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► **To cite this version:**

Lauren A. Keating. Revisiting mindsets for careers research: What we know, what we don't and why we should care. *Career Development International*, 2024, 29 (5), 577-592 p. hal-04717611

**HAL Id: hal-04717611**

**<https://hal.science/hal-04717611v1>**

Submitted on 2 Oct 2024

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**Revisiting Mindsets for Careers Research:  
What We Know, What We Don't, and Why We Should Care**

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**Abstract**

**Purpose:** By virtue of affecting how people perceive and respond to challenges, mindsets are conceivably consequential for, though relatively under-studied, in careers research. This paper thereby highlights the importance of bridging the mindsets and careers literatures.

**Approach:** I review literature describing the ontology of mindsets, before reviewing what is currently known about mindsets in the careers domain. This is followed by theorizing about mindset dynamics in pressing career challenges, and providing avenues for future research.

**Findings:** I outline some of the major implications of fixed and growth mindsets as they (potentially) relate to career-relevant cognitions, emotions, and behaviors. I also formulate an agenda for future research with regard to what we study, who we study, and how we, as scholars, can study mindsets in careers.

**Originality/value:** This review enables looking back on the state of mindsets and careers research. The theorizing herein about mindset dynamics in careers also invites scholars to look toward exciting research possibilities about how mindsets can shape careers in ways not yet realized.

**Keywords:** mindsets; lay theories; careers; career challenges; review

## Revisiting Mindsets for Careers Research:

### What We Know, What We Don't, and Why We Should Care

It has long been acknowledged by social psychologists that in order to understand human behavior, it is critical to first understand the lay or implicit theories individuals develop about themselves and the world around them (Kelly, 1955; Piaget 1928/1964). One such theory that people develop are implicit theories regarding the plasticity of human attributes, such as intelligence, personality, and morality. These implicit theories (Dweck, 1986, 1999), more commonly known as *mindsets* (Dweck, 2006, 2017), serve as a mental framework that activates a range of thoughts, feelings, and behaviors that are particularly consequential in challenging contexts (e.g., pursuing difficult goals, navigating setbacks, or mastering new skills). When people hold a *fixed mindset* (previously known as an entity implicit theory) about human attributes, they presume that these attributes are largely static and cannot be cultivated very much. By contrast, a *growth mindset* (previously known as an incremental implicit theory) assumes that attributes are developed through concerted effort and across the lifespan.

The mindsets literature, having emerged almost forty years ago from developmental, educational, and social psychology, is comprised largely of studies exploring the consequences of students' mindsets on their motivation and academic performance (e.g., Blackwell *et al.*, 2007; Paunesku *et al.*, 2015; Yeager *et al.*, 2019), as well as on their interactions with others (e.g. Beer, 2002; Chiu *et al.*, 1997; Yeager *et al.*, 2011). This research has coalesced around the central observation that the more of a growth **than** a fixed mindset that an individual holds, the more adaptive their cognitive, emotional, and behavioral responses will be when faced with a particular challenge. Given the role mindsets play in people's response to challenges, it is of little wonder that mindsets research has boomed in the past two decades in organizational psychology

and management, wherein employees and managers routinely navigate setbacks, difficult goals, and interpersonal dilemmas. Indeed, scholars have highlighted the role of mindsets in enacting performance appraisals (Heslin *et al.*, 2005), employee coaching (Heslin *et al.*, 2006), navigating prejudice and workplace belonging (Rattan and Dweck, 2018), happiness at work (Berg *et al.*, 2023), leader humility (Wang *et al.*, 2018), and work performance (Zingoni and Corey, 2017).

By comparison, fewer studies have explored the role of mindsets in shaping people's career development and success. This is despite the reality that careers often involve a rollercoaster of challenges, shocks, achievements, and change across the course of one's life, wherein mindsets are likely to be consequential. Motivated by this significant opportunity to more fully integrate the mindsets and careers literatures—and the vast research possibilities that doing so could yield—the purpose of the current paper is three-fold: (i) to **illuminate** what we, as mindsets or careers scholars, know from the few mindset studies within the careers domain, (ii) to highlight what we do not yet know about the role of mindsets in some of the most pressing career challenges, and (iii) to call attention to why we should care about the kind of research that brings these two literatures together and how we can do so. Yet before pursuing these aims, and in the interest of construct clarity, I will first briefly describe the nature of mindsets, what stems from them, as well as their different sources.

