

THE 'LESSONS' of ENTREPRENEURIAL EXPERIENCE: Toward Identifying Critical Development "Lessons"

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Principal Topic This paper uses insights from cognitive developmental psychology, constructivism and social neuroscience to move beyond entrepreneurial intentions to explore deeply-held beliefs associated with entrepreneurial thinking. From those insights, we propose identifying those developmental experiences ("lessons") that are the sources of those critical deep beliefs that are intrinsic to our mental models regarding entrepreneurship: How we construct opportunities and, perhaps more important, how we learn to perceive ourselves as entrepreneurs. This paper addresses the nature of beliefs from a social neuroscience perspective, the constructivist learning model, theory and recent evidence from cognitive developmental psychology, and a look at a key phenomenon that reflects deep entrepreneurial beliefs, entrepreneurial role identity.

Beyond Intentions: The Origins of Entrepreneurial Beliefs Considerable attention is paid to understanding entrepreneurial thinking: What is it exactly? What is its impact? What is its role in entrepreneurial action? This paper focuses on beliefs, defined here as deeply-held assumptions about the world that operate at Simon's symbolic level of cognition, that lie beneath attitudes and intentions.

Beliefs are more than knowledge; Deep beliefs drive the way we structure our knowledge. Yet, most of us are as unmindful of many of our deep beliefs, let alone their impact. Let us not lose sight that while we focus on entrepreneurial action: Behind entrepreneurial action are entrepreneurial intentions; Behind entrepreneurial intentions are critical entrepreneurial attitudes; Behind entrepreneurial attitudes are deep cognitive structures. When we think of deep cognitive structures, we usually think about scripts, schemas, and maps, but we have perhaps neglected the beliefs that comprise and/or drive these deeper cognitive structures.

Why is this important? The explanatory power of theory-driven models of entrepreneurial intentions has proven invaluable. However, there are limits to these models. How does one handle the reality that human intentions are multidimensional, that we trade off multiple objectives? What about the frequent occurrence of conflicting intentions? What about passion? We talk all the time about entrepreneurs being driven by passion, yet intentions models as yet do not handle the strength of one's beliefs. We propose that if we can identify ways to surface deep beliefs that influence entrepreneurial behaviors and identify ways to surface the origins of those deep beliefs, we will not only have a richer, more fine-grained understanding of entrepreneurial thinking but we will also identify mechanisms for generating those beliefs in students and trainees.

The "Heart of the Heart of the Heart of Entrepreneurship"? We will return to some useful insights from cognitive developmental psychology, but social neuroscience offers newer insights that in a very real sense justify all the attention being paid to entrepreneurial cognition.

Social neuroscience is known for its focus on the neurological underpinnings of human cognitions. (This might conjure up an image of putting subjects through a PET scan (positron emission tomography) and seeing what parts of the brain light up when they see an opportunity.) However, the real lesson from social neuroscience for entrepreneurship scholars is that deep cognitive structures -and the deep beliefs they entail - are real and they lie at the heart of all human activity, whether stimulus-response or intentional (Cacioppo & Berntson 2001; Cacioppo, et al. 2002; Insell & Fernald 2004).

From Novice to Expert: How Entrepreneurs Learn to Think Entrepreneurially As individuals experience entrepreneurial training, we note their attitudes and intentions toward entrepreneurship tend to change significantly (Krueger 2001; Peterman & Kennedy 2002). Learners should also change at a deeper cognitive level such as scripts (Gaglio & Katz 2001; Mitchell, et al., 2000). While research into expert thinking (e.g., Ericsson) suggest that years of deliberate practice is necessary to evolve into an expert, that time can be

shortened if we understand the cognitive structures shared by experts (e.g., maps, scripts, self-efficacies, tacit knowledge).

Methodology/Key Propositions

We propose here to focus on three different vehicles for helping entrepreneurs learn to think entrepreneurially: (a) Neergaard's work on the socializing effects of participation in sports, (b) Kickul's work on classroom outcomes and (c) Krueger's work on the effects of growing up in a family business. In each case, we are deploying a mixed qualitative-quantitative analysis using surveys and interviews on disparate samples (venture investors, students and nascent entrepreneurs).

Results and Implications

We will present past findings and new pilot results from these three streams of research, then the authors will present a social neuroscience process model of how entrepreneurial thinking can evolve from novice to expert. The authors will also discuss the model's significant implications for teaching/training. Finally, they will discuss especially fruitful new directions for research suggested by the model. In particular, the authors will share a new larger-scale research project that will rigorously identify a parsimonious set of cognitive developmental 'lessons' and the key developmental experiences that provide those 'lessons'. The Center for Creative Leadership) performed a landmark study on highly successful leaders, published as *The Lessons of Experience* ((McCall, et al. 1988). The CCL found that these leaders tended to share a perhaps remarkably short list of key 'lessons' and a corresponding set of developmental experiences that provided those lessons. Interestingly, those lessons and experiences were largely cognitive in nature and tended to reflect changes in deep beliefs and thus changes in cognitive structures deeper than surface attitudes. Coupling this proven social neuroscience approach with recent insights into entrepreneurial expertise and the model we will present, we will be creating the "Lessons of Entrepreneurial Experience."

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