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Learning Agility: In Search of Conceptual Clarity and Theoretical Grounding

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Abstract

As organizations become more complex and dynamic, individuals' ability to learn from experience becomes more important. Recently, the concept of learning agility has attracted considerable attention from human resource professionals and consultants interested in selecting on and developing employees' ability to learn from experience. However, the academic community has been largely absent from this discussion of learning agility, and the concept remains ill defined and poorly measured. This article presents a constructive critique of the existing literature on learning agility, seeks to clarify the definition and conceptualization of the construct, and situates learning agility within a broader nomological network of related constructs. We conclude by discussing several important directions for future research on learning agility.

Experience can be a masterful teacher. Even ancient scholars such as Aristotle noted how virtue, morality, and courage are learned through habit and practice (Ostwald, 1962). Education theories portray young children and adults as active learners who develop through lived experience (Dewey, 1916; Lewin, 1951; Piaget, 1952). In organizational studies, the lessons of experience are emphasized in domains such as employee training (Noe, 2002), leadership development (McCall, Lombardo, & Morrison, 1988), team learning and adaptation (Edmondson, Bohmer, & Pisano, 2001), and organizational learning (March, 1991). Certainly, the lessons of experience are a central component of individual, group, and organization learning, growth, and development. Yet, experience is a funny thing. In any given experience, some people learn valuable lessons. Other people, in that same experience, learn nothing or even the wrong lessons. It is the ability to learn from experience that enables some people but not others to excel in contemporary organizations where change and dynamism are the new normal and learning is an emerging source of competitive advantage (Garvin, Edmondson, & Gino, 2008; Spreitzer, McCall, & Mahoney, 1997).

The ability to learn from experience reflects a person's ability to master the changing demands of his or her job (Kolb, 1976) and involves a broad array of individual differences and characteristics (Spreitzer et al., 1997; Van Velsor, Moxley, & Bunker, 2004). In particular, an individual's ability to learn comprises a diverse set of attributes and competencies, including but not limited to individuals' intelligence (Hunter, 1986; Hunter & Schmidt, 1996), personality attributes such as Openness to Experience (LePine, Colquitt, & Erez, 2000), motivation to learn and seek out developmental opportunities (Birdi, Allan, & Warr, 1997; Colquitt &

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Simmering, 1998; Spreitzer et al., 1997), the recognition of when new skills or behaviors are required (Van Velsor et al., 2004), and resilience in the face of adversity or unexpected events (Weick & Sutcliffe, 2007). In this sense, ''ability to learn'' is a metaconcept reflecting a constellation of individual characteristics and attributes that enable people to develop or refine their job-related knowledge and skills in response to changing job demands and in service of improving their performance over time.

Seeking to extend our understanding of individuals' ability to learn from experience, scholars and practitioners recently introduced a concept called learning agility, which to date has referred to a person's ability and willingness to learn from experience and apply the lessons of experience to improve future performance (De Meuse, Guangrong, & Hallenbeck, 2010; Eichinger & Lombardo, 2004; Lombardo & Eichinger, 2000). Although learning agility goes beyond ability by emphasizing the importance of individuals' willingness to learn and ability to implement the lessons of experience, the concept has largely been treated as synonymous with the ability to learn. This conceptual overlap raises two important concerns. First, it is unclear whether learning agility is a unique concept or simply a repackaging of old wine in a new bottle. Existing research on learning agility does not carefully differentiate, either theoretically or empirically, the agility concept from a general ability to learn. As a result, learning agility is becoming a ''catch-all'' phrase referring to most everything related to learning from experience, and to the extent that we allow learning agility to become everything, it becomes nothing. Second, by equating learning agility with a person's general ability to learn, we potentially overlook the value in considering agility as a unique component of the experiential learning process. In this article, we develop a narrower conceptualization of learning agility that is more faithful to the traditional meaning of agility, focusing on the speed with which people learn and the flexibility people exhibit in learning both within and across situations. By refocusing learning agility on speed and flexibility, we address an important theoretical gap in our understanding of the experiential learning process—that is, explaining why some people learn faster and are more flexible in their learning than others. In this sense, learning agility is not equivalent to one's ability to learn but rather is one component of the ability to learn. We expect that narrowing the conceptualization of learning agility will actually enhance the contribution that learning agility can make to our collective understanding of how people learn from experience.

With this in mind, our goals for the current article are threefold. First, we propose a narrower definition of learning agility and develop a conceptual framework for the concept that situates it within the broader domain of research on learning from experience. To accomplish this goal, we begin by reviewing the existing literature on learning agility and offering a constructive critique of prior research. We then leverage the limitations of existing research as a launching point for developing a more precise and narrower definition of learning agility. Second, we clarify the personal attributes that would be associated with learning agility, as well as the cognitive and behavioral processes that serve as manifestations of learning agility and enhance the degree to which people engage in agile learning. Third, we conclude by identifying opportunities for future theory development and empirical research, measure the development related to learning agility, and explain how this research on learning agility could extend our collective understanding of how people learn from experience.

Learning Agility: A Literature Review and Constructive Critique

In Lombardo and Eichinger's (2000) work on identifying high-potential talent in organizations, they posited that managerial roles are becoming more complex, global, and marked by extreme paradox—and as a result, individuals moving into these roles

need to be flexible, adaptable, and able to learn from experience. Accordingly, they argued that executive potential is a function of one's ability to learn from experience, and the selection of leadership talent should account for people's ability to learn and adapt to the demands of new roles not simply performance in a prior role. To capture this ability to learn from experience, Lombardo and Eichinger introduced the concept of learning agility, which they defined as ''the willingness and ability to learn new competencies in order to perform under first-time, tough, or different conditions'' (p. 323).

This seminal article spawned research on the conceptual development and measurement of learning agility. We review here the conceptual insights and return later to questions of measurement precision and validity. Learning agility was conceptualized according to four dimensions (Lombardo & Eichinger, 2000, p. 324):

> *People agility*: ''people who know themselves well, learn from experience, treat others constructively, and are cool and resilient under the pressures of change.''
> *Results agility*: ''people who get results under tough conditions, inspire others to perform beyond normal, and exhibit the sort of presence that builds confidence in others.''
> *Mental agility*: ''people who think through problems from a fresh point of view and are comfortable with complexity, ambiguity, and explaining their thinking to others.''
> *Change agility*: ''people who are curious, have a passion for ideas, like to experiment with test cases, and engage in skill-building activities.''

In their original study, based on a sample of over 200 managers, Lombardo and Eichinger (2000) concluded that learning agility predicted the degree to which individuals performed well in their current role and had the potential to be promoted to their next role. From these data, they advocated using learning agility to select talent for key developmental assignments, to identify high-potential talent that might not be in visible roles, and to help people become more open to other points of view so they learn more from their developmental experiences.