### **The Nature of Mindsets**

Mindsets are lay implicit theories about the plasticity of personal attributes that influence people's judgments and reactions, particularly in the face of challenges. From the view of a fixed mindset, setbacks or failure are the result of not possessing the requisite inherent attribute, while success reflects and affirms endowed talent. A growth mindset assumes that attributes are malleable and thus amenable to being cultivated over time (Dweck, 1999, 2006). Through the

lens of a growth mindset, setbacks indicate that the requisite attribute is not yet developed, though could be with sufficient effort applied to develop it. Success reflects the effort and energy investment in developing the specific capability. Studies across diverse populations have revealed that mindsets are typically uncorrelated with level of education (Dweck *et al.*, 1995), self-esteem (Niiya *et al.*, 2004), and the Big Five trait dimensions (Chao *et al.*, 2017).

Mindsets are generally presumed to be domain-specific, such that an individual can simultaneously hold a growth mindset about their athletic ability and a fixed mindset about their public speaking ability, with their mindset in a specific domain driving their reaction to the challenges they encounter in that area (Dweck, 2006, 2017). In some situations, however, mindsets can cut across the domains of personality and intelligence. A sample item that measures this domain-general, *kind-of-person* mindset is “People can do things differently, but the important parts of who they are can’t really be changed” (Dweck *et al.*, 1995, p.269). The observation that mindsets can be both general and domain-specific is aligned with other implicit theory research emphasizing their hierarchical structure (e.g., Lord *et al.*, 2002; Lord *et al.*, 2020). Within this structure, people can hold, at an abstract level, a general belief about a particular phenomenon (e.g., generally believing that one cannot really change), and, at a more concrete level, a more nuanced belief (e.g., believing that one cannot change their athletic ability), with both levels of beliefs potentially informing one another. Much mindsets research nonetheless focuses on mindset dynamics in a specific domain.

### **Mindset Manifestations**

Mindsets create psychological worlds that activate allied attributions, goals, effort beliefs, and strategies. A fixed mindset cues a tendency to avoid challenges that could potentially expose an underlying and innate weakness (Dweck and Leggett, 1988), attribute setbacks to ability that

cannot be controlled (Robins and Pals, 2002), characterize effort and persistence to overcome difficulties as likely to be fruitless (Mueller and Dweck, 1998), ignore valuable feedback (Lee *et al.*, 2012), and avoid trying to learn from the success of others (Hoyt *et al.*, 2012). A fixed mindset concern with validating one's abilities, rather than developing them, often prompts individuals to pass up challenging opportunities that could help them attain their objectives (Hong *et al.*, 1999). In the interpersonal realm, fixed mindsets prompt anchoring on first impressions (Heslin *et al.*, 2005), more readily endorsing and maintaining stereotypes (Levy *et al.*, 1998), as well as paying more attention to information that confirms rather than contradicts them (Plaks *et al.*, 2001).

A growth mindset concern with cultivating presumably malleable personal attributes prompts people to construe setbacks as a signal that they need to exert more effort, deploy better strategies, or further develop the capabilities required to successfully complete the task at hand. This focus on learning typically leads them to pursue more difficult goals, embrace challenges, seek and learn from negative feedback (Burnette *et al.*, 2013; Zingoni and Byron, 2017), be inspired by others (Hoyt *et al.*, 2012), as well as strive to learn from them (Nussbaum and Dweck, 2008). It is important to note that growth mindsets do not lead people to view setbacks as any less disheartening than when people hold fixed mindsets. Growth mindsets, however, can buffer against losing the motivation to re-attempt goal attainment. With regard to interpersonal dynamics, growth mindsets also tend to lead to more functional outcomes, such as engaging in more and better quality employee coaching (Heslin *et al.*, 2006), more positive subsequent expectations of a coworker who previously exhibited prejudice (Rattan and Dweck, 2018), and more generally believing that people can reform poor behavior (Erdley and Dweck, 1993).

