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Response to the Commentaries: The Individual-Opportunity (IO) Nexus Integrates Objective and Subjective Aspects of Entrepreneurship

Shane's 2012 article, "Reflections on the 2010 AMR Decade Award: Delivering on the Promise of Entrepreneurship As a Field of Research," was a reflection on the field of entrepreneurship in the decade following the publication of Shane and Venkataraman's 2000 article, "The Promise of Entrepreneurship As a Field of Research." This retrospective has stimulated the dialogue commentaries by Alvarez and Barney (2013) and Garud and Giuliani (2013). Collectively, the two

We appreciate Joseph Raffiee's suggestions on this dialogue.

commentaries take issue with three dimensions of Shane's article: (1) why a case still needs to be made for the distinctive domain of entrepreneurship, (2) the definition of opportunity, and (3) the consistency of the individual-opportunity (IO) nexus perspective with "evolutionary" perspectives on entrepreneurship. In this response we address these three points.

ALVAREZ AND BARNEY'S COMMENTARY

Alvarez and Barney take issue with Shane's (2012) argument that, to become a distinct field, entrepreneurship must explain and predict empirical phenomena that other fields do not explain and predict. We believe that Alvarez and Barney misunderstand the point of the article because they say Shane asserts that the distinctiveness of the field depends on who conducts research on entrepreneurship. However, Shane (2012) holds that who does the research is *irrelevant* to whether a field is distinctive. Instead, he argues that, for a field to be distinctive, it has to do something unique. If another field researches the same topics as the field of entrepreneurship, then the field of entrepreneurship is not distinctive.

Alvarez and Barney point out that much of what the entrepreneurship field claims to explain and predict the field of strategic management also claims to explain and predict. This is precisely the point being made in "Delivering on the Promise of Entrepreneurship As a Field of

Research." While considerable overlap exists between fields—such as economics, sociology, and strategy—for a field to be distinctive, some aspect of it must be unique. Shane (2012) argues that the field has not yet made the case for its distinctiveness and suggests that it work harder to make that case.

Alvarez and Barney write that "Shane (2012: 12) rejects an alternative to establishing the distinctiveness of entrepreneurship—for the field to develop new theories that can be applied to study phenomena of interest in other fields in new, interesting ways" (2013: 156). However, Shane (2012) does not claim that this alternative is impossible but, rather, that it hasn't happened and that he (personally) doesn't think it is likely to happen. If Alvarez and Barney think this approach will show the distinctiveness of the field, they should make that case.

The heart of the disagreement between Shane (2012) and Alvarez and Barney (2013) lies in whether opportunities can always be defined as existing independent of human cognition, and whether the conceptualization fully takes into account the subjective perceptions of individuals in the entrepreneurial process. In Table 1 we compare the two approaches. What is striking about this comparison is that there is considerable overlap in terms of constructs between the two approaches. In particular, both approaches explicitly theorize about perceptions that individuals have about the existence of an opportunity for profit.

TABLE 1:
Contrasting the IO Nexus with Alvarez & Barney

Concept	IO Nexus	Alvarez and Barney (2007, 2010)
Subjective perceptions by individuals about the existence of unexploited profitable combinations of what is technologically feasible and market feasible	Conjecture "Hypotheses in the entrepreneur's theory of the opportunity . . ." Shane (2003: 43) Or business idea Shane (2012: 14)	Creation opportunity "Social constructions that do not exist independent of entrepreneur's perceptions" Alvarez & Barney (2007: 15)
Unexploited profitable combinations of what is technologically feasible and market feasible; exist independent of human perception	Opportunity "Situations in which new goods, services, raw materials, markets and organizing methods can be introduced through the formation of new means, ends, or means-ends relationships" Eckhardt & Shane (2003: 336)	Not defined

However, where they differ is important. Alvarez and Barney focus much of their commentary on their conceptualization of opportunity—which they term *creation opportunity*—and how they see creation opportunity as different from the opportunity construct within the IO nexus. In an earlier article they wrote that “creation opportunities are social constructions that do not exist independent of entrepreneur’s perceptions” (Alvarez & Barney, 2007: 15). Thus, in the Alvarez and Barney approach (2007), the term *opportunity* appears to be used to refer to subjective perceptions of individuals.

The IO nexus represents a different perspective, where opportunities are defined as “situations in which new goods, services, raw materials, markets, and organizing methods can be introduced through the formation of new means, ends, or means-ends relationships.” (Eckhardt & Shane, 2003: 336). The IO nexus has a separate construct to represent the subjective perceptions that individuals have about the existence of an opportunity for profit—a point that Alvarez and Barney appear to have overlooked. That construct has most consistently been called a “conjecture” (Eckhardt & Shane, 2003; Shane, 2003), although Shane (2012) offers the term *business idea* as a synonym because the term *conjecture* has not been noticed consistently by researchers.

The IO nexus incorporates technological feasibility and market feasibility into the theory and refers to the two as *opportunity*. As Eckhardt and Ciuchta write, opportunities are “situations in which goods and services can be sold for profit, opportunities are a subset of what is technologically feasible at a given point in time” (2008: 210). Alvarez and Barney apparently recognize that the market may serve as a constraint when they write that “when entrepreneurs act to exploit these socially constructed opportunities, they interact with an environment—the market—that tests the veracity of their perceptions” (2007: 15).

However, in their work Alvarez and Barney appear to ignore the importance of technological feasibility, and they provide no articulation within their approach to refer to a condition where their “creation opportunity” might not actually be technologically feasible, nor might it be infeasible, because of market constraints. We are left wondering how, exactly, constraints fit into their view. If their view is that no con-

straints exist, then we wonder how that aligns with the realities practicing entrepreneurs face. If their view is that constraints do exist, then we wonder what is different in their approach from that of the IO nexus, which explicitly addresses both subjective perceptions of individuals (conjecture/business ideas) and the bounded set of what is feasible (opportunity).

We are also confused by Alvarez and Barney’s (2013) view that the IO nexus is inconsistent with evolutionary approaches to entrepreneurship and their claim that their theory builds on “evolutionary realism.” Eckhardt and Ciuchta (2008) is an evolutionary model of entrepreneurship that is a population-level implementation of the IO nexus. Furthermore, we wonder how the Alvarez and Barney approach can be interpreted as evolutionary in the tradition of Campbell (1969), as they claim (Alvarez & Barney, 2007: 15), when their approach is silent on fundamental elements of Campbell’s evolutionary theory, such as variation, selection, and retention.

GARUD AND GIULIANI’S COMMENTARY

Garud and Giuliani’s commentary (2013) also emphasizes the subjective aspects of entrepreneurship. The authors describe a narrative perspective involving the interaction of humans and artifacts over time.

Garud and Giuliani’s conclusion makes three points, two of which Shane (2012) agrees with and one of which requires clarification. First, Garud and Giuliani write “that entrepreneurial journeys are dynamic processes requiring continual adjustments by actors” (2013: 159). Shane (2012) agrees, arguing that entrepreneurship is a dynamic process and that, by definition, dynamic processes involve adjustment.

Second, Garud and Giuliani write that “involved actors . . . navigate . . . [by renarrating] their journeys given the possibilities that emerge, the futures they can conceptualize, and the pasts that they recollect” (2013: 159). This is not inconsistent with Shane (2012). Entrepreneurs try to make sense of the process, and their sensemaking is based on their perception of the past, present, and future.

Third, Garud and Giuliani write that “a narrative perspective suggests that discovery and creation are both part of entrepreneurial opportunities” (2013: 159). Here we need to clarify again the distinction between opportunities and

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-