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Identity-Based Motivation and the Motivational Consequences of Difficulty

Daphna Oyserman 

Department of Psychology, University of Southern California, Los Angeles, California, USA

Correspondence: Daphna Oyserman (oyserman@usc.edu)**Received:** 15 July 2024 | **Revised:** 23 November 2024 | **Accepted:** 24 November 2024**Funding:** This work was supported by U.S. Department of Education.**Keywords:** behavior, judgment and decision-making | difficulty-as-importance, difficulty-as-impossibility, and difficulty-as-improvement | goal attainment | identity and identity-based motivation, metacognitive inferences and difficulty mindsets | motivation and action | self-concept, future self and possible selves

ABSTRACT

Difficulty is an under-appreciated but powerful motivational force. As outlined by identity-based motivation (IBM) theory, a social cognition theory of self, self-regulation, and goal pursuit, people prefer to act (action-readiness) and understand their experiences (procedural-readiness) in ways that fit who they are (identity-congruence). IBM also predicts that experienced identity congruence is context-sensitive—though experienced as stable anchors, people’s identities are dynamically constructed in context. Contexts shape which identities come to mind, what these on-the-mind identities imply for action, and what people infer when thinking about a task, goal, or life feels hard. People can draw two inferences (termed difficulty-as-importance and difficulty-as-impossibility) when a task or goal feels hard to think about and a third (termed difficulty-as-improvement) when their life feels hard to think about. IBM predicts, and studies support, a bidirectional relationship among these three components (action-readiness, procedural-readiness, and dynamic construction). Situations shape the identities that are on the mind and feel relevant (dynamic construction) and the inferences people draw from difficulty (procedural readiness). On-the-mind and context-relevant identities shape inferences from difficulty. Inferences from difficulty affect identity and action—when applying a difficulty-as-importance lens, people feel more certain of attaining their self-relevant goals. They perform better and find engaging a “me” thing to do—“no pain, no gain”. When applying a difficulty-as-impossibility lens, people find engaging a waste of their time and unlikely to yield self-benefits unless an easy means to goal attainment exists—“cut your losses”. They focus on their virtuous character traits and prefer effortful means to attain self-relevant goals when applying a difficulty-as-improvement lens—“the high road”. Difficulty can be a green light of importance signaling you to get going, a detour sign of impossibility signaling you to shift to something else, or angel wings pointing you to the effortful route.

1 | Introduction

Identity-based motivation theory is a social cognitive theory of self, self-regulation, and goal pursuit (IBM, Oyserman 2007, 2009, 2015a, 2015b; Oyserman and Destin 2010; Oyserman et al. 2017a). It provides a novel perspective on a familiar paradox: people can imagine their future selves without taking

or sustaining future-focused action. IBM explains why by focusing on the inferences people draw from difficulty as an underappreciated aspect of how and when identities motivate current action (Oyserman and Dawson 2019; Oyserman, Elmore, and Smith 2012; Oyserman and Horowitz 2023). This IBM explanation starts with an observation (experienced self-stability) and two counter-observations (context sensitivity and

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metacognition as input to judgments). The observation is that people generally feel they know who they are and that their future self's wants, needs, and values are known to them and use this feeling of self-knowledge as an anchor to take present-focused and future-focused action (as reviewed in Oyserman, Elmore, and Smith 2012). The counter observation is that though feeling fixed, identities are dynamically constructed—shaped by features of the immediate situation and how easy or difficult thinking feels (as reviewed in Oyserman 2007, 2009; Oyserman and Dawson 2019; Oyserman, Destin, and Novin 2017b). IBM regards this combination as a design feature, not a flaw, postulating that experienced self-stability combined with dynamic construction—sensitivity to context and meta-cognitive experience—facilitates people's investments in their long-term goals and adaptation to changing circumstances.

Using the IBM terminology, IBM predicts that people prefer to act (action-readiness) and make sense of their experiences (procedural-readiness) in ways that fit their identities and that identities are not fixed (dynamic construction). Inferences from ease and difficulty of thinking, on-the-mind identities, and actions mutually shape one another, varying between and within individuals (Oyserman 2007). These predictions build on a rich literature in social cognition that documents that people are sensitive to their experiences of difficulty while thinking and apply the inferences they draw from that difficulty as inputs in their thinking (e.g., Schwarz 2004, 2012; Schmidt and Heck 2024). Because people are not necessarily sensitive to the source of this difficulty, they may carry inferences relevant to one reasoning context into the next, with consequences for judgment and behavior (e.g., Schwarz 2004). IBM synthesizes these insights to make novel predictions about the self and its role in thinking and doing (Oyserman 2007, 2009). Next, I summarize IBM's three theorized components (dynamic construction of identity, procedural readiness, action readiness) and linked predictions, highlighting each component's grounding in social cognition research and examples of supporting evidence across studies with children and adults varying in socio-economic, racial-ethnic, cultural, and national groups.