### **Sources of Mindsets**

Although naturally occurring chronic mindsets can be relatively stable (Robins and Pals, 2002), Dweck *et al.* (1995) described mindsets as malleable personal qualities, rather than as fixed traits, which can be cultivated by persuasive messages. Fixed and growth mindsets are respectively fostered by emphasizing the diagnosticity versus developmental opportunity provided by a given task (Wood and Bandura, 1989), reading scientific testimonials that endorse a fixed or growth mindset (Chiu *et al.*, 1997; Kray and Haselhuhn, 2007), as well as self-persuasion based interventions (Aronson *et al.*, 2002; Heslin *et al.*, 2005). Mindsets can also be induced by working in an environment that endorses either a largely fixed or malleable view of ability. In a *culture of genius*, people share the belief that talent and intelligence are fixed attributes that are prime drivers of performance capabilities (Murphy and Dweck, 2010). On the other hand, *cultures of growth* are marked by collective endorsement of the belief that talent and intelligence can be cultivated.

Within homes and classrooms, fixed mindsets are cued when successful performances are attributed to the traits of being “smart” or “brilliant,” rather than to having worked hard (Mueller and Dweck, 1998). Employees are also likely to hold fixed mindsets when they routinely receive praise from managers that focuses on who they are, rather than what they did to achieve high performance. As people often strive to live up to the labels assigned to them (McNatt, 2000), an employee labeled as “brilliant” may subsequently shun challenging tasks in which their identity and reputation for being gifted could be jeopardized. Growth mindsets are instead cued when successful performances are attributed to working hard, and people are praised for their effort and initiative (Mueller and Dweck, 1998). People are subsequently more likely to persist in making considerable investments in knowledge and skill development, even when the payoff for doing so is not readily apparent.

## **What We Know: Mindsets in Careers Research**

Careers are often characterized by years of study or training, obstacles and shocks, job changes, doubt, taking risks, forging relationships, and, for some, lifelong learning. Although mindsets likely play a critical role in how people navigate the various challenges they encounter along this journey, there are relatively fewer studies that directly examine mindset dynamics as they relate to career issues, compared to the plethora of studies on mindsets in education, or in organization and management. Nevertheless, this stream of research reveals numerous important insights regarding how mindsets can affect people's careers, particularly with regard to how they view and foster their career success, how they navigate entrepreneurial endeavors, and whether they are inclined to pursue studies and careers in STEM.

### **Mindsets and Career Success**

Career success involves “the real or perceived achievements individuals have accumulated as a result of their work experiences” (Judge *et al.*, 1999, p.621) and is typically operationalized as either objective or subjective career success. Objective career success comprises tangible outcomes, such as salary and promotions, which others can observe or verify. Subjective career success is instead only experienced by the individual, typically measured by their level of job or career satisfaction. Although traditional measures of subjective career success evaluations implicitly presume that individuals only evaluate their success against their own personal goals and standards (i.e., self-referent criteria; see Greenhaus *et al.*, 1990; Peluchette and Jeanquart, 2000), Heslin (2003) demonstrated that people also evaluate their career success by comparing their successes to the achievements of others (i.e., other-referent criteria, such as comparing oneself to parents, peers, or colleagues). In one of the first studies exploring mindset dynamics with working-age adults, Heslin (2003) also observed that people's mindsets are associated with



drawing on self- or other-referent criteria in making such assessments, such that those with a fixed mindset relied more on other-referent criteria when judging their career success, compared to those with a growth mindset who tended to draw on self-referent criteria. Given that consistently comparing oneself to others can prompt more destructive affect (White *et al.*, 2006), a fixed mindset concern with what others have achieved could conceivably erode an individual's sense of subjective success over time, irrespective of the accomplishments they attain.

