level (e.g., culture, public policy) [15,16] (see Figure 1). Our purpose here is not to present a definitive list of all contextual factors relevant to self-control (we have a word limit!), but rather to focus tightly on one particular psychological process that differentially shapes self-control across time: motivation, the process that energizes, directs, and sustains behavior [17–19]. For the purposes here, we consider motivation a contextual factor to the extent it fluctuates across time and situations.

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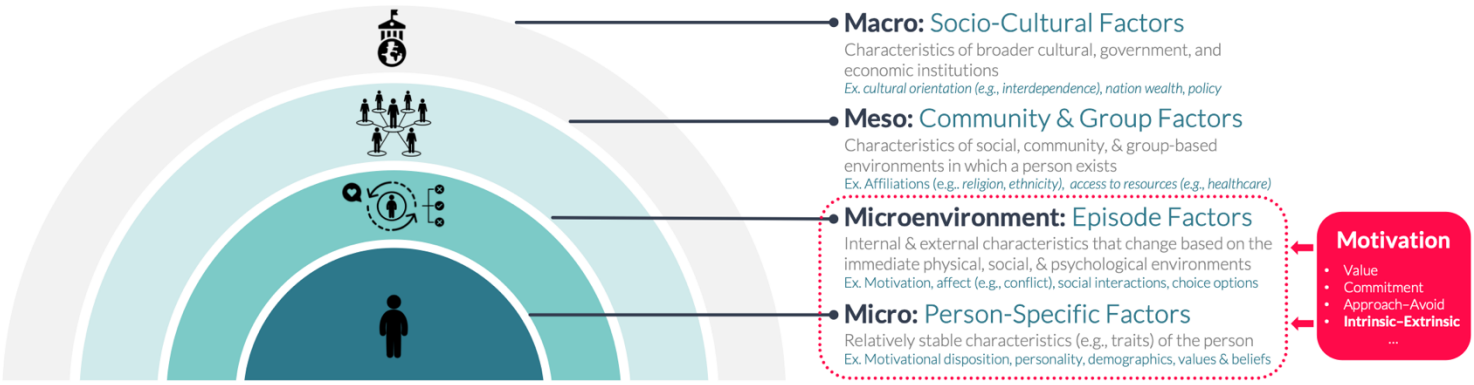

Figure 1. Contextual influences on goal pursuit. Adapted from Hofmann (2024) and Greenaway et al. (2018), we propose that contextual factors can include various features of both the person and the situation, ranging from relatively stable features of the person (i.e., the micro-level) to more distal features of the situation (i.e., meso-level, macro-level). Although the micro, meso, and macro levels represent relatively stable characteristics of the person or the situation, the microenvironment represents features of both the person (e.g., motivation, affect) and the situation (e.g., available choice options, whether other people are present) as they emerge *in a specific regulation episode*, such as in response to a specific momentary desire, temptation, or goal in real-time. From a motivational perspective, a person may generally be intrinsically motivated for a particular goal, as represented in the micro-level, but the extent to which they are intrinsically vs. extrinsically motivated in a given moment can vary, as represented in the microenvironment. Thus far, most research has examined the association between motivation and self-control from a micro-level perspective [20–22]; however, we propose it is also important to consider motivation within a given regulation episode, or the microenvironment [1,23].

Exactly how and when does motivation influence self-control? One useful way to conceptualize the complex and dynamic process of self-control – and map where and when motivation is most impactful – is to parse self-control into different stages that are part of an iterative cycle. The extended process model of self-control [1] offers just such a map. Inspired by research on emotion regulation [24,25], this framework describes four stages: identification, selection, implementation, and monitoring [1,14]. Each stage is linked to a decision that the person makes, consciously or not [25,26].