Connolly and Viswesvaran (2002) and Eichinger and Lombardo (2004) subsequently investigated the discriminant validity of learning agility relative to other individual differences such as personality and intelligence, as well as the predictive validity of learning agility in explaining variation in promotions and performance after promotion. With data collected from 313 employees in three firms (two in insurance and one in electronics), as well as 107 law enforcement officers, they found evidence for discriminant validity in results showing that learning agility is unrelated to intelligence, goal orientation, and personality (with one exception being a positive relationship with Openness to Experience). In terms of predictive validity, learning agility was found to be unrelated to whether someone was promoted, which the authors posited was because promotions are more a function of prior performance, politics, or poor choice as opposed to one's ability to learn from experience. In terms of performance after promotion, the evidence was mixed. Learning agility related to performance after promotion when learning agility, and likely performance (the article was unclear about the source of the performance rating), were rated by one's supervisor ($r = .45$). There was no relationship between learning agility and performance after promotion when learning agility was assessed via one's peers.

Finally, similar to Eichinger, Lombardo, and colleagues, McKenna, Boyd, and Yost (2007) examined learning agility by exploring both the situational and personal factors that influence individuals' learning from experiences. On the basis of 100 interviews with pastors, the authors concluded that one's ability to learn from experience—which they refer to as learning agility—is enhanced by situational factors

such as access to role models, exposure to novel experiences that involve change and complexity, and opportunities for reflection. In addition, an individuals' ability to learn from these challenging experiences was a function of personal strategies such as adopting a learning focus, being willing to admit one's own mistakes, and relying on personal values and faith to get through difficult and challenging times. These results generally reinforce prior findings related to what enables individuals to learn and develop from developmentally challenging experiences (e.g., McCall et al., 1988).

Although we fully support the emphasis on learning from experience and are encouraged by the results presented in the current literature, we have several concerns about how learning agility is being defined and conceptualized, as well as concerns about the validity of the conclusions being drawn from prior research. First, learning agility has come to be used as a catch-all phrase referring to anything related to learning from experience and individuals' ability to learn from experience. On the basis of the current research, it is unclear why one would use the term learning ''agility'' as opposed to learning ''ability.'' What is the significance of ''agility,'' and how does learning ''agility'' extend or add to our understanding of learning ability, which has been the topic of decades of scientific research (Cronbach & Snow, 1969; Derry & Murphy, 1986; Kolb, 1984)? Our fear is that the concept began with an ambiguous definition, and as the literature has evolved, the definition has become even more ambiguous and unclear.

Second, the current literature presents learning agility as a multidimensional construct. Yet, it is unclear how these dimensions relate. In addition, some of these dimensions go beyond one's agility in learning and even beyond one's ability to learn from experience, and they frequently confound learning with performance and success. For example, De Meuse et al. (2010) define learning agility as the ''willingness and ability to learn from experience, and subsequently apply that learning to perform successfully under new or first-time conditions'' (p. 120). Embedded in this definition is an assumption of successful performance, thus defining the concept of learning agility in part by its outcome. The potential contribution of a learning agility concept is to further our understanding of how people learn from experience in ways that enable more effective performance. To realize this potential, we need to keep the concept of learning agility distinct from performance itself. The four dimensions of learning agility posited by Lombardo and Eichinger (2000) also seem to differ in terms of how related they are to learning from experience. For example, the people agility dimension refers specifically to the process of learning from experience, and the change agility dimension refers to learning behaviors such as experimentation and skill building. In contrast, the results agility dimension refers to aspects of performance such as getting results and inspiring others.

Finally, researchers tout the predictive validity of learning agility, a questionable claim given the lack of rigorous empirical testing of the concept and underlying theory. For example, Eichinger and Lombardo (2004) concluded that learning agility is related to performance after promotion, but this relationship only holds for boss-rated learning agility (not peer-rated learning agility). Although it is not reported in the article, it is likely that this finding is at least in part a product of common source bias (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003), where an individual's boss provided assessments of both learning agility and performance after promotion. Moreover, although learning agility is expected to predict learning from experiences over time, all the prior research has provided only cross-sectional reports of the relationship between learning agility and performance. Thus, it is not clear that learning agility is actually the causal mechanism driving improved performance or that any learning from experience is even occurring. The existing literature is plagued by research designs that produce inconclusive and ambiguous results.

In summary, the learning agility concept lacks conceptual clarity, and the existing empirical research offers ambiguous insights related to its construct and predictive validity. This is particularly problematic as selecting individuals based on their ability to learn—as well as being able to develop a learning ability in people—is particularly important in the dynamic and complex world that we live in today. As John R. Ryan (2009), the president and CEO of The Center for Creative Leadership, noted, ''To succeed in a world where our work is always changing, where challenges are unpredictable and competition abounds, we need to be agile learners'' (p. 7). To the extent that learning agility is one part of a person's ability to learn, it is an important concept worthy of investigation. Herein, we develop a more precise and narrower conceptualization of learning agility and develop a framework for understanding how learning agility relates to but is distinct from other constructs associated with learning from experience. On the basis of this revised definition and conceptualization, we then go on to identify opportunities for future research and measure development related to learning agility.

Defining and Conceptualizing Learning Agility

Learning is the process of improving actions through better knowledge and understanding (Fiol & Lyles, 1985), and despite a wealth of research on the types of experiences that promote learning (McCall et al., 1988; McCauley, Ruderman, Ohlott, & Morrow, 1994) and the personal attributes and organizational factors that support learning (DeRue & Wellman, 2009; Dragoni, Tesluk, Russell, & Oh, 2009), several important gaps remain in our understanding of the experiential learning process. In particular, the current literature offers little insight into the rate of learning or specifically why some people go through the experiential learning process faster than others. Likewise, prior research has yet to explain why some people are more flexible with their understanding of a particular situation, are able to shift among ideas and points of view more fluidly, and are ultimately able to make connections across ideas and situations more easily than other people. We posit that the concept of learning agility will be most applicable and have the most theoretical value when thinking specifically about issues related to speed and flexibility in the experiential learning process.

The term ''agility'' has traditionally referred to ''the power of moving quickly and easily; nimbleness'' and ''the ability to think and draw conclusions quickly; intellectual acuity'' (American Heritage Dictionary of the English Language, 2000). Extending the traditional meaning of the term to experiential learning, learning agility foregrounds both the speed of learning (i.e., an ability to pick things up quickly) and the ease of movement across ideas (i.e., moving among various ideas or points of view and across situations). In this sense, learning agility references the importance of developing ''different, more appropriate and possibly counterintuitive ways of doing things'' (LePine et al., 2000, p. 570). It also captures a person's ability to learn quickly within a particular experience and to be flexible in moving across ideas and understandings such that the person is able to maximize the potential learning value of a given experience. Learning from experience requires identifying and comprehending different patterns within and across experiences (Matlin, 2002). The term ''agility'' implies that a person can see patterns quickly and is able to easily move between different interpretations or descriptions of those patterns. Implicit in this description of flexibility as moving easily from one idea to another is the ability to hold multiple, conflicting ideas in one's head simultaneously, which F. Scott Fitzgerald (1936) long ago labeled the ''test of a first rate intelligence.'' Taken together, we define learning agility as the ability to come up to speed quickly in one's understanding of a situation and move across ideas flexibly in service of learning

both within and across experiences. From this perspective, learning agility comprises both processing and perceptual speed (Kyllonen & Christal, 1990), as well as flexible cognition (Deák, 2004).