A prominent stream of careers research involves examining the role that personality plays in shaping people's career success, with studies revealing that traits including conscientiousness, extraversion, and emotional stability are particularly important for influencing such outcomes (e.g., Barrick *et al.*, 2013; Ng *et al.*, 2005). However, what this largely between-person research implies is that those who do not possess high levels of these traits may be doomed to experience less of the objective and subjective career success of their counterparts who do. In this context, growth relative to fixed mindsets have been theorized to be a compensatory mechanism for when individuals do not necessarily have high levels of a particular trait, though are faced with a situation that calls on them to express it (Heslin *et al.*, 2019). For instance, when those who are more introverted face the challenge of networking, a growth mindset could compensate for their low extraversion by leading them to perceive the call to network as a challenge to develop themselves rather than as a daunting task. Such cognitions are likely to prompt a trickle-down effect on more functional affect (e.g., feeling enthusiastic versus threatened) and behavior (e.g., speaking to versus avoiding new people), which could result in more positive career outcomes, such as developing important relationships that can support one's career.

### **Mindsets and Entrepreneurship**

As highlighted by Heslin (2003) and colleagues (Heslin *et al.*, 2019), mindsets have a role to play in guiding the perceptions people have regarding their own career success, as well as their perceptions of career challenges as opportunities or threats, which could respectively help or hurt their related affect, behavior, and career outcomes. Research has also revealed that mindsets are influential in shaping how individuals approach entrepreneurial endeavors. In a study exploring the effect of mindsets on students' entrepreneurial self-efficacy and career development, Burnette and colleagues (2020) randomly assigned undergraduate students in an introduction to entrepreneurship class to an online growth mindset intervention, wherein students learned about the changeable nature of entrepreneurial ability, engaged with research on growth mindsets, and received advice about how to foster a growth mindset. As a final component of the intervention, students wrote to a pen-pal interested in though also struggling with entrepreneurship to explain what they had learned about mindsets in their own words. Compared to those in the control condition, students exposed to the growth mindset intervention indicated greater entrepreneurial self-efficacy and task persistence on their entrepreneurship class project. Moreover, this enhanced entrepreneurial self-efficacy predicted students' academic and career interest in entrepreneurship-related activities, such as acquiring or owning a small business in the future.

As well as having high self-efficacy for enabling entrepreneurship, individuals must also proactively engage in entrepreneurial activities in a timely manner in order to take advantage of potentially daunting though worthwhile opportunities. Over a 16-month period, Li *et al.* (2023) observed that holding more of a growth than a fixed mindset was positively related not only to engaging in various entrepreneurial activities (e.g., developing business ideas, managing operations, seeking funding, hiring employees, testing a product or service), but also to engaging

in them sooner. In addition, this positive dynamic between growth mindsets, entrepreneurial action, and timing was amplified in the context of the COVID-19 pandemic. The pronounced positive effect of growth mindsets during a tumultuous time is in line with extant mindsets theory and research (Dweck, 2006, 2017) that underscores that—because mindsets are important for shaping perceptions of and reactions to difficulties—mindsets are much more impactful in truly challenging contexts.

### **Mindsets and Interest in STEM**

So far, I have outlined how an individual's mindset can affect their perceptions related to their career success, view of career-related challenges, as well as their entrepreneurial self-efficacy and action. However, people's thoughts, feelings, and behaviors can also be affected by mindset-related messages that they are exposed to in their environment, such that the mindset that *others* hold or convey can similarly impact their own career motivations. This is particularly evident from the burgeoning stream of research exploring the impact of mindset messaging on people's STEM-related study and career choices (i.e., within the fields of science, technology, engineering, and mathematics).

Research has revealed that the mindset that STEM faculty communicate to students can impact students' beliefs about the kinds of goals they will be able to fulfil through STEM career roles, that in turn, predict students' motivation to pursue STEM pathways (Fuesting *et al.*, 2019). Specifically, when STEM faculty convey the growth-oriented message regarding the potential for growth in STEM (versus the fixed-oriented emphasis on students' fixed abilities), they also communicate the opportunity for students to pursue communal (e.g., helping others) and agentic (e.g., personal accomplishment) goals, in contrast to STEM faculty who endorse a fixed mindset who communicate fewer opportunities overall. By virtue of emphasizing the variety of

opportunities for students to grow and succeed, the growth-oriented messaging of STEM faculty indirectly enhances students' drive to go after STEM-related classes and careers.