The decision whether to even regulate a desire occurs in the *identification* stage. Desires can sometimes conflict with other important goals, in which case they become temptations [1,2]. So, self-control is required whenever two goals conflict, regardless of the temporal nature of those goals [2]. Upon setting the goal to regulate a desire (or temptation), the choice in the *selection* stage is among the strategies available in a person's strategy repertoire (i.e., their strategy toolbox) [10]. Then, the person decides which specific actions to take in the *implementation* stage. Strategies are broad and can be enacted in different ways [4,27]– using strategies to actively approach the goal (e.g., buy more healthy foods) or avoid temptation (e.g., not buying unhealthy snacks) [1], and the concrete way a strategy is deployed is known as a *regulation tactic*. As the situation evolves over time, the person engages in a *monitoring* stage to decide whether to maintain, switch, or stop an approach. Central to our argument here is that each stage can be influenced by contextual factors, including motivation, that shape the regulation process [16]. As such, successful regulation does not involve merely using the "right" strategies, but also flexibly adapting one's approach (i.e., a goal, strategy, or tactic) to appropriately match the situation.

Motivation Shapes When People Need Self-Control

The field is beginning to understand how and when motivation bears on the dynamics of self-control. At the heart of several motivational accounts of self-control is the distinction between intrinsic and extrinsic motivation [1,17,28,29] – that is, the extent to which a person pursues a goal because it is central to their identity [17,19] and any action related to the goal is rewarding in itself [29] versus pursuing a goal because of external demands (e.g., societal pressure, rewards) or to avoid feelings of guilt and shame [19]. We focus here on intrinsic and extrinsic motivation for illustrative purposes, but many other theoretical models of motivation propose distinct contextual factors influencing goal pursuit [30] and are worth considering in future research.

The decision to regulate a temptation that conflicts with a goal – thus activating the need for self-control –

happens during the *identification* stage. Motivation can influence when a desire crosses the threshold to become a temptation. Following the principles of the identity-value model [17], temptations occur when the subjective value of a desire is close to the subjective value of the alternative goal. Critically, the value of each option is dictated by its various value inputs, the most prominent being one's identity [17]. So, choice options that are pursued for more intrinsic reasons should be given greater weight in the valuation process [1] compared to other factors such as social influence or perceived effort [17].

The prediction that identity-aligned goals should be relatively more motivating is supported by evidence that people who pursue goals for intrinsic reasons have greater preference for goal-congruent options, less of a preference for possible temptations [31,32], and are more likely to naturally make goal-congruent choices, such as buying healthier foods and choosing sustainable amenities [21]. Conversely, people who pursue goals for extrinsic reasons have a greater preference for temptations [31], are more likely to perceive temptations as an obstacle to one's goals [20], and experience greater conflict when faced with temptations. Our model suggests that goals that are pursued for intrinsic reasons are less likely to require self-control in the first place because choices that promote identity-aligned goals are valued to a far greater degree than potentially competing desires [29]. In this view, effective self-control and the use of strategies to avoid temptation are most important when goals are pursued for extrinsic reasons, making the choice between a goal and a temptation a narrower one.

Motivation Shapes How People Regulate to Achieve Their Goals

Decisions about *how* to pursue a goal happens in the *selection* and *implementation* stages. Though "strategies" and "tactics" are conceptually distinct, it is useful in practice to consider them along a continuum from general abstract regulatory approaches (strategies) to more concrete regulatory actions (tactics) [33].

One possibility is that people who pursue goals for intrinsic reasons are better at self-control because they use self-control strategies that help them avoid temptations before they arise [19]. For example, people who pursued goals for intrinsic reasons tended to position temptations further away from themselves [20]. This result would seem to implicate motivation in the choice of an effective self-control strategy (i.e., to actively distance oneself from the temptation). However, this behavior did not translate into actual behavior in the lab or in the real world [20]. Further analyses showed that people who pursued goals for intrinsic reasons did not even perceive the "temptations" as obstacles to their goal, giving them no reason to use strategies to avoid the temptation in the first place.

