

business ideas/conjectures. Discovery and creation are both ways in which entrepreneurs formulate business ideas/conjectures. Those ideas/conjectures are formulated from the interaction between individual perceptions and technical and market constraints (opportunity). Thus, entrepreneurs discover or create business ideas/conjectures in part by responding to external constraints, which are called "opportunities" in the IO nexus.

CONCLUSION

Lest we appear too critical, we appreciate the emphasis that the dialogue commentaries place on the distinctiveness of entrepreneurship and the role of subjective perceptions in the entrepreneurial process. We encourage all scholars to continue to consider what makes the field of entrepreneurship unique and how individual perceptions interact with technological and socioeconomic constraints in the formulation of business ideas. The IO nexus sought to shift the focus of analysis of individuals alone to individuals in interaction with the situations in which they operate. We believe that the approaches articulated by the commentaries that we respond to here, with their emphasis on subjective perceptions of individuals, overemphasize the actions of specific individuals in a process that involves the interaction of many individuals and the technological and socioeconomic constraints that they face.

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Of Narratives and Artifacts

In a thoughtful commentary on our recent article, Garud and Giuliani (2013) spotlight a narrative perspective on understanding entrepreneurial opportunities. This perspective has been gaining ground in recent times through special issues, edited books, and even a focused journal (Gartner, 2010; Hjorth & Steyaert, 2005; Jennings, Perren, & Carter, 2005), all of which suggest it would be worthwhile to incorporate this view within a research agenda that seeks to conceptualize entrepreneurship as a science of the artificial. Without falling into a tautological position where narratives are everything or artifacts are all that we need worry about, we would like to articulate three specific touchpoints between narratives and artifacts, especially artifacts of the entrepreneurial process—such as opportunities, markets, and institutions.

We see at least three relationships between narratives and artifacts that could enhance an agenda for researching entrepreneurship as a science of the artificial.

NARRATIVES OF AGENCY LOCATED IN INDIVIDUALS

Human development theorists have argued that the way we perceive relationships between the past, the present, and the future influences our beliefs about how we develop as persons. Furthermore, as these beliefs or theories become part of our culture, they begin to play a major role in our actual development.

Theories of human development, once accepted into the prevailing culture, no longer operate sim-

ply as descriptions of human nature and its growth. By their nature, as accepted cultural representations, they, rather, give a social reality to the processes they seek to explicate and, to a degree, to the "facts" that they adduce to support (Bruner, 1990: 134).

In a parallel thesis, we could argue that prevailing theories about how the temporal aspects of a market/industry are interrelated, once accepted generally, influence the growth strategies and, ultimately, the fate of firms in that market (Geroski, 2003; McNamara, Halebian, & Dykes, 2008; Short, Payne, Suarez, & Lanzolla, 2008).

Furthermore, in both human development and firm growth, beliefs about what shapes history are constituted through linguistic tools. This is in line with Garud and Giuliani's view of "text, context, and subtext . . . as constituent elements of distributed yet emergent agency" (2013: 158). Various facets of the role of language in shaping the connections between action, meaning, and reality have been outlined by others as well (Bruner, 1990; Ford & Ford, 1995; Gardner & Laskin, 2011; Porac, Thomas, & Badenfuller, 1989; Rorty, 1989; Sternberg, 2000; Taylor, 1971; Weick, 1979). But Garud and Giuliani point to an interesting ontological dichotomy between agency as located in individuals and agency as distributed and emergent.

From a pragmatist's perspective, this raises the question, "What difference does this difference make?" (James, 1997).¹ In tackling that question, we begin to see a third possibility offered by the quote from Bruner, cited above—namely, that the very person and identity of "the entrepreneur" could be and often is an artifact of agentic narratives about entrepreneurship (Fauchart & Gruber, 2011). Another way to think about this is to notice that in societies where the view of agency as located within individuals dominates narratives, more individuals begin to act entrepreneurially (Hayek, 1948; James, 2009; Sarasvathy, Dew, & Ventresca, 2009). Thus, irrespective of the ontological validity of the locus of agency being distributed or focused, deliberate or emergent, widespread sociocultural ac-

ceptance of the belief that individuals can make an active difference in shaping reality makes people capable of acting in ways that do make a real difference. Clearly, this issue of what difference a belief in individual agency makes, whether at the level of the individual or at a more macro level, ought to be on our empirical agenda for future research.