The mindset of STEM faculty is also consequential for women interested in pursuing opportunities in these fields. Canning and colleagues (2022) observed that when a professor believes that intelligence is fixed, both women and men perceived that their professor endorses more gender stereotypes and reported feeling less belonging in the course. As harmful as these perceptions and feelings can be for any student in STEM, this effect of professors' fixed mindsets was more pronounced for women and resulted in women's (but not men's) grades suffering in the course. This is particularly problematic given the existing gender disparities in academic enrolment in STEM-related programs (e.g., Ortiz-Martínez *et al.*, 2023; Tandrayen-Ragoobur and Gokulsing, 2021), which fixed-oriented faculty arguably exacerbate with messaging that only "certain people" with "certain abilities" can fruitfully pursue. Importantly, then, Canning *et al.* (2022) and Fuesting *et al.* (2019) call attention to the potential power of others' mindsets in boosting or derailing the career aspirations of those exposed to them.

### **What We Don't Know: The Potential Role of Mindsets in Career Challenges**

At this juncture, it is hopefully clear how mindsets can affect decisions about pursuing particular studies and career roles, approaching entrepreneurial challenges, as well as shaping perceptions of and behaviors facilitating (or undermining) career success. Yet in what other career contexts beyond those noted above could mindset dynamics be consequential? What other career challenges call for individuals to be adaptable, proactive, or "shift gears" into unexpected territory, wherein mindsets give rise to critical thoughts and reactions? Although answers to these questions could prompt an exhaustive list of possibilities, below I focus on three pressing

career challenges that most individuals will confront (to various extents), and theorize about the role that mindsets could play in how people react to them.

### **Mindsets and Digital Transformations**

Over the past several years, scholars have highlighted how digital transformations have shifted the way people work, as well as how such transformations have (and will likely continue to) shape their career trajectories (e.g., Goulart *et al.*, 2021; Hirschi, 2018). As a recent example, generative artificial intelligence has proliferated across a range of industries (Chui *et al.*, 2023), including education, healthcare, media, fashion, consulting, and banking, calling for scholars, practitioners, and career actors alike to seriously contemplate the place that such technology should and could have in one's daily life. Such transformations, irrespective of debates regarding their advantages or pitfalls, seem inevitable, with those reluctant to embrace them potentially risking their careers. But the extent to which people embrace these changes or feel daunted by them could be affected, at least in part, by their mindset regarding their capacity to leverage such technology. For instance, growth relative to fixed mindsets are associated with pursuing more difficult goals and tasks (Kray and Haselhuhn, 2007), as well as with more methodically experimenting with strategies versus haphazardly doing so (Wood and Bandura, 1989). Such growth-oriented tendencies are likely to be instrumental as individuals upskill for, experiment with, and adapt to various digital transformations.

Beyond mindsets affecting whether people approach such challenges along their career journey, could mindsets play an even larger role in what people expect from their career, in ways that make them more or less receptive to such transformations? For example, can people hold fixed mindsets about their career identity, such that they have more rigid views about how their career ought to unfold, or the kinds of opportunities that “a person like them” would or would

not pursue? In other words, might fixed-oriented tendencies to potentially avoid digital transformations or reluctantly embrace them stem from a more general, entrenched view about the career path one thought they would forge? In the same vein, a willingness to embrace digital transformations could manifest from a broader growth mindset about one's career identity as fluid and flexible, leading to greater receptiveness of the transformations, digital or otherwise, that take one's career path down an unexpected though potentially worthwhile turn.