2 | Identity-Based Motivation

2.1 | Operationalizing Self, Self-Concept, and Identity

IBM concretizes the abstract idea of identity as the temporally tagged content of the self—the “me” or object of self-reflection, and the abstract idea of self-concept is defined as the organizing structure of identities (Oyserman, Elmore, and Smith 2012). Identities vary in content, centrality, and certainty. Personal identities, that is, traits and attributes such as “I am a persistent person,” are often nested in social identities—role relationships such as “I am a mother” and group memberships such as “I am an American.” People are sensitive to contextual cues as to which of their many identities and which identity-linked actions are relevant in the situation. Because identities are abstract ideas, not concrete objects, people draw on contextual cues to infer identity content, the degree to which an identity is relevant in context, and the likelihood that they have or could have the identity

themselves. These cues shape people's momentary certainty that they have or can have a particular identity. Self-concepts provide organizing structures clustering identities around culturally valued ways of being a person. For example, independent self-concepts highlight uniqueness and distinctiveness, interdependent self-concepts highlight connectedness and relatedness, and honor self-concepts highlight morality and virtuousness (Oyserman, Elmore, and Smith 2012; Oyserman and Yan 2019).

2.2 | A Recursive Process: Dynamic Construction, Action-Readiness, and Procedural Readiness

IBM draws on social psychological, social cognition, cultural, and developmental psychology research documenting that thinking is for doing such that what is on the mind and applied in judgment and decision-making is a function of what is available in memory and seems relevant in the immediate situation (for a review Oyserman and Yan 2019). IBM predicts that all things being equal, people prefer to act (action-readiness) and make sense of their experiences (procedural-readiness) in ways that fit their on-the-mind identities (Oyserman 2007). Building on social cognition theories and supporting evidence about how the mind works (e.g., Schwarz 2004), IBM predicts that, like other mental constructs, identities are not fixed but created from memory and inputs from the immediate situation (dynamic construction). Hence, situations shape identity content, certainty, and experienced relevance—which actions seem identity-relevant, and what to make of metacognitive experiences of ease and difficulty while thinking (Oyserman 2007, 2009). In that sense, identities are probabilities, not certainties about the self. As identity content, certainty, and relevance fluctuate, so does their likely course of action and the likelihood that they will infer that difficulty means importance (stick to what you are doing) or impossibility (shift or disengage and try something else). IBM predicts bidirectionality—just as features of on-the-mind identities influence action and inferences from difficulty, so do action and inferences from difficulty influence how people momentarily construe their identities (Oyserman 2007). Figure 1 depicts this recursive process graphically, using certainty as the example feature of dynamic construction and concretizing the process for difficulty-as-importance and difficulty-as-impossibility inferences. Below, I explain how IBM conceptualizes each piece in this recursive process and provide examples of empirical evidence, mostly drawing from experiments that test pieces in the recursive process as these provide a clear test of inferences.

2.3 | Dynamic Construction: Identities Are Context-Sensitive and Shape Action-Readiness and Procedural Readiness

This section focuses on the dynamic construction aspect of IBM and its consequences for readiness to act (action-readiness) and draw inferences (procedural-readiness), as depicted in Figure 1. Dynamic construction entails three IBM postulates. First, people have many identities stored in autobiographical memory and automatically apply situational inputs to create identities on the spot (Oyserman 2009). Second, the subset of identities that are on the mind and seem relevant to the situation at hand matter for judgment. Third, which identity comes to mind is a