It is important to recognize that the process of learning from experience occurs over time, such that people develop an understanding of a particular experience and then draw connections between the lessons of that experience and future experiences. As such, the learning agility concept applies both within an experience (e.g., coming up to speed quickly and thinking flexibly about the current experience) and across experiences. For example, an agile learner not only quickly recognizes important patterns in a situation but is also able to quickly and flexibly see connections between experiences.

As just one example of cross-situational learning agility, imagine the manager who can both carry over appropriate lessons from experience and not get overly invested in (and thus carry over) inappropriate or incorrect lessons. Examples might include the expatriate from one country who is moving to a different country, a manager with experience in one population who now must manage a different population, or a manager with experience in one functional area who is now moving to a different function. Less agile learners not only get caught up in and defensive about their point of view within a particular experience but also rigidly carry over specific conclusions and lessons to new experiences. Those higher in learning agility are not only able to get up to speed quickly in a particular experience, but they are also able to drop inappropriate lessons learned as they travel across experiences. Thus, agility is not only about picking up new knowledge quickly and flexibly moving on to different conclusions when warranted, it also involves not getting stuck in a particular point of view and being able to transfer lessons appropriately to new situations and experiences.

Leavitt and March (1988) captured the temporal aspect of learning within organizations when they stated that learning is about encoding ''inferences from history into routines that guide behavior'' (p. 319). In this way, learning agility is as much about unlearning as it is learning. Yet, the unlearning aspect of learning agility is not straightforward or simple (see Weick, 1993, 1996). Classic work on commitment by Kiesler (1971) and Salancik (1977) suggests that people become committed to certain courses of action that then become difficult to abandon. As an example, the more public the action and the more concerned people are about what various publics think of their actions, the more actors stay committed to the original course of action. Such behavioral commitment makes it difficult to remain flexible within and across situations. In addition, what we know about schematic information processing suggests that the lessons one takes from one setting to another can serve as an expectation that may color information processing in the new setting (e.g., confirmation bias; Nickerson, 1998). People are more likely to see information that supports their expectation in the new setting, thereby making change, unlearning, or relearning less likely.

Our conceptualization of learning agility is both narrower and broader than those offered in prior literature. As described above, learning agility has been defined previously as ''the willingness and ability to learn new competencies in order to perform under first time, tough, or different conditions'' (Lombardo & Eichinger, 2000, p. 323). De Meuse et al. (2010) add the word ''successfully'' following ''perform'' in their definition. These definitions are problematic in that they confound agility with either its antecedents or outcomes. For example, the Lombardo and Eichinger definition incorporates into the construct of learning agility the motivation to engage in agile learning—specifically, it includes a ''willingness'' to be agile as part of the definition of learning agility. In accordance with tenets of good construct development (Schwab, 1980), our proposed definition explicitly separates a person's willingness

to do the things that represent agility from the definition of what it means to be an agile learner. Agility is about an ability to learn from experiences through being flexible and fast. One's willingness to engage in agile learning is a different issue that might be predicted by a range of other personal and situational factors beyond those that explain one's ability to be fast and flexible in learning from experience. As mentioned earlier, the De Meuse et al. definition is problematic as it brings a success dimension into the definition of learning agility itself, suggesting that agility is in part defined by its creation of successful performance. By their definition, a person cannot be agile and fail under new or first-time conditions. As Schwab's treatment of construct validity suggests, there is value in keeping the ability to be agile and its possible effects on subsequent performance separate in the definition of the construct itself.

In addition, the Lombardo and Eichinger (2000) definition delimits the application of what is learned from experience and the contexts within which that learning is valuable (i.e., learning agility is relevant for performing in first-time, tough, or different conditions). Although learning from experience is generally in service of building capabilities that can be applied to future experiences, it is probably best to stop the definition there and not limit the relevant application to certain types of subsequent experiences. Although learning agility may be especially useful when a person faces subsequent experiences that are novel or tough, these are not the only types of experiences where agile learning could be valuable. Thus, defining learning agility independent of any particular experience type allows researchers to explore a wide range of experience types that might accentuate (or attenuate) the value of learning agility.

There are two final definitional issues worth mentioning. First, there is a tradeoff in the two dimensions of learning agility. Notably, being flexible in moving across ideas and points of view and being able to embrace simultaneously conflicting points of view will likely reduce the speed at which people can learn from experience and incorporate new lessons into their behaviors and routines. It takes time to consider and reconcile differing ideas and to determine the best course of action among alternatives. Similarly, an intention or personal style of moving quickly may make one less willing or able to be flexible, as we have described it. This notion of learning agility as containing a paradox fits well with views of leadership as embodying paradoxical elements that must be simultaneously satisfied (Denison, Hooijberg, & Quinn, 1995). Second, learning agility is only one component of the ability to learn from experience. It is not synonymous with that ability. With this narrower conceptual focus, learning agility has great promise in helping us identify those who can be agile in learning from experience as well as train employees to engage in experiences of various types to maximize their learning and development. For example, in the context of cross-cultural management, Caligiuri and Tarique (2009) note the importance of developing what they call ''cultural agility,'' which similarly captures the ability to move quickly (in their case from one culture to another).

Learning Agility: An Organizing Framework

Figure 1 situates learning agility into a broader framework of constructs related to learning from experience, with a particular emphasis on the cognitive and behavioral processes through which learning agility is manifested and enhanced. Indeed, as De Meuse et al. (2010) note in their review of learning agility, there are several constructs that are different but conceptually related to learning agility, although they identify only learning goal orientation and leadership agility as particularly relevant. In developing the nomological network (Cronbach & Meehl, 1955) for learning agility, we extend the work of De Meuse and colleagues by examining a broader set of related constructs, including individual differences

