“**The entrepreneurial journey as an emergent hierarchical system of artifact-creating processes”** (Journal of Business Venturing, 2015, 30(3), p.603-61).

We are Paul Selden and Denise Fletcher, authors of the above article. In this short introduction, we want to explain how we addressed our research gap and outline our contribution. See also the journal website where you can watch a video presentation of this text and have a free download of the paper until 8th July, 2015.

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**The research gap**

The first thing to say is that we take the view that future markets are unknowable and that the entrepreneur acts under conditions of genuine uncertainty by making adjustments to provisional strategies in the light of contingent experience. This view has become increasingly influential in recent times through process perspectives that emphasise concepts like effectuation, emergence, bricolage, enactment and dynamic creation. The challenge at the heart of this literature is to reconcile the purposefulness of entrepreneurial action with the entrepreneur’s experience of unpredictable contingent events. On the one hand, the journey emerges as a systemic whole driven by the narrative of strategic visions and endogenous dynamics. On the one hand, the events of an entrepreneurial journey are circumstantial to time and space.

The process literature has made important contributions to our understanding of this apparent contradiction. Effectuation theory, for example, explains how the entrepreneur controls the future by adjusting provisional decisions to contingent events as they arise. What remains under explored is whether or not an entrepreneurial event can be explained in relation to the prior entrepreneurial journey taken as a whole. As McMullen and Dimov (2013) have pointed out, the whole journey is an “indelible part” of explaining an outcome. In our article, we address this research gap by asking, “Can a holistic conception of the entrepreneurial journey be used as a unit of analysis in explaining entrepreneurial events?”

Our first challenge was how to conceptualize the entrepreneurial journey as a unified emergent process. We adopted ‘artifact-creation’ as a unifying concept.

**Entrepreneurship as artifact-creation**

The challenge of unifying the entrepreneurial process, is, of course, nothing new. This is the issue at the heart of Shane and Venkataraman’s ‘The Promise of Entrepreneurship Research’. Shane and Venkataraman use the concept of opportunity to unify the domain of entrepreneurship. They view an opportunity as an objective condition, context and outcome of entrepreneurial activity. The problem with this approach, from a process perspective, is that an opportunity is not external to entrepreneurial action, but emerges at the interface between purpose and contingency. Consequently an opportunity takes on different ontological forms as the journey develops. Process theorists stress that these forms are initially intangible, such as market possibilities and abstract business ideas, and then, as the journey progresses, take on progressively more tangible forms, such as business models, organizational processes and commodities.

What unifies the entrepreneurial journey is, therefore, the process of creating increasingly tangible outcomes. Lichtenstein (2010) has called these outcomes ‘emergent outcomes’, while Venkataraman et al. (2012) refer to them as ‘artifacts’ drawing on Herbert Simon’s notion of “sciences of the artificial”. In fact, the Venkat article, building on previous work by Sarasvathy, proposes that entrepreneurship research should move forward as a science of the artificial on the basis that entrepreneurs create future markets through the design of artifacts. We consider this proposal to be an important development in process research because it engenders an action-based, rather than environment-based, solution to the problem of unifying the entrepreneurial journey. We, therefore, proceeded from the premise that the entrepreneurial journey is unified by artifact-creating processes.

The next challenge was to explain how the *emergence* of the journey is unified by artifact-creating processes. In addressing this challenge we drew on Herbert Simon’s notion of “hierarchical complexity”, and more widely on complexity science concepts, such as path-dependence, information feedback, phase transitions, bifurcation points and upward/downward causation.

**An emergent hierarchical system**

Inspired by Simon’s notion of hierarchical complexity, we conceptualize the entrepreneurial journey as a hierarchy of interrelated subsystems associated with different levels of emergence. These levels, from lowest to highest are: (1) entrepreneurial sense-making, (2) entrepreneur-stakeholder interaction, (3) firm level interaction; and (4) market level interaction. The journey emerges hierarchically as new subsystems, at higher levels, are progressively incorporated into the system. The creation of new artifacts at each level is fundamental to this process of hierarchical emergence.

Herbert Simon explains that artifacts embody ‘purposefulness’ and in a social context this means that an artifact is a medium for connecting past activities with future activities. For example, a business model is an artifact that the entrepreneur enacts in social relationships in order to connect an underlying business idea with the future organization of concrete resources. In general terms, we, therefore, propose that the entrepreneur (or entrepreneurial team), creates artifacts as enabling and constraining contexts on the emergence of the entrepreneurial journey. On the one hand, a new artifact reinforces endogenous system dynamics at lower levels. On the other hand, the artifact drives higher level emergence, because it contextualizes larger aggregations of resources and activities.

In relation to complexity theory, this means that the emergence of an entrepreneurial journey is not characterized by self-organization in the sense of decentralised and spontaneous emergence that characterises physical, biological and higher level social systems, such as market processes (see for example Chiles et al, 2004). Rather, the entrepreneur uses artifacts to purposefully influence interaction between social entities and then makes adjustments to self-organizing forces that feedback information from higher level processes. This explains why entrepreneurial ventures often end in failure because individual purpose is independent of wider self-organizing forces.

**Explaining entrepreneurial events**

Having briefly outlined our conceptualization of the entrepreneurial journey as an emergent hierarchical system, I now want to move on to the implications of this framework for explaining entrepreneurial events. In the context of the emergent hierarchy, the first thing to say is that the critical events of an entrepreneurial journey relate to processes of artifact emergence – such as the event of recognizing when an artifact needs to be modified because of problematic contingent events.

Critical events can, therefore, be explained in terms of the endogenous dynamics of a process of artifact emergence. A new artifact is created at a higher level of emergence by enacting or testing the viability of a lower level artifact against contingent events. For example, an entrepreneur enacts a business idea in the context of stakeholder interactions in order to develop a business model. If entrepreneur-stakeholder disagreements ensue and cannot be resolved, the system might reach a threshold, or bifurcation point, where these problematic fluctuations cannot be assimilated and the entrepreneur is impelled to change the business idea and initiate a new pattern of emergence.

In the article, we illustrate the potential of our conceptual framework to explain entrepreneurial events in the context of the Republic of Tea – an autobiographical account of the setting up of a tea business. In this case study, we show how a transformational event into a new pattern of artifact emergence emerges from problematic fluctuations in an entrepreneur-stakeholder subsystem.

**Research implications**

We conclude that an entrepreneurial event should be explained in relation to processes of artifact emergence as the unit of analysis. This means explaining an event in relation to the patterns of artifact emergence that constitute the prior emergence of the journey.

In the article we discuss some research implications of this approach to theory development. These include implications for our understanding of how the entrepreneurial journey emerges through the relationship between purpose and contingency; implications for an empirical focus on events relating to the creating, testing and modifying artifacts, and implications for our understanding of how multiple contexts and levels of analysis are combined in the explanation of an event.

We acknowledge that this framework is at an early stage of development and we hope to further explore its potential in the not too distant future. We also hope that others might build on our framework and apply it to new situations.