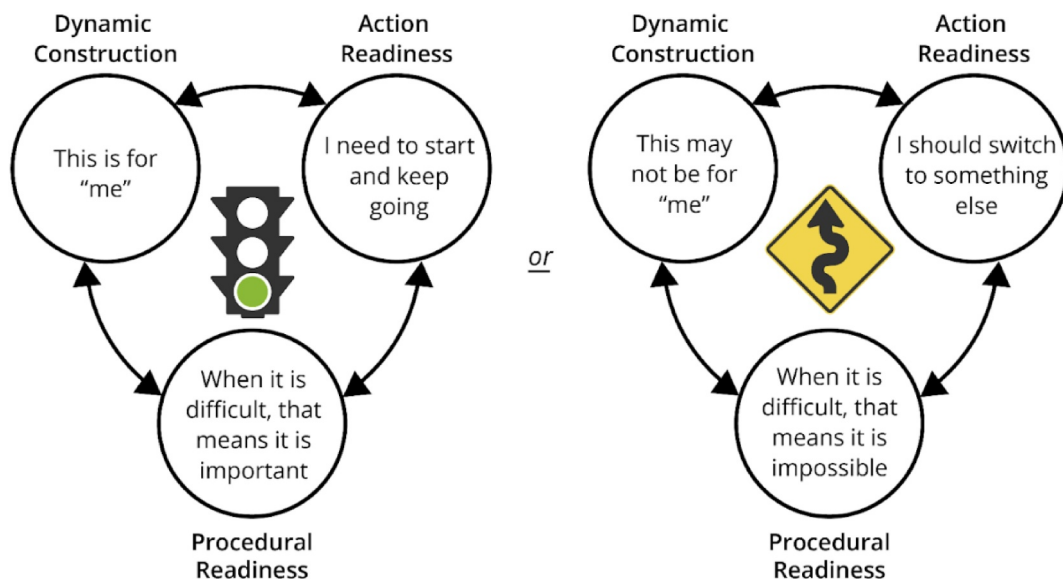


FIGURE 1 | Identity certainty (this is for me) and uncertainty (this may not be for me) shape and are shaped by what people do (action readiness) and the inferences they draw when thinking feels hard (procedural readiness). Dynamic construction of identity refers to the situated nature of identity content, certainty, and experienced relevance. This figure uses certainty as an example. Action-readiness refers to a readiness to act in whatever seems to be identity-congruent—a “me” or “us” thing to do. Procedural readiness refers to a readiness to make sense of experiences using identity-congruent lenses—inferences from metacognitive experiences of difficulty.

function of how frequently and recently particular identities have been on the mind (Oyserman, Elmore, and Smith 2012). Next, I briefly summarize examples of studies to concretize the dynamic construction of identity content (Elmore and Oyserman 2012), certainty (Nurra and Oyserman 2015), and relevance to the task at hand (Oyserman, Destin, and Novin 2017b).

2.3.1 | Dynamic Construction of Identity Content

IBM predicts that people are sensitive to contextual cues about identity content and its implication for action. Elmore and Oyserman (2012) focused on the implication of contextual cues on the content of gender identity to test the dynamic construction of identity content prediction. They randomly assigned students to see one of four graphs depicting Census information from their state. Students read and interpreted the graphs, then described their next year and adult identities. Two graphs depicted median high school graduation rates and two median incomes. One graph of each kind provided gender information, and the other did not. Graphs that included information by gender provided a subtle contextual cue that being a boy or girl is relevant to future success—that “women succeed” (graduation rate is higher for women) or that “men succeed” (incomes are higher for men). Results support the prediction of dynamic construction of identity content—boys randomly assigned to the men succeed, and girls randomly assigned to the women succeed conditions subsequently described more school-focused possible identities. They rated their likely future academic and occupational success higher.

2.3.2 | Dynamic Construction of Identity Certainty

Nurra and Oyserman (2015) documented the dynamic construction of identity certainty by randomly assigning fourth,

fifth, sixth, and twelfth graders to read subtly different instructions for imagining their adult future selves. Higher certainty instructions described the adult future self as either near or the same person as the current self. Lower certainty instructions described the adult future self as either far or as a different person than the current self. Of course, both are truthful descriptions, differing only in their emphasis on aspects of a complex reality. These subtle instruction differences mattered. Compared to those randomly assigned to the lower identity certainty conditions, students in the higher identity certainty conditions saw themselves differently. They reported a more vivid image of their adult selves and more overlap between their adult and current selves. They also engaged more with subsequent school tasks—a demanding math task, a boring attention task, or the next-quarter grade point average.

2.3.3 | Dynamic Construction of Identity Relevance

Oyserman, Destin, and Novin (2017b) defined identity relevance and identity irrelevance as possible identities whose valence fits or misfits that of the context. Examples of identity relevance are a desired identity in a context in which success is likely and an undesired one in a context in which failure is likely. Examples of identity irrelevance are a desired identity in a failure-likely context and an undesired identity in a success-likely context. They documented the dynamic construction of identity relevance by randomly assigning first-year college students to read subtly different instructions to imagine their possible identities in college and measuring action consequences. Instructions described college as “the first step in a progression toward continued academic success...” or the beginning of “declining trends...” and then either asked students to describe their desired or undesired possible identities during the college years. Compared to students randomly assigned to the irrelevance

conditions, students in the relevance conditions engaged more with schoolwork. They planned to act sooner, and they endorsed difficulty-as-importance more.