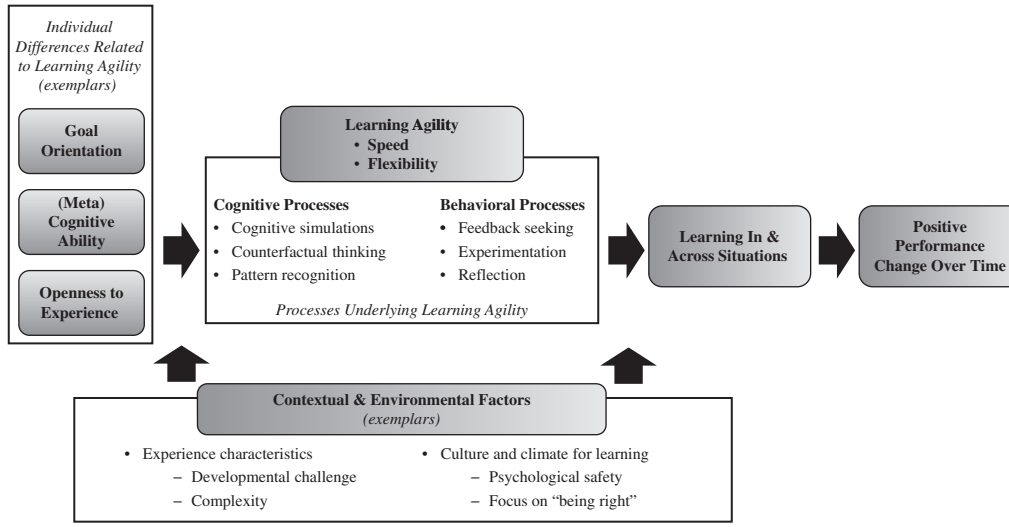

Figure 1. A model of learning agility.

that promote learning agility, cognitive and behavioral processes that underlie and enhance agile learning, and context factors that influence the emergence and effects of learning agility. Figure 1 also depicts the idea that learning agility will promote learning within and across situations and, through that learning, positive performance change over time. Although certainly not exhaustive, Figure 1 illustrates how learning agility fits within a broader network of research on how individuals learn quickly and flexibly from their experiences.

Individual Differences Related to Learning Agility

Although learning agility is unique in its focus on speed and flexibility, the concept does have similarities and connections with other constructs related to experiential learning. Identifying the conceptual connections among constructs provides insight into the basic meaning of learning agility and helps clarify its boundaries and value in the broader literature (Messick, 1975). In the following sections, we describe how learning agility is related to three individual differences that are fundamental to understanding an individual's ability to learn from experience: an individual's goal orientation, cognitive ability, and Openness to Experience.

Goal orientation. Goal orientation references individuals' propensity to pursue goals related to learning and mastery (learning orientation) or performance and rewards (performance orientation; e.g., Dweck, 1986; Kanfer, 1990). Goal orientation has been shown to affect learning and adaptation generally (e.g., Farr, Hofmann, & Ringenbach, 1993), and it also influences individuals' feedback-seeking behavior (VandeWalle & Cummings, 1997; VandeWalle, Ganesan, Challagalla, & Brown, 2000), leadership development (DeRue & Wellman, 2009; Dragoni et al., 2009), and performance adaptability (DeShon & Gillespie, 2005; Kozlowski et al., 2001). Related work on learning versus performance goals (Seijts & Latham, 2001, 2005) suggests that the assignment of a performance goal actually detracts from learning by making some people so anxious about performing at a high level that they unsystematically scramble to discover appropriate task-relevant strategies, and in doing so, ''they fail to learn in a timely fashion the most efficient ways to accelerate their effectiveness'' (Seijts & Latham, 2005, p. 126). The conclusion of this stream of research is that having

a learning goal orientation is associated with greater motivation to learn (Colquitt & Simmering, 1998), improved performance after receiving feedback (VandeWalle, Cron, & Slocum, 2001), and a greater capacity to learn from challenging developmental experiences (DeRue & Wellman, 2009; Dragoni et al., 2009), all suggesting an important relationship between learning goal orientation and learning agility. Indeed, De Meuse et al. (2010) identified learning goal orientation as a key construct related to learning agility, although their empirical results showed no relationship between the two constructs. It is unclear whether these results are because learning orientation is unrelated to learning agility or because the measures used to assess learning agility were imprecise in assessing the speed and flexibility dimensions that we have emphasized here. We expect learning-orientated individuals will be less committed to a single point of view, thus enhancing individuals' flexibility in the learning process. Also, because learning-oriented individuals are particularly attentive to possible learning opportunities, it is possible that a learning orientation could be associated with greater speed in the learning process as well.

More recently, scholars also have emphasized the possible positive impact of performance goal orientation in learning contexts, with a particular emphasis on the extent to which people seek to prove their performance capability to others (a performance-prove orientation) and to avoiding mistakes (a performance-avoid orientation; Button, Matheiu, & Zajac, 1996; DeShon & Gillespie, 2005; VandeWalle et al., 2001). Although a performance orientation is often assumed to have a negative impact on learning (Ford, Smith, Weissbein, Gully, & Salas, 1998; Payne, Youngcourt, & Beaubien, 2007), it is possible that a combination of a strong learning goal orientation and a strong performance-prove goal orientation might best enable individuals to learn from experience and then use those lessons to improve their performance over time (DeShon & Gillespie, 2005). Whereas a learning orientation establishes an openness to new insights and lessons from experience, a performance-prove orientation should encourage people to incorporate those new lessons into their behaviors and routines to improve their task performance. For example, VandeWalle et al. (2001) demonstrated that individuals with a performance-prove orientation are more likely to implement the lessons extracted from performance feedback quickly and thus experience improvements in performance after receiving feedback. Thus, we submit that learning agility is maximized when individuals hold a learning goal and performance-prove goal orientation simultaneously. This combination will enable individuals to be both fast and more flexible in learning from experience.

Cognitive and metacognitive abilities. General cognitive ability or *g* has been defined as an individual difference in information processing capacity or the ability to learn (Hunter, 1986; Kanfer & Ackerman, 1989; Ree & Earles, 1991) and has been shown to enhance job performance across a broad set of work and task contexts (Hunter & Hunter, 1984; LePine et al., 2000; Ree, Earles, & Teachout, 1994). Individuals who possess higher levels of *g* perform better because they are able to retain more information in their working memory and can thereby store knowledge and skills more efficiently and learn more quickly from their experiences (Schmidt, Hunter, & Outerbridge, 1986). In addition, metacognitive ability is a specific form of cognitive ability that reflects one's ability to ''think about thinking'' and monitor cognition (Flavell, 1979). Prior research suggests that metacognitive ability is positively related to knowledge and skill acquisition, monitoring of goal progress, adaptation and learning, and task performance (Ford et al., 1998; Kanfer & Ackerman, 1989; Pintrich & De Groot, 1990; Pokay & Blumenfeld, 1990).