### **Mindsets and Ageing**

The ageing of the world's population is one of the most significant global transformations of the twenty-first century (United Nations, Department of Economics and Social Affairs, 2020), motivating changes in government policies (e.g., increasing retirement ages) and organizational practice (e.g., recruiting and retaining older workforces). Despite an imperative to hire and develop older workers, managers' fixed mindsets about older employees could prompt them to anchor on stereotypes about their presumably limited competence (cf. Plaks *et al.*, 2001). Doing so could thereby negatively impact older employees' careers by virtue of having fewer opportunities for growth made available to them. But beyond this possibility, older employees could also form *meta-mindsets* (also known as meta-lay theories) about the mindsets that others hold about them (cf. Rattan *et al.*, 2018), such that they may believe that their manager or peers hold a fixed mindset about their capabilities, even if this is not necessarily true. This fixed meta-mindset could be consequential insofar as it might result in a Golem effect, whereby an older employee internalizes the fixed-oriented beliefs they presume others hold about them and thereby engages in more limiting behavior, such as being reluctant to pursue difficult learning goals or procrastinating. Although this dynamic has been theorized (Keating and Heslin, 2022),

research is yet to investigate the career implications of fixed and growth meta-mindsets that people presume others hold about them.

Having to work longer could be psychologically and physically draining, but it may also be, for some, an opportunity to instigate career shifts. While there is considerable research on job hopping throughout a person's career (e.g., Huang and Zhang, 2016; Lake *et al.*, 2018), relatively less is known about the factors that prompt or help people as they seek to make such changes later in life. As suggested above, a fixed-oriented belief about who one fundamentally *is* and what one's career *should* look like might make it less likely that an individual will consider a career shift or "second career" that looks different to what they had anticipated for themselves. If, however, they do entertain the possibility, an individual's fixed mindset may nonetheless daunt them from taking steps to concretely pursue it. By contrast, a growth-oriented view about the malleability of one's identity or capabilities could prompt more serious considerations of alternative career paths **later in life**, as well as enacting the steps needed to bring this into being (e.g., researching, retraining, or networking).

### **Mindsets and the Overwhelm of Productivity**

In the midst of technological change, cost of living hikes, and economic instability, productivity culture—or the need to be productive at all times, usually at all costs—has similarly surged. Indeed, popular press reveals how workers around the world feel over-worked, burned out, though also not necessarily inching closer toward their goals (e.g., Grant, 2019; Newport, 2021). This extreme emphasis on productivity and its implications for careers is not yet well understood, but is likely consequential in numerous ways. For instance, does striving for productivity have paradoxical effects, such that doing so positively and negatively affects one's objective (e.g., creating more wealth and opportunities) and subjective (e.g., feeling down about

not ever doing enough) career success, respectively? Moreover, who is more likely to yield to this pressure to always be productive?

Up until this point, this paper has painted the picture that growth mindsets routinely lead to more functional outcomes, relative to fixed mindsets. This is because the extant mindsets literature is almost entirely made up of research that provides evidence for this very point (cf. Dweck, 2006, 2017). There are, however, a handful of studies that demonstrate that growth mindsets can have negative consequences, such as increased anxiety when performance does not improve as expected (Plaks and Stecher, 2007), and increased rumination when one is not given the opportunity to improve their performance (Park and Kim, 2015). Pertinent to the point of striving for productivity at whatever cost, is evidence that growth compared to fixed mindsets are also associated with escalating commitment despite feedback to revise or abandon a goal (Lee *et al.*, 2021). This is likely because of the growth-oriented tendency to believe that virtually any ability or attribute can be developed, and that most (if not all) situations can be turned around. Although this tenacity can be helpful across various challenging contexts, could a (strong) growth mindset lead to attempts to seize any opportunity possible, to over-work, and to prioritize too many goals, in the name of productivity and thus a stellar career? As a potential consequence, a growth mindset might then undermine subjective career success or career sustainability, by virtue of not feeling as though one has done enough, or not sufficiently recovering from their career pursuits. Over the long-term, perhaps a growth mindset also undermines objective career success, as the psychological and physical toll of pushing oneself limits the capacity for pursuing future opportunities. Against the backdrop of productivity culture, the potential effects of mindsets to help or hurt people in their quest to *do it all* warrants further investigation.



## **Why We Should Care: Opportunities for Mindsets and Careers Research**

Careers seldom unfold without setbacks or frustrations. They can also take (sometimes unexpected) turns depending on whether we, as career actors, shirk or embrace challenging opportunities. Although a simple belief about the plasticity of human attributes, mindsets nonetheless have great potential for shaping people's careers, by virtue of influencing how they perceive and respond to the setbacks and challenges they encounter along the way. Mindsets and careers research is thus much needed and important—not only for replicating and building on what we already know about mindset dynamics in careers—but for unearthing how these beliefs can propel us forward or hold us back in ways we have not yet imagined.