2.4 | When Thinking Feels Hard: Procedural Readiness and Its Consequences for Identity and Action

I focus here on inferences drawn from metacognitive experience (termed procedural-readiness in Figure 1). IBM predicts that culture, situation, and person can affect how much people endorse difficulty-as-improvement and difficulty-as-impossibility. As shown in Figure 1, IBM predicts a bidirectional process—the procedural lens applied shapes identities and actions. At the same time, accessible identities and actions shape the accessible procedural lens. This aspect of IBM builds on social cognitive research documenting that people use what is on their minds and feels relevant in forming judgments, automatically including the content of their thoughts and the inferences they draw from how easy or difficult thinking feels (Schwarz 2012, 2013). IBM highlights the informational value of difficulty as an underappreciated yet critical input into self-regulation and goal pursuit. When thinking feels hard, people may carry the inferences they draw about what that means to make sense of themselves and as inputs into action. Though they may become aware of the inferences they make and draw on an organized cognitive structure or mindset about difficulty, awareness is not a necessary feature of this aspect of IBM. Hence, IBM predicts that relevant or irrelevant features of the situation can trigger which inference people draw and that cultures may shape which inference is chronically accessible, whether or not it is explicitly endorsed. As detailed next, IBM considers tasks and goals as one source and life circumstances as another source of metacognitive experiences of difficulty.

2.4.1 | When Potentially Self-Relevant Tasks and Goals Are Hard to Think About

IBM predicts, and evidence shows, that when a potentially self-relevant task or goal feels hard to think about, people can infer that difficulty signals something about value and that it signals something about odds (Fisher and Oyserman 2017; Oyserman 2007, 2009). Within IBM, the former is termed difficulty-as-importance and the latter difficulty-as-impossibility. IBM predicts that which procedural lens is accessible matters—when they apply a difficulty-as-importance lens, people attend to difficulty as a signal of value and to the possible losses incurred in giving up (e.g., investment costs “no pain, no gain”). When they apply a difficulty-as-impossibility lens, they attend to difficulty as a signal of odds and possible losses incurred in not shifting to something else (e.g., opportunity costs “don’t waste your time”; “cut your losses”). It also predicts that these procedural lenses are distinct. When focusing on the odds, people do not necessarily focus on value. When focused on value, they are not necessarily thinking about odds.

We tested these predictions with school children, college students, and adults across cultures using three distinct methods:

biased recall, autobiographical recall, and measurement. I refer to difficulty-as-importance and difficulty-as-impossibility lenses when describing the effects of experimentally induced accessibility and difficulty-as-importance and difficulty-as-impossibility mindset scores when describing associations in measurement studies.

We tested the predicted effect of accessible lenses on identity and action in three ways. First, we used biased recall in studies with undergraduates (Aelenei, Lewis Jr, and Oyserman 2017) and middle school students (Elmore et al. 2016; Oyserman et al. 2018). We made one or the other lens accessible by randomly assigning participants to read and rate four statements reflecting difficulty-as-impossibility (e.g., “If a task feels difficult, my gut says that it may be impossible for me”) or difficulty-as-importance (e.g., “If a task feels difficult, my gut says that it really matters for me”). Compared to difficulty-as-impossibility-accessible condition participants, difficulty-as-importance-accessible undergraduates reported more certainty and efficacy about attaining their school-focused possible identities (Aelenei, Lewis Jr, and Oyserman 2017). We found the same pattern of effects on action. After reading statements reflecting difficulty-as-importance rather than difficulty-as-impossibility, eighth-graders scored better on a standardized test (Elmore et al. 2016; Oyserman et al. 2018) and found it less difficult (Oyserman et al. 2018).

Second, we used autobiographical recall. In studies with undergraduates (Choi and Oyserman 2024; Smith and Oyserman 2015) and non-student adults (Choi and Oyserman 2024), participants recalled a time when a task or goal felt hard to think about. We randomly assigned half to recall a time they inferred that it was important to them (difficulty-as-importance) and the other half to recall a time they inferred that it was impossible for them (difficulty-as-impossibility). Compared to those randomly assigned to the difficulty-as-impossibility recall, those randomly assigned to the difficulty-as-importance recall group rated academics as more central to their identities (Smith and Oyserman 2015). They believed they could find or make the time needed to work on their topmost self-goals and drew longer line segments when asked to draw a line to represent how much time they had until the end of the semester or year (Choi and Oyserman 2024). They performed better at academic tasks (Choi and Oyserman 2024; Smith and Oyserman 2015). In contrast, those randomly assigned to the difficulty-as-impossibility recall group believed they would not have the time because time is fixed and limited (Choi and Oyserman 2024). Beliefs about time partially mediated the effects of difficulty mindset accessibility on performance (Choi and Oyserman 2024).