We propose that general cognitive ability and metacognitive ability will be related to learning agility by enabling individuals

to be faster and more flexible in learning from experience. In terms of speed, prior research suggests that general cognitive ability enhances individuals' working memory, which in turn is associated with greater perceptual and processing speed (Ackerman, Beier, & Boyle, 2002; Kyllonen & Christal, 1990). In this research, the authors argue that greater cognitive ability increases three aspects of learning speed: (a) the encoding speed with which information makes its way from an initial precept to a representation in working memory, (b) the retrieval speed with which information from long-term memory is deposited in working memory, and (c) the speed with which information leads to a specific behavioral response. In terms of flexibility, a stronger metacognitive ability should be associated with an enhanced ability to see connections and move across ideas more easily. As noted by Shore and Dover (1987), ''Metacognitive processes enable individuals to better control their thinking and thereby become more efficient and flexible learners'' (p. 37). One reason for this association is that metacognitive ability reduces the likelihood that an individual myopically focuses on a single element of the task and instead has a greater appreciation and understanding of the connections across elements. Indeed, research suggests that metacognitive ability enhances individuals' problem-solving abilities in complex situations or tasks (Swanson, 1990).

Openness to Experience. Openness to Experience captures the extent to which individuals are broad minded, curious, imaginative, and original (Barrick & Mount, 1991; Costa & McCrae, 1992; McCrae, 1987). Open individuals have a strong intellectual curiosity, actively seek out new and varied experiences and ideas, and are generally more receptive to change (Costa & McCrae, 1992; King, Walker, & Broyles, 1996; McCrae, 1987). They have been shown to be more creative and better able to adapt to change than those who are less open (Baer & Oldham, 2006; Feist, 1998; LePine et al., 2000). Likewise, individuals high on Openness to Experience are able to draw from a broader range of experiences and perspectives when in new situations (McCrae & Costa, 1996) and have been shown to be more willing to engage in the self-monitoring and assessment that is involved in learning from experience (Blickle, 1996; Busato, Prins, Elshout, & Hamaker, 1999).

Being open to new experiences and perspectives allows an individual to take in a broader array of knowledge, and this breadth increases flexibility as the individual is not limited to a single perspective and is able to draw on multiple, perhaps even conflicting, sources of information. Openness has also been described as a key determinant of a broader searching for information and a more thorough and flexible analysis of available information (Day & Lance, 2004; Hooijberg, Hunt, & Dodge, 1997). For example, Day and Lance discussed the need to handle potentially conflicting ideas and balance the differentiation and integration of experience as an important aspect of leader development. As such, the tendency to be open to new ideas and experiences, and in particular ones that might contradict prior knowledge and experience, should be related to the degree to which individuals are flexible and exhibit agile learning.

Cognitive and Behavioral Processes Underlying Learning Agility

Critical to building a framework of learning agility is an understanding of what learning-agile individuals do differently from others. Figure 1 suggests two fundamental differences: (a) internal, cognitive processes that people with high learning agility engage in to facilitate fast and flexible learning processes and (b) external, more visible behavioral processes that agile learners employ to enhance their learning. In the following sections, we describe three cognitive and three behavioral processes (a set that is neither exhaustive nor exclusive) that underlie an individual's learning agility. We suggest that these processes are both a

manifestation of learning agility (meaning that individuals higher in learning agility are more likely to engage in them) and also support and promote learning agility (meaning that the more individuals engage in them over time, the more learning agile they will become).

Cognitive processes. First, agile learners likely engage in more prospective cognitive simulations—a form of internal, mental experimentation about possible future situations and experiences (Bandura & Adams, 1977; Sanna, 2000; Taylor & Schneider, 1989). Cognitive simulations that are prospective, such as visualization, allow individuals to imagine possible situations that they may encounter in the future and draw connections with prior experience to develop strategies that can be applied in the future. In this sense, individuals can think about how they might act in a situation, and in thinking through alternatives, lessons can be extracted before even having the experience. Although cognitive simulations can only represent a portion of a potential experience (Barsalou, 1999), they have been shown to aid implicit and explicit memory, as well as application of learned skills to future tasks (e.g., Schacter & Addis, 2007).

Thus, cognitive simulations enable individuals to forecast and make predictions about potential future situations and through this forecasting come up with possible solutions and behavioral intentions for what one might do in the situation. In this sense, prospective cognitive simulations enable individuals to take the learning they have acquired from one experience and quickly and flexibly apply it to future experiences. This preplanned understanding of how one might apply his or her knowledge to a future scenario enables individuals to learn and adapt more quickly, as they will already have a partially formed plan of action. In addition, prospective simulations allow individuals to forecast for a range of experiences beyond those that they have actually encountered in the past, thereby reducing the reliance on actual experience for learning purposes.

A second cognitive process that both supports and is a manifestation of an individual's learning agility is the practice of counterfactual thinking, which is a retrospective form of cognitive simulation (Mandel & Lehman, 1996; Markman, Gavanski, Sherman, & McMullen, 1993; Sanna, 2000). Counterfactual thinking is the process of imagining what ''might have been'' in any given situation and identifying alternative outcomes that might have arisen if one had acted differently or the situation had been different (Baron, 1999). Counterfactual thinking has a strong effect on individual cognition and enhances learning and application in a variety of ways (Roese, 1997). For example, counterfactual thinking enables individuals to clarify cause-and-effect relationships (Branscombe, Crosby, & Weir, 1993) and identify more effective strategies for performance (Johnson & Sherman, 1990). By engaging in counterfactual thinking, individuals can more quickly identify the possible ways in which a prior experience could have unfolded and, through consideration of these alternative courses of action, more quickly extract the lessons of experience and apply these lessons to future experiences. Moreover, by examining not only what happened but also what *might* have happened, a person engaging in counterfactual thinking can draw a broader range of lessons from experience than just those that he or she encountered directly, which should in turn enhance individual flexibility in drawing connections across different ideas and experiences. As such, an individual who engages in counterfactual thinking is more agile as a learner.

Beyond prospective and retrospective cognitive simulations, a third cognitive process enabling learning agility is that of pattern recognition. Matlin (2002) defines pattern recognition as the process through which individuals perceive complex and seemingly unrelated events as constituting identifiable patterns. Work in cognitive psychology suggests that individuals recognize these patterns through the use of prototypes (a theoretical amalgam of the most frequent or modal features of a given category)

or exemplars (specific examples of members of a given category) to categorize an experience into a relevant category, and it is this categorization process that enables individuals to see patterns across seemingly disparate experiences (Ashby & Maddox, 2005).

Extending these notions of pattern recognition to learning from experience, we posit that pattern recognition enables more agile learning. Just as entrepreneurs are able to ''connect the dots'' between their past experiences and a future venture opportunity (Baron, 2006; Baron & Ensley, 2006), we believe that the ability to better discern patterns and linkages within and between experiences will enable individuals to apply their learning more quickly and more flexibly. Whereas individuals without strong pattern recognition abilities can apply the lessons of prior experience to very similar future experiences, an individual with strong pattern recognition abilities will be able to more quickly and flexibly see connections across a broader range of experience types. These individuals can see similarities between experiences that, on the surface, seem unrelated and, as a result, be more agile in their learning from and applying the lessons of experience.

Behavioral processes. In addition to internal, cognitive processes, there are several more visible, behavioral processes through which learning agility is manifested and that support learning agility in return. Though no single process is either necessary or sufficient for being an agile learner, engaging in these processes provides a structure and set of behaviors through which the learning agile can augment their speed and flexibility in learning from experience.

