

# Chapter 8

## Understanding Entrepreneurship through Chaos and Complexity Perspectives

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### **ABSTRACT**

*This chapter aims to cover entrepreneurship as an emergent field of scholarly inquiry in the social sciences. Four different dominant paradigms are developed in this