Third, we created situations in which a metacognitive experience of difficulty would likely carry over from one task to another to show the robustness of this effect (Oyserman, Fryberg, and Yoder 2007). We asked American Indian, Hispanic, and African American Stanford University undergraduates how much healthy behaviors were more common in their in group and among White middle-class Americans. They rated healthy behaviors as more common among Whites, an inference our White Stanford undergraduates did not make. We leveraged this lack of certainty that healthy behaviors are “us” things to do and identity-congruent in follow-up studies in which we randomly

assigned American Indian adults to a thinking-feels-difficult or thinking-feels-easy condition. We did this by having participants think of many ways their group is similar to white middle-class Americans, a difficult task, or of only a few ways, an easy task. We determined the number of examples requested in the “many” and “few” conditions by adding or subtracting one standard deviation from the average number of similarities generated in a pilot listing task with a separate group of American Indian participants. As predicted, people carried the feeling of difficulty from the listing task to their subsequent judgments. Compared to those in the thinking-feels-easy condition, participants in the thinking-feels-difficult condition were not as certain that healthy behavior was self-defining, less likely to believe in the effectiveness of health-promoting actions, and more fatalistic about their health.

2.4.2 | Culture-Based Differences

Having documented that we could make an inference accessible, we asked which is more accessible in the U.S. and the two most populous countries, India and China. IBM predicts that cultures provide people with practice in making associations, whether they explicitly endorse these associations or not. Empirically, we found that difficulty-as-impossibility is more accessible than difficulty-as-importance for Americans, whether assessed with the Implicit Associations Test (IAT) or associations to definitions and synonyms of difficulty (O'Donnell et al. 2023). We did not find this bias among participants in India using the same English language materials or in China using Mandarin Chinese materials. Difficulty-as-importance and difficulty-as-impossibility were equally accessible to participants in these countries, implying a culture-based difference in context-driven flexibility in choosing which mindset to apply.

2.4.3 | Between-Person Differences

Lastly, we considered between-person differences in endorsement of difficulty-as-importance and difficulty-as-impossibility mindsets using the statements described in the biased recall experiments. We assessed whether the constructs are distinct as predicted by IBM, how much people agreed or disagreed with each, and their unique associations with identity content. We found that both inferences from difficulty are available and can be reliably measured and, as predicted by IBM, they are not correlated (Choi and Oyserman 2024; Fisher and Oyserman 2017; Kiper, Oyserman, and Yan 2024a; O'Donnell et al. 2023; Yan et al. 2023). On average, people score above the midpoint on difficulty-as-importance, tending to agree that difficulty can imply value for the self. On average, people score below the midpoint on difficulty-as-impossibility, viewing the idea that difficulty can imply low odds or even impossibility with skepticism. The two scores are distinct rather than opposites; people can score high in both or neither, as well as high in one and not the other across studies with college students and adults in the U.S., Australia, Canada, China, India, Iran, and China (O'Donnell et al. 2023; Yan et al. 2023). Studies have not revealed between-culture differences in how much people endorse the difficulty-as-importance scale but have revealed that people from

Western societies are slightly but significantly more likely to endorse difficulty-as-impossibility (Yan et al. 2023).

Each difficulty mindset scale is also distinct from measures of other motivational constructs, including fixed-growth mindset, learning and performance goals (Fisher and Oyserman 2017; Kiper, Oyserman, and Yan 2024a), self-efficacy, locus of control, promotion and prevention focus, grit (Fisher and Oyserman 2017), contamination and redemption mindsets (Haque and Oyserman 2025), optimism, fatalism (Burbidge et al. 2024), conservatism, religiosity, and belief in karma (Yan et al. 2023).

Results of measurement studies support and expand on the results of priming, diary, and chronic accessibility studies. As predicted by IBM, how much people endorsed difficulty-as-impossibility is associated with a preference for taking the less effortful route to goal attainment and seeing time as limited and not to be wasted. Endorsing difficulty-as-impossibility is associated with believing that time is a limited resource; endorsing difficulty-as-importance is associated with believing that time is an expandable, not just a limited one (adults and college students, Choi and Oyserman 2024). Undergraduates scoring higher in difficulty-as-impossibility prefer less effortful means to attain their health, fitness, and academic goals; those scoring higher in difficulty-as-importance are agnostic as to means (Kiper, Oyserman, and Yan 2024a).