### ***What Could We Study?***

The mindsets and careers studies highlighted in the present paper focus on the role of mindsets in career success (Heslin, 2003; Heslin *et al.*, 2019), entrepreneurial endeavors (Burnette *et al.*, 2020; Li *et al.*, 2023), as well as in pursuing studies and careers in STEM (Canning *et al.*, 2022; Fuesting *et al.*, 2019). To understand the extent to which the insights gleaned from these studies generalize across different career contexts and samples, research that replicates and extends these studies is needed. Other potential mindset dynamics in how people approach the challenges associated with digital transformations, as well as with ageing, are also fruitful avenues for future research. Indeed, are growth relative to fixed mindsets respectively associated with embracing such transformations or opportunities to shift one's career later in life? Moreover, when might fixed mindsets lead to more functional career outcomes? Earlier I theorized that fixed compared to growth mindsets may be associated with feeling less compelled to be productive and opportunistic at whatever cost, potentially limiting the psychological or physical toll that doing so could yield. Given the few studies in the mindsets literature that

investigate the upsides of a fixed mindset or the downsides of a growth mindset, there is considerable scope for future careers research to reveal fresh insights in this regard.

In addition to these possibilities, research could explore the role of mindsets in how individuals navigate positive or negative career shocks (e.g., receiving a prestigious award or being laid off from work; see Seibert *et al.*, 2016). While individuals can exert agency and control over their careers, careers are also forged by events or “shocks” that they do not anticipate, have little control over, though nonetheless need to face (Akkermans *et al.*, 2021). Given the pronounced effect of mindsets in the midst of challenges, how might mindsets affect how people react to unpredictable events that are more and more likely in an increasingly complex career landscape? One such challenge might be the need to secure (re)employment, potentially made more difficult amid changing labor markets and technological advancements. Although a growth compared to a fixed mindset has been proposed to lead to more functional job search outcomes (e.g., successful job interviews, speed of gaining employment, quality of employment; Heslin and Keating, 2016), empirical evidence is lacking about whether this is actually the case. Mindsets and careers research might thereby be fruitfully integrated by examining whether mindsets do indeed guide cognitive, emotional, and behavioral self-regulation in ways consequential for job search and employment.

The careers literature is abound with numerous career theories and models, including but not limited to the protean career (Hall and Mirvis, 1996), the Kaleidoscope career model (Mainiero and Sullivan, 2006), and sustainable careers (De Vos and Van der Heijden, 2015). Despite their theoretical differences, what is common across many such theories is the imperative for learning, self-management, and/or adaptability in steering one’s career. These skills and attributes represent an avenue for drawing mindsets into some of the most prominent

career theories, given that mindsets affect people's willingness to learn, self-regulation, and capacity to bounce back (Dweck, 1999, 2006, 2017). As an example, Heslin and colleagues (2020) theorize about the role of mindsets in experiential learning, such that growth relative to fixed mindsets facilitate learning about how to enable career sustainability. In the same vein, how might mindsets function as an impediment or resource within other career theories that similarly call for individuals to upskill, adapt, and manage themselves?

### **Who Could We Study?**

Much of the research that has been presented in this paper, including the research possibilities outlined above, focuses on the (potential) role of one's mindset in their career outcomes. This is because much of what is known about the consequences of mindsets resides at the individual level; that is, the largely functional or dysfunctional cognitions, emotions, and behaviors that people experience or enact as guided by their own mindset (Dweck, 1999, 2006, 2017). Yet research conducted by Canning and colleagues (2022), as well as Fuesting and colleagues (2019), hints at how the mindset of another—such as an educator, parent, leader, coach, or significant other—could ripple out and influence an individual's career-relevant affect and decisions. Indeed, research on the social contagion of mindsets suggests that fixed- and growth-oriented beliefs can be readily “spread” by peers and role models (e.g., Burkley *et al.*, 2017; King, 2019). Taken together, these studies of mindsets at the meso level emphasize the scope for others to (unknowingly) inculcate mindsets around them. Although research on mindsets at the individual level is needed, so too is research on others' mindsets in influencing one's career, particularly given the reality that careers are often shaped by the input, advice, and approval of other people (Bosley *et al.*, 2009).