One key behavior related to learning from experience is seeking feedback. Individuals learn best from experience when they ''check in'' with others by actively seeking and receiving feedback (Ashford & DeRue, 2012; Ashford & Tsui, 1991; DeRue & Ashford, 2010a), and feedback seeking has been shown to be particularly relevant when situations are more uncertain (Ashford, 1986; Brett, Feldman, & Weingart, 1990; Morrison, 1993) and when learning is the primary goal (Ashford, Blatt, & VandeWalle, 2003; Butler, 1993; VandeWalle & Cummings, 1997). Moreover, individuals who actively seek feedback from others, rather than just waiting to receive it, are more likely to receive more accurate feedback. People often do not like giving feedback, especially negative feedback. As such, seeking feedback counteracts a prevalent social norm of withholding negative feedback, leading the individual to a more thorough and precise understanding of his or her own behavior (Ashford & Tsui, 1991).

Correspondingly, active feedback seeking should, at minimum, enhance the flexibility with which people are able to see and draw connections between their behavior and outcomes, as well as patterns across within and across experiences. Obtaining feedback from others provides additional points of data that individuals can incorporate into their understanding of a situation and their behavior within it, thereby broadening the points of view that are considered in the experiential learning process. These additional perspectives can be combined with the individual's own perceptions of the experience to generate a more thorough and detailed understanding of the situation, which in turn should enhance that person's ability to see how the lessons of one experience could inform and apply to a separate situation—thereby enhancing the flexibility dimension of learning agility. With respect to the speed dimension of learning from experience, the effect of feedback seeking is less apparent. On one hand, feedback seeking could help identify lessons of experience that would go unrealized if the person was left to interpret and process experience on his or her own, thus enhancing the speed of learning. On the other hand, feedback seeking could slow down the learning process by introducing points of view or alternative perspectives that introduce unnecessary or unhelpful variation in the interpretations of a particular experience. Thus, although

feedback should enhance how flexible people are in drawing connections within and across experiences, the impact on speed of perception, processing, and learning is less clear.

Experimentation is a second behavioral process that is related to learning agility. According to Kolb (1984), individuals have the ability to experiment with different behaviors, tactics, and strategies as they go through an experience. Within the boundaries of any single experience, people who engage in active experimentation—for example, trying out new behaviors or approaches to a particular action—have a much richer set of experiences to learn from compared with those who do not experiment and thus engage in fewer different behaviors. Prior literature identifies two forms of experimentation, guided and enactive (i.e., self-guided; Debowski, Wood, & Bandura, 2001; Wood, Kakebeeke, Debowski, & Frese, 2000), though the effect of each has been explored primarily with tasks that are removed from any interpersonal or organizational context (e.g., electronic searches on the computer). They found that experimentation was effective primarily after a person had some degree of proficiency at the task. Our view is that when individuals engage more complex and ambiguous tasks and go into more dynamic and uncertain situations, such as a leader taking on a novel job assignment, those who engage in mini-experiments as they move through the assignment develop more accurate mental models of leadership, a stronger sense of self-efficacy and identity as a leader, and a broader range of leader behaviors (DeRue & Ashford, 2010b; Ng, Van Dyne, & Ang, 2009).

Engaging in active experimentation should also enhance an individual's learning agility. It allows an individual to ''try out'' different ways of being within one experience, thereby illuminating a more detailed mental model of the experience and a broader range of lessons that might be gleaned from the experience. Similar to feedback seeking, active experimentation should enhance the flexibility with which people see and draw connections within and across experiences. Interacting with an experience in different ways through engaging in behavioral experiments should highlight the ways in which the same experience (and its associated knowledge) can be applied in different contexts, thereby enhancing individuals' flexibility in applying the lessons of experience across different situations. With respect to speed of learning, active experimentation could slow down the learning process, as experiments take time. That said, in complex and dynamic environments, we expect the experimentation process will actually speed up the learning process by illuminating lessons of experience that would otherwise not be apparent. For both feedback seeking and active experimentation, there is likely a key boundary condition with respect to the speed of learning: specifically, the more complex and dynamic the situation is, the more feedback seeking and active experimentation increase the speed of learning.

A third behavior enabling and promoting learning agility is an individual's tendency to reflect on the lessons of experience. Reflection has been identified as a powerful process that helps individuals ''digest'' their experiences, identify key lessons, and incorporate those lessons into future experiences (Alinsky, 1971; Anseel, Lievens, & Schollaert, 2009; DeRue & Ashford, 2010a; Gosling & Mintzberg, 2003; Schön, 1983). Recognizing the value of reflection in learning from experience, researchers have examined how reflection practices can be designed and structured to enhance the learning value of experience, with a particular focus on the value of structured reflection interventions such as after-event reviews (Baird, Holland, & Deacon, 1999). For example, Ellis and Davidi (2005) showed that after-event reviews focusing on both successes and failures improved learning and performance more so than after-event reviews focusing only on failures. Extending this study, Ellis, Ganzach, Castle, and Sekely (2010) showed that both personal and filmed after-event reviews can be effective, and in

both cases, the after-event review leads to performance improvements by increasing individuals' self-efficacy. By providing a more structured process that addresses key barriers to learning from experience (e.g., individual biases such as hindsight bias), structured reflection enables people to develop a more accurate understanding of cause and effect, a richer understanding of counterfactuals, and clear guidance on how the lessons of experience can translate into behavior change in the future. In turn, after-event reviews enable greater learning from experience in complex and dynamic environments (DeRue, Nahrgang, Hollenbeck, & Workman, in press).

Reflection practices such as after-event reviews should enable individuals to more quickly and flexibly learn from experience, thus enabling greater learning agility. In terms of flexibility, reflection will be an important process for identifying connections across disparate ideas or divergent points of view, as well as across series of actions that seem disjointed or disconnected. According to Alinsky (1971), without reflection, individuals can go through an experience without ever really having an experience. That is, in the ''heat of the moment,'' people can easily miss the lessons of experience. By dedicating time and energy to structured reflection during and after an experience, people can construct broader, more complex, and more detailed knowledge and insights from an experience. In particular, people should see more connections among ideas and points of view and develop these insights faster than if they were not reflecting and just acting. Thus, reflection should foster greater learning agility.

Context Factors Related to Learning Agility

Past research has emphasized the consequences of learning agility and the personal attributes that predict learning agility (De Meuse et al., 2010), but less attention has been directed at understanding the environmental factors that might moderate the effects of learning agility. Yet, anything in the environment that affects the speed of learning, or the degree to which people can be flexible across different points of view or competing ideas, would affect the degree to which people, even people high in our proposed individual difference predictors, can demonstrate agility in the learning process. Moreover, environmental factors might also influence the degree to which learning agility translates into greater within- and cross-situational learning and development. Thus, in developing the construct of learning agility and specifying related constructs, we also need to consider how contextual and environmental factors might influence individuals' ability to be agile learners and the subsequent consequences of learning agility.