2.4.4 | When Life Circumstances Are Hard to Think About

People can choose to pursue or discard, to engage or disengage with some tasks and goals. IBM describes experienced identity congruence and inferences from difficulty as inputs into their choice of action. As detailed in Figure 2, IBM predicts that the inference from difficulty is distinct when the difficulty arises from thinking about aspects of life that feel fixed rather than

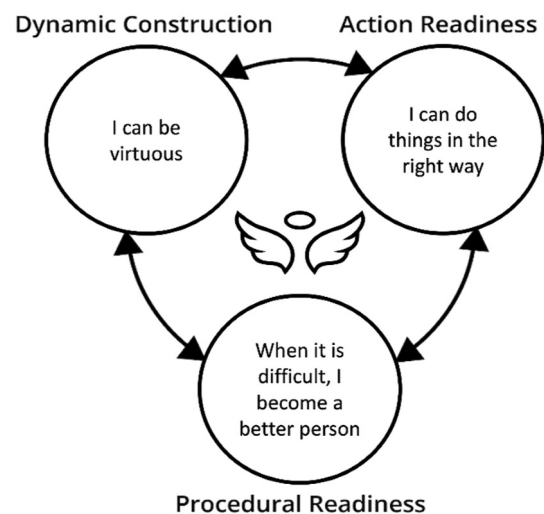


FIGURE 2 | Identity-based motivation: When thinking about life circumstances feels hard, experienced difficulty can carry over to a preference for doing things the right way (action readiness), believing in improvement (procedural readiness), and experiencing the self as potentially virtuous (dynamic construction).

chosen or discardable. Developmental, personality, and cultural psychologists, philosophers, and scholars of religion argue that when thinking about life feels hard, people may draw inferences about the kind of person who experiences such a life (for a review, Yan et al. 2023). IBM builds on this literature to predict that when life feels hard to think about, people may infer that they are experiencing purifying or character-building, “what does not kill us makes us stronger,” and that this may carry over to generally preferring more over less effortful means to attain a goal, as reflected in sayings such as “pain is weakness leaving the body,” and the “the easy way is always mined.” Figure 2 depicts a recursive path from identity to action to inferences when thinking about one’s life feels hard, termed within IBM “difficulty-as-improvement.”

Americans who score higher in difficulty-as-improvement also report more episodes of difficulty-as-improvement experiences, on average reporting having difficulty-as-improvement experiences at least once a semester in a retrospective recall task (Haque and Oyserman 2025). To measure endorsement of the idea, researchers developed a brief 4-item reliable difficulty-as-improvement scale (e.g., “Your journey through life cannot be complete without adversity, hardship, and overcoming suffering,” Kiper et al. 2022; Kiper, Newman, and Oyserman 2024b; Yan et al. 2023). The scale shows measurement invariance across the U.S., Australia, Canada, China, India, Iran, the U.K., and Turkey (Yan et al. 2023). Discriminant validity studies suggest that the difficulty-as-improvement measure is distinct from related motivational constructs including difficulty-as-importance, difficulty-as-impossibility, fixed-growth mindset, learning and performance goals (Kiper, Oyserman, and Yan 2024a; Kiper, Newman, and Oyserman 2024b), self-esteem (Kiper, Newman, and Oyserman 2024b), Protestant Ethic beliefs, contamination and redemption mindsets (Haque and Oyserman 2025), religiosity, conservatism, belief in fate, and karma (Yan et al. 2023). This pattern of correlations suggests that these constructs provide distinct insights. For example, a small, positive correlation with belief in karma, fate, and a just world implies that people can infer that hard times are a just punishment (deservingness or karma) while also endorsing the idea that when thinking about one’s life feels hard, that can signal character (difficulty-as-improvement, Kiper, Oyserman, and Yan 2024a; Kiper et al., 2022; Malekabadi et al. 2024; Yan et al. 2023).

As IBM predicts, societies likely socialize members in a difficulty-as-improvement discourse—on average, people in Western societies slightly agree, and people in non-Western ones agree with the scale items, a small but significant difference (Yan et al. 2023). Just as societal cultures change as contexts change, large language model (LLM) analysis reveals that discourse on improvement follows increased discourse on difficulty in the Corpus of the English Language (Malekabadi et al. 2024). A different LLM analysis of the U.S. Congressional Record corroborates this association (Malekabadi et al. 2024). Representatives from states with historically and currently harsher environments (e.g., infant mortality) are more likely to use difficulty-as-improvement discourse in their speeches in Congress.