NARRATIVES EMBODIED IN ARTIFACTS

Garud and Giuliani also point to another important touchpoint between narratives and artifacts when they speak of "the infusion of a 'pet rock' with value" (2013: 159). This evokes the possibility that narratives can be embodied in artifacts. But the relationship between narratives and artifacts may also be reflexive. Just as narratives could infuse value in something as mundane as a rock fragment, narratives that are given physical shape in artifacts may become real drivers of social and economic change. Consider the influence of science. Narratives about science and reason are no doubt powerful in changing the way we live. But at least one important way they do so is through the artifacts that embody scientific tropes—that is, technology. Just as narratives infuse artifacts with meaning and value, artifacts shape and give value to narratives. That is why smartphones and sunglasses and the umpteen gadgets we use every day are as powerful and influential advocates for scientific reasoning as are our most renowned philosophers of science (Ihde, 1991).

We propose that the artifacts that entrepreneurs build, be they products, ventures, markets, or opportunities, embody as well as shape the narratives of the times and spaces in which they occur. While collecting data for a study of the role of state socialism on organizational structure, Ansari, Bell, and Lundblad (1992) discovered an interesting detail about the role of West German television in bringing down the Berlin Wall. As reported in Ansari, Bell, and Lundblad (1991), it was the commercials, not the programming, on West German television that had the most impact. Because of experience with their own government's media outlets touting economic successes in the face of routine shortages (Browne, 1999), East Germans tended to dismiss as government propaganda the narratives featured in the actual programming of West Ger-

¹ "There can be no difference anywhere that doesn't make a difference elsewhere—no difference in abstract truth that doesn't express itself in a difference in concrete fact and in conduct consequent upon that fact, imposed on somebody, somehow, somewhere and sometime" (James, 1997: 96).

man television stations. They believed the commercials, however, because they knew the commercials were "West Germans talking to themselves" (Ansari et al., 1991: 21). Moreover, East German television carried very few advertisements (Browne, 1999: 246). In effect, the products being advertised on West German television embodied a far more evocative narrative about the progress of the West relative to the East. Ultimately, this embodied narrative helped in some measure to move East Germans to break down the Berlin Wall.

NARRATIVES THEMSELVES AS ARTIFACTS

Finally, we would like to offer the provocation that, often, dominant narratives are themselves artifacts of the entrepreneurial method. Consider where new narratives come from—especially narratives about new ends worth pursuing. To the extent that intersubjective interaction is core to an artifactual conception of entrepreneurship, it is easy to see not only how narratives may frame, constrain, and shape those interactions but also how new narratives may emerge from those interactions. Narratives about the creditworthiness of the poor have come to dominance in the last three decades of the twentieth century, thanks at least in part to the Grameen Bank. But before Grameen became a "bank," Mohammed Yunus, the founder of what was then the Grameen Foundation, found himself stuck indoors for almost an entire day while attending a conference on rural development, talking with an old classmate (Yunus, 2007). The reason for the confinement was a sudden military coup in Bangladesh by General Hussain Muhammad Ershad. During the forced time together, the conversation between Yunus and his classmate turned to the necessity and possibility of falsifying the dominant narrative that "the poor were unbankable." Later, the classmate, Abul Maal Abdul Muhith, was appointed finance minister by General Ershad and worked to legally transform Grameen into a bank.

On the one hand, it is difficult not to see Grameen as the contrived artifact designed and implemented by a heroic entrepreneur. On the other hand, it is also difficult to deny the importance of contingency, conversation, and an emergent flow of history that led to the artifact. Yet we believe that the interaction itself is worth

examining and understanding in more detail. A focus on the intersubjective allows us to study all entrepreneurship phenomena, even narratives themselves, as artifactual.

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