Some environmental factors will be local to the person's experience. For example, drawing from trait activation theory (Tett & Burnett, 2003; Tett & Guterman, 2000), the nature of the experience itself could have a strong influence on whether people demonstrate learning agility. Some experiences more so than others should activate individuals' learning agility, which in turn would promote quicker learning and more flexibility across ideas within the experiential learning process. An example might be in Kohn and Schooler's (1978) classic work on intellectual flexibility. In their studies, they examined the reciprocal relationship between intellectual flexibility and the substantive complexity of work or the degree to which work requires independent thought and judgment—for example, jobs that require making decisions that involve ill-defined or conflicting contingencies. Their findings suggest that experiences high in substantive complexity can actually enhance the degree to which people exhibit intellectual flexibility. Likewise, research on experience-based leadership development suggests that experiences rich in developmental challenge promote learning by breaking routines and forcing people to think about and process experiences in different ways (McCall et al., 1988). In this research, more complex and challenging experiences create a context where the

demand for learning agility is greater and thus is likely to trigger the expression of learning agility more so than less challenging or less complex experiences.

Yet, there is an ironic tension between the attributes of experience that make them developmental and learning agility. On one hand, learning agility will most likely be activated and needed in experiences that are more complex and challenging—thus the reason Lombardo and Eichinger (2000) include tough or first-time experiences in their definition of the concept. On the other hand, research suggests that experiences can become overly challenging and complex, thereby impairing or hindering the learning process (DeRue & Wellman, 2009). With respect to learning agility, it might be that experiences can become so complex that individuals cannot acquire new knowledge fast enough or there are simply too many conflicting inputs or points of view so that individuals are less likely to exhibit agile learning. In this sense, the same qualities of experience that make an experience developmental could ultimately be the qualities that reduce the likelihood of individuals demonstrating agile learning. For example, as experiences become more complex, the relative importance of speed versus flexibility in learning agility might differ, where flexibility becomes more important than speed as experiences increase in complexity.

Moving beyond the experience itself, there are also aspects of the broader group and organizational context that might moderate the likelihood of individuals engaging in agile learning or the effects of agile learning on outcomes. Edmondson's (1999) research on psychological safety suggests that a context that is considered safe allows people to take risks, explore different avenues of thought, raise questions, and seek feedback. As De Meuse et al. (2010) point out, learning from experience generally requires one to be wrong sometimes, and a punitive culture inhibits individuals' motivation for learning (Day, Harrison, & Halpin, 2009). Learning agility specifically requires a certain freedom of thought or playfulness when it comes to considering various approaches and points of view. One of the major deterrents to that playfulness will likely be defensiveness or an overconcern with the self. Thus, anything in the environment that increases concerns about ego and image would likely detract from learning agility.

For example, educational psychologists have long recognized the relationship between openness and defensiveness (Brockett & Hiemstra, 1991; Fisher, King, & Tague, 2001; Oddi, 1986). If individuals are concerned about ''being right'' or ''being seen as being right,'' then they are more likely to invest in their point of view and defend it against perceived attacks (and are more likely to perceive disagreement as an attack). Such defensiveness reduces an individuals' ability to move flexibly across ideas while also distracting their thinking in ways that could reduce the speed at which they acquire and apply new knowledge. It is also possible that this defensiveness could reduce the degree to which people consider points of view that do not directly support their held beliefs, which in turn might result in learning the wrong lessons entirely or missing out on a learning opportunity. De Meuse et al. (2010) discuss how a punitive culture could have negative implications for learning agility, but we extend this idea even further. In particular, any element of an organizational culture (e.g., the reward system) that promotes individualism and narrowly measures achievement will prompt a focus on ''being right'' and ''looking right.'' In other words, there are dimensions of organizational culture beyond its punitiveness that will affect learning agility. For example, the extent to which learning is well articulated as a norm and modeled in the organization should help trigger individuals' underlying ability to learn fast and be flexible, thus prompting greater demonstration of learning agility in the organization.

The personal attributes, cognitive and behavioral processes, and context factors that we have identified as being related to learning agility represent only a few of

the many potential constructs within the nomological network of learning agility. By identifying a few exemplar concepts that are either closely tied to learning agility or are a manifestation of learning agility, and elaborating how they relate to or capture aspects of learning agility (speed and flexibility), we hope to have clarified how learning agility is situated within the broader conceptual space of learning from experience.

Assessing Learning Agility

To truly understand learning agility and its effects, we need valid and reliable measures of the construct. In this section, we address several concerns regarding the measurement of learning agility. The dominant measure in this research, called Choices Architect®, was developed by Lombardo and Eichinger (2000; Eichinger & Lombardo, 2004). It consists of 81 items that assess their original four dimensions of learning agility; the measure has evolved over time into a workbook and assessment called *FYI for Learning Agility*™ (Eichinger, Lombardo, & Capretta, 2010). To help establish its psychometric properties, De Meuse, Dai, Hallenbeck, and Tang (2008) used the Choices Architect® measure to assess learning agility in a sample of 1,000 employees from a large firm headquartered in South America. They found that the Choices Architect® measure was reliable across four different world regions. In addition, the data from this study established that learning agility as measured by Choices Architect® is normally distributed, with no observed differences across gender or age.

Although Lombardo and Eichinger (2000) are to be commended for putting the learning agility construct on the map and for developing Choices Architect® to help researchers begin to measure it, there are several prominent concerns with the Choices Architect® measure. First, with 81 items—27 dimensions of 3 items each, clustered into 4 agility factors (people, change, mental, and results) that each contain between 4 and 11 dimensions—the measure lacks parsimony and is likely more complex than it needs to be for measuring learning agility.

Second, the measure is not well aligned with the definition of learning agility that Lombardo and Eichinger originally proposed. Recall that the authors define learning agility as ''the willingness and ability to learn new competencies in order to perform under first-time, tough, or different conditions'' (Lombardo & Eichinger, 2000, p. 323). Ignoring for the moment the conceptual issues involved in including ''willingness'' as a component of the definition of an ability construct, the authors stray even from their own definition of learning agility. Instead of containing a ''willingness'' factor and an ''ability'' factor, as seems to be indicated in their original definition, the Choices Architect® measure includes four factors: people agility, results agility, change agility, and mental agility. These four factors are further divided into 27 dimensions, and although some dimensions seem related to learning agility, such as ''complexity'' or ''inquisitive,'' the vast majority seem unrelated, such as the ''delivers results,'' ''cool transactor,'' ''taking the heat,'' or ''light touch'' dimensions. These factors and dimensions seem to lose touch with the basic idea of learning agility and seem to be more a product of factor analysis than careful theoretical consideration. As an example, the items, ''Knows how to get things done outside of formal channels as well as within them; is savvy about who to go to, and when'' and ''Is politically adept; knows how to work with key decision makers and stakeholders'' seem conceptually similar (although neither seem related to learning agility). However, in the measure, these items correspond to two entirely different factors (and correspondingly, different dimensions)—change agility (innovation manager) and people agility (cool transactor), respectively.

Not only does the Choices Architect® scale invite questions about content validity with respect to Lombardo and Eichinger's (2000) original definition, we also have concerns about whether it adequately taps

our more narrow definition of learning agility in terms of speed and flexibility. To assess content validity with respect to the refined definition, we and three management PhD students who were blind to the purpose of the exercise coded the 81 items of the Choices Architect® measure, as either (a) a manifestation of learning agility, (b) a concept that was somewhat related to learning agility, or (c) totally unrelated to learning agility as defined in this article. Thus, six raters coded each item according to three possible responses. Only 14 items were rated as manifestations of learning agility by four or more raters, and 26 items were rated as unrelated to learning agility by four or more raters. There was less agreement with respect to the remaining 41 items, suggesting significant conceptual confusion in the Choices Architect® measure. In summary, many of the items seem unrelated to the authors' original definition and, certainly, as we have defined it here, thus drawing into question the content validity of the measure.

A third issue with the Choices Architect® measure is that some of the items capture performance dimensions that should be measured separately as outcomes, such as the degree to which people build high-performing teams, are effective at managing diversity, and get things done without relying on authority. Examples include items such as ''Performs well under first-time conditions; isn't thrown by changing circumstances'' or ''Has a significant, noticeable presence.'' The content of these items is related to an individual's performance more so than learning agility. This observation is particularly important given the strong claims made about learning agility predicting performance (e.g., Lombardo and Eichinger, 2000). This relationship would be true by definition given that the two are confounded in the Choices Architect® measure.

Finally, of the 81 items, almost 40% are double barreled. One example is the item: ''Knows that change is unsettling; can take a lot of heat, even when it gets personal.'' In this example, a person might agree that change is unsettling but not feel that he or she can take a lot of heat or only do so when the situation is impersonal. Responses to such items are impossible to evaluate.

In summary, the Choices Architect® measure has been a valuable stimulus for research on learning agility, but to sufficiently assess the construct in the future, a new measure is needed. We need a fresh start—a measure of learning agility that is theoretically grounded and psychometrically sound.

Concluding Remarks

Our intent with this article is to offer a constructive critique of research on learning agility in service of providing a stronger theoretical foundation for future research on this important concept. As a research community, we are at a choice point. We can keep going as we are, conceptualizing learning agility as we have despite its conceptual ambiguity. The result, we believe, will be to blur the boundaries between learning agility and learning ability so much that the two become nearly synonymous, to the detriment of progress in this literature. The other option is to embrace a conceptually clearer and narrower definition of learning agility. This path has attractive properties regarding construct development. A more precise definition allows us to differentiate learning agility from learning ability and, as a result, allows us to assess the contribution of learning agility to performance over time in organizations. The practical benefit of this path is that, if organizations are indeed becoming more complex and facing more uncertainty and dynamism in the environment, there will be payoff for firms that can better identify and employ highly agile learners as well as payoff for individuals within those firms who can demonstrate agile learning.

In this article, we have taken the first step in this process by proposing a conceptualization of learning agility that is more faithful to its everyday definition and situating it within a nomological network of related constructs. We then turned

to measurement, where we highlighted several concerns related to the dominant measure of learning agility (the Choices Architect® scale). What we end up with is a narrower, more focused construct that taps a person's speed and flexibility in learning from experience in organizations, as befits the definition of agility. By refining and narrowing the conceptualization of learning agility, we hope to provide a foundation for future researchers to develop measures of learning agility, explore its conceptual boundaries and causal relationships, and ultimately draw more precise conclusions about learning agility and its effects on learning from experience.

An attractive future research agenda would include several following steps. First, the development and validation of a learning agility measure is essential to progress in this area. The goal is to create a parsimonious and targeted measure of learning agility that allows differentiation between the speed at which people can learn from experience and the flexibility with which people are able to work across ideas both within and across experiences. Spreitzer et al.'s (1997) research on ability to learn and the flexibility dimension would be one role model in this regard. The goal is to construct a measure of learning agility that is reliable, valid, and empirically differentiates between speed and flexibility. Such a measure will allow researchers to assess the unique variance explained by learning agility beyond other related constructs. Likewise, researchers would be able to determine what types of situations require agility for learning to occur, as well as identify the types of situations where agility is not particularly necessary. With a more focused concept and measure, the terrain can be assessed more precisely, allowing our knowledge to accumulate and our field to advance an understanding of how individuals and organizations can learn faster and more flexibly.

Second, speed and flexibility are both part of learning agility, but the two dimensions are not the same and introduce some interesting tensions in the experiential learning process. We have pointed out that they can be in tension (e.g., moving quickly can hurt one's flexibility) and also related constructs that may help in one area can hurt in another (e.g., feedback seeking may help individuals be more flexible in the learning process and also slow them down in the process). In addition, learning occurs over time, and to the extent that a person is particularly strong at learning quickly, it may also be true that this person develops a point of view quickly and then cannot adapt that point of view over time. We expect that differential predictions about speed and flexibility will be an interesting and important focus for future research on learning agility.

A third emphasis for future research should be on the role of context. Arguments for the importance of learning agility are inherently contextualized, as they invoke the dynamic and complex nature of organizations and their environments—for example, that agility is more important in substantively complex environments. Future research that examines the role of context in shaping the payoff of learning agility, or the ability of individuals to engage in agile learning, would be particularly noteworthy. This research would shed light on the conditions under which organizations should pay particular attention to learning agility, as well as offer insight into how organizations can foster learning agility in their employees.

Finally, future research needs to employ methods that allow for stronger conclusions about learning agility. These methods include using multiple sources to assess individuals' learning agility and the outcomes associated with learning agility. In addition, to assess the impact of learning agility on learning, researchers need to employ longitudinal research designs to understand whether learning agility produces a faster rate of learning or different trajectories and patterns of learning. To illustrate, organizational newcomers with higher learning agility might exhibit steeper learning or performance curves, rising to higher levels of learning or performance

much more quickly, than do peers with lower learning agility. However, if placed in jobs with low complexity, their learning curve may plateau or be similar to the curve for individuals who are lower in learning agility. Thus, the relative advantage of being learning agile will likely be affected by the environment within which one is operating. Such dynamic modeling of the effects of learning agility over time and across contexts would be a noteworthy extension of our work and be a valuable contribution to our understanding of learning from experience in organizations.

We have great confidence in the importance of learning agility in today's world. Our hope is that with more careful definition and measurement, we might assess its impact more precisely and understand nuances and complexities in its development and effects. This article establishes an agenda for what we hope will be a fruitful research stream for years to come.

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