At the individual level, while an autobiographical recall measure exists (Haque and Oyserman 2025), difficulty-as-

improvement studies focus on between-person differences and within-person fluctuations, using measurement and diary methods. For example, at the height of the COVID-19 pandemic, Americans scoring higher in difficulty-as-improvement saw more of a silver lining for themselves and their communities in the pandemic-induced suffering controlling for how much they endorsed difficulty-as-importance and difficulty-as-impossibility (Kiper et al. 2022). Difficulty-as-improvement scale scores have a small-sized positive association with self-views—higher scorers rate themselves as conscientious and otherwise virtuous, optimistic in outlook, and having a purpose in life (Yan et al. 2023). These results are robust, controlling for difficulty-as-importance and difficulty-as-impossibility, and consistent across the U.S., Australia, Canada, China, India, Iran, the U.K., and Turkey. Americans tend to agree slightly with the difficulty-as-improvement statements. In each country studied, difficulty-as-improvement scale scores are positively associated with religiosity, a small-sized but significant relationship (Yan et al. 2023). Daily diary studies reveal the same pattern of results (Kiper, Newman, and Oyserman 2024b). On days undergraduates endorse difficulty-as-improvement more, they report more positive self-esteem, higher life satisfaction, and a greater sense that their life is meaningful and coherent. These results are robust to controlling for the positivity or negativity of daily events. Though patterns are not unique to religious people, religious people tend to endorse difficulty-as-improvement more, and on days people engage in religious activities, they also endorse difficulty-as-improvement more.

Crucially, IBM predicts that people who score higher in difficulty-as-improvement will carry over their belief that when their lives feel hard to think about, they may be in the process of character development to a preference for more effortful means of goal attainment and disdain less effortful means of doing so. Kiper, Oyserman, and Yan (2024) tested this prediction among students. As predicted, controlling for how much they endorsed difficulty-as-importance or difficulty-as-impossibility, students who scored higher on the difficulty-as-improvement scale preferred the effortful way and disdained the less effortful way of attaining their school, fitness, and health possible identities (Kiper, Oyserman, and Yan 2024a). Across three studies, they showed undergraduate images of means to work toward their health, fitness, and academic possible selves and asked them to rate each means on how hard it would be, how effective it would be, and how likely they would be to use it. Undergraduates who scored higher in difficulty-as-improvement preferred more effortful means and believed they would be more likely to be effective. They disdained easy means, saying they were unlikely to use them and that these methods were unlikely to be effective. These effects are robust to controlling for people’s scores on difficulty-as-importance and difficulty-as-impossibility.

Kiper, Newman, and Oyserman (2024b) followed up with a series of daily diary studies to address the question of within-person variability. Individual-level and between-person effects are consistent. On days undergraduates endorsed difficulty-as-improvement more, they engaged more effortfully and experienced more daily successes.

2.4.5 | IBM and Readiness to Act in Identity Congruent Ways: Action-Readiness

As depicted in Figures 1 and 2, IBM predicts that people prefer to act in ways that fit how they experience themselves and what they infer from difficulty thinking, and this relationship is bidirectional—at least to some extent. If people see others like them acting in a particular way, they are more likely to infer that these actions are identity-congruent—fit who they are. One way to test this prediction is to intervene to change act and measure consequences for identity and inferences from difficulty. We tried this approach, operationalizing the components of IBM into a set of activities, delivered to Detroit eighth graders in six weekly after school-school chunks (Oyserman, Terry, and Bybee 2002) or eleven bi-weekly chunks during the school day (Oyserman, Bybee, and Terry 2006). For our in-school test, we randomly assigned eighth graders attending Detroit Public Schools to a school-as-usual condition or our IBM intervention. Controlling for seventh-grade records, students in the intervention group attained higher test scores and grades at the end of eighth grade and results carry over to high school. We also measured identity, defined as the extent to which students focused on school when asked to describe their expected and to-be-avoided possible identities and their certainty of making progress, defined as having multiple, concrete strategies. The intervention affected action—time spent studying, in-class engagement, attendance, and course grades in part by affecting identity content and certainty. We replicated these results with eighth-graders attending Chicago Public Schools (Horowitz et al. 2018; Oyserman et al. 2021). Students in classrooms that received the intervention with more fidelity showed significantly more change in their possible identities and endorsement of difficulty-as-importance and difficulty-as-impossibility. These changes resulted in higher grades and less risk of school failure, controlling for their sixth- and seventh-grade records. Effects are robust, remaining in the 9th grade (Oyserman et al., 2025). Our lab is completing another randomized trial in rural schools; preliminary analyses reveal that students in schools randomly assigned to the intervention attain better academic outcomes. Together, results suggest that students exposed to IBM activities changed to engage more and more flexibly with schoolwork.

3 | Summary and Conclusions

Identity-based motivation theory is a social cognitive theory of self, self-regulation, and goal pursuit. It integrates social cognition methods and evidence with the broad and heterogeneous literature on self, self-concept, and identity (Oyserman, Elmore, and Smith 2012; Oyserman and Horowitz 2023). In doing so, IBM highlights the contingent nature of identity certainty and inferences from difficulty as underappreciated aspects of how and when identities motivate. The core assumptions are three-fold: People seek information about who they are and can become from their past and current experiences. They are sensitive to how hard or easy thinking about the self feels but are not necessarily aware of the inferences they draw. These inferences matter for how people view themselves and what they do.