Despite substantial evidence for the impact of one's mindset on their individual or micro-level outcomes, there are nonetheless numerous opportunities for novel careers research in this area, by way of focusing on important though relatively under-studied populations. For instance, individuals working as part of the gig economy (e.g., as independent contractors or temporary workers) or engaging in pink-collar work (e.g., as a teacher, nurse, carer) face a host of unique challenges related to pay insecurity (e.g., Glynn and Powers, 2012; Wright, 2023) and mental health (e.g., Fattal, 2022; Gaskell, 2020). How, then, might mindsets affect self-regulation (i.e., of thoughts, feelings, or behaviors) in these lines of work in ways that are consequential for one's career? More broadly, what role do mindsets play in people entering, persisting in, or leaving such careers?

### ***How Could We Study Mindsets in Careers?***

As described earlier, mindsets can be relatively stable (i.e., a chronic mindset) though also inculcated via persuasive messaging (i.e., an induced mindset). The mindsets literature is thereby largely comprised of correlational and experimental research that respectively reveal the correlates of fixed and growth mindsets, as well as what flows from them. Indeed, there are far fewer mindset studies that employ qualitative methods (e.g., Erdley and Dweck, 1993; Heyman and Dweck, 1998) and, where they have been used, generally call for children to describe how they would respond to a **hypothetical** scenario. By contrast, careers research has long drawn on qualitative approaches, such as in-depth interviews, (non)participant observation, focus groups, ethnography, and documentary or narrative analyses (cf. Blustein *et al.*, 2005; Richardson *et al.*, 2022). Such approaches have facilitated a deeper understanding of a host of career phenomena that would not necessarily be captured by quantitative methods.

Although there is scope for quantitative mindsets and careers research to offer fresh insights, utilizing qualitative methods to more deeply understand how mindsets affect careers represents a significantly novel line of inquiry, particularly for the mindsets literature. As an example, mindsets about one's ability to adopt new technology could be ascertained by interviewing individuals about their view of anticipated challenges, and whether they perceive their ability to navigate these challenges as blocked by the "kind of person" they are (i.e., indicative of a fixed mindset) or calling for them to develop themselves (i.e., indicative of a growth mindset; see Keating, 2016, as an example of how to qualitatively gauge mindsets). Such interviews could probe individuals further by asking them to explain in their own words how digital transformations have or are likely to affect their careers, potentially accompanied by observational methods that investigate how they accommodate these transformations. As another example, research on mindsets and ageing in careers could leverage mixed methods, such as by employing a longitudinal diary study. In this study, people's mindsets could be quantitatively measured at various time points (e.g., to ascertain their **relative** stability), while their career experiences are simultaneously and qualitatively captured, enabling potential relationships between mindsets and career shifts or stasis to be observed over time.

Overall, the avenues for future mindsets and careers research described here—in terms of what, who, and how scholars study them—could be novel next steps for integrating the mindsets and careers literatures, though also hopefully motivate further ideas for doing so.

### **Conclusion**

As a simple belief about the fixedness or plasticity of human attributes, mindsets are just one piece of the puzzle that could help explain people's cognitions, emotions, and behaviors as they relate to their career. However, as relevant as mindsets are to career challenges and

endeavors, it is a puzzle piece that has largely been missing from careers research. With a view to highlighting how the mindsets and careers literatures can be integrated, I have outlined in this paper what we know from the few studies of mindsets in careers, how mindsets could be important for understanding people's responses to pressing career challenges, as well as the research possibilities that could flow from bridging the mindsets and careers literatures. Indeed, such research opportunities are boundless and exciting. It is my hope that this review and the ideas offered herein provide encouragement, and potentially, inspiration for scholars to more routinely draw mindsets into the realm of careers.

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