If not by steering away from temptations, why are intrinsically motivated people more likely to achieve their goals? Another possibility is that people who pursue goals for intrinsic reasons tend to flexibly shift among self-regulation strategies and accept nudges that promote goal progress [22,34]. Essentially, by increasing the value of the goal [17], the intrinsically motivated person is better able to channel their regulatory efforts (e.g., the strategies they use) in ways that help them achieve their goal without giving any thought to possible temptations. This is further evidenced by the finding that people who are intrinsically motivated tend to have stronger goal-related habits, further automatizing the self-regulation process [35]. Although it was initially thought that having strong habits bypasses the need for regulation strategies [36], recent findings suggest that people are more likely to use strategies to reinforce more complex habits (e.g., exercise) [37] rather than actively regulating temptation.

Taken together, the evidence suggests that people who are motivated for intrinsic (versus extrinsic) reasons are better self-regulators because they have the right tools to achieve their goals and do not place as much value on temptations, thus reducing the need for self-control. Of course, people who are intrinsically motivated are bound to experience temptations sometimes, but they are more likely to possess and deploy the right tools to manage such conflict. In this sense, the way intrinsic motivation promotes self-control is not by using strategies to actively avoid temptation entirely [20,38], but rather by providing flexibility to respond in accordance with situational demands [1].

Directions for Future Research

The literature supports a view of self-control as a dynamic process with motivation shaping both *when* and *how* people regulate their goals across contexts. We see several promising directions for this new generation of research.

First, the extent to which motivation changes across time and contexts is surprisingly understudied,

particularly in relation to self-control. To further unpack the *identification* stage of self-control, future research could deploy intensive longitudinal methods (e.g., EMA) [18,39] to examine how often and under what conditions motivation shifts over time and whether such shifts correspond with how much conflict a person experiences in daily life, thus activating the need for self-control.

Second, the field lacks a unified theory that maps out which strategies are most effective in which situations despite broad agreement that no strategy is uniformly helpful or harmful [1,39,40]. Future research could sharpen our understanding of how motivation operates in the *selection* and *implementation* stages by examining: (1) whether certain strategies or tactics are more (or less) effective depending on the level and kind of motivation in a situation, and (2) whether people who are more intrinsically motivated have a greater capacity for flexible regulation – for example, whether they generally have a larger strategy repertoire and if they are able to effectively use strategies that match the situation.

Third, though motivation appears to change from situation to situation [23], ecologically-valid interventions to change motivation are lacking [41]. One promising approach could be reappraisal [12,42], which refers to altering one's mental representations of states of the world (e.g., changing how one thinks about a temptation in a regulation episode). Though typically deployed in service of emotion regulation, reappraisal might also be effective in altering mental representations of desired end states – goals – thereby changing motivation [43]. For instance, considering goals as identities ("I am a non-smoker" versus "I want to quit") can help people act in more goal-congruent ways and make better progress on their goals [44]. Building on this initial work, micro-randomized interventions that incorporate intensive longitudinal designs (e.g., diary, EMA) [45] can be used to determine whether reappraisal can also durably shift people's motivation and subsequently impact downstream regulation processes (e.g., conflict, strategy use) as they unfold in daily life.

Finally, there is growing interest in leveraging the positive emotional benefits of intrinsic motivation to enhance self-control and promote lasting behavior change [29,46,47]. A caveat to this approach is that striving to feel good—moving toward positive emotions and away from negative emotions—can also incur costs [48]. For instance, using strategies to reduce negative emotions in the moment can protect well-being but may come at the expense of longer-term goal pursuit [49]. Future research would benefit from further unpacking the benefits and costs of positive emotions as they relate to self-regulation both in the short term (regulating desires) and the long term (promoting lasting behavior change).

Conclusion

The field of self-control faces an exciting juncture where researchers are beginning to address the rich, often complex role of context during goal pursuit. Seemingly every day, excellent studies emerge that advance the scientific understanding of self-control as a flexible and dynamic process. Of course, there remains much work to be done to rigorously and systematically unpack the myriad ways context can shape *when* and *how* people regulate their goals. We focused here on intrinsic and extrinsic motivation for illustrative purposes but encourage researchers to extend this framework to other contexts. By embracing the essential role of context during goal pursuit, we can ultimately better understand how to change behavior both in the short-term and the long-term.

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**Article of outstanding interest.
*Article of special interest

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