As summarized in this paper, evidence suggests that the inferences people draw from their metacognitive experiences of difficulty matter. When thinking about tasks and goals or life feels hard, people may infer something about themselves. These inferences shape how they see themselves, what they do, and how they do it. When difficulty-as-impossibility is on the mind, people experience time as limited, believe they don't have time to make progress on their important self-goals, prefer less effortful means of attaining their health, fitness, and academic goals, find tasks harder, and perform worse on them. In contrast, when difficulty-as-importance is on the mind, people experience time as expandable, believe they have or can find the time to make progress on their important self-goals, are agnostic as to whether to use easier or harder means to pursue their goals and perform better on tasks. People who endorse difficulty-as-improvement see themselves as good people (virtuous, conscientious), find meaning and purpose in life, prefer the more effortful way to do things, and disdain the less effortful way. Difficulty-as-improvement is associated with living in and experiencing harsh environments but is not a measure of suffering but rather of inferences people draw when thinking about their lives feels difficult.

The inference people draw is a function of their immediate situation and inference accessibility given individual and culture-based differences. IBM does not predict, and the evidence does not find that a particular inference is better. Each can be useful and hence is likely to be available to people whether or not it is chronically on their minds. Difficulty-as-impossibility reminds people not to waste their time (“know when to walk away”) and focuses their attention on opportunity costs. Difficulty-as-importance reminds people not to give up too soon (“no pain, no gain”) and focuses attention on investment costs (Choi and Oyserman 2024; Oyserman 2007; Oyserman and Dawson 2021). Difficulty-as-improvement reminds people about their inner strengths and nudges them toward more effortful means of goal attainment (“What doesn't kill you makes you stronger,” Kiper, Oyserman, and Yan 2024a; Malekabi et al. 2024). Though not tested in the current studies, a preference for effortful means of attaining self-goals can be beneficial in two ways. First, effort might be a heuristic indicator of effectiveness. Second, if doing things the hard way is socially valued, people who prefer effortful means may be more trusted and gain self-regard in this way.

IBM focuses on the inferences people draw when thinking feels hard, in part because these inferences are underappreciated aspects of self-regulation and motivation. Self, self-concept, and identity researchers may fail to notice that inferences from metacognitive experience matter because other theories lack terminology, measures, and priming methods focused on inferences from difficulty. Because people are sensitive to metacognitive experiences of difficulty but not to the source, they may mislabel their experiences if they lack language highlighting inferences from difficulty. For example, when thinking about schoolwork feels hard, students and teachers who lack language about difficulty-as-importance and difficulty-as-impossibility may mislabel their experience as something else. This mislabeling may explain the surprising finding that during demanding test situations, poor performers report feeling bored (Goetz et al. 2023).

Similarly, lacking a difficulty-as-importance and difficulty-as-impossibility frame, when learning feels difficult, students and teachers may infer that a learning technique is not for them. This mislabeling may explain the surprising finding that effective but effortful learning techniques like spacing are often rejected (Wang, Muenks, and Yan 2023). Indeed, if a learning process feels difficult, people assume they have not learned (Baars et al. 2020). They may infer that learning should feel easy, not hard –this may explain the common usage of extra-neous hints, stories, and activities when educators try to “gamify” learning (Oyserman and Dawson 2021).

IBM predicts bidirectional relationships between identity (content, certainty, relevance), inferences from difficulty, and action (as depicted in Figures 1 and 2). People are more likely to apply a difficulty-as-importance lens when thinking about a task or goal feels hard if an identity feels certain rather than probabilistic and relevant rather than irrelevant. The green light in Figure 1 depicts the increased probability of goal-focused action when difficulty-as-importance and identity-relevance are triggered. In contrast, people are more likely to apply a difficulty-as-impossibility lens when it feels hard to think about a task or goal if an on-the-mind identity feels probabilistic and irrelevant to the task at hand. The detour sign in Figure 1 depicts the increased probability of using less effortful means or shifting to something else when difficulty-as-impossibility or identity uncertainty are triggered. When people focus on their possible virtues, the inference they draw from difficulty focuses them on effortful means, the set of angel wings in Figure 2 depicts this. People may fail to act in self-supporting rather than self-undermining ways if they misread difficulty thinking as implying something about the options available in their current contexts.

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Conflicts of Interest

The author declares no conflicts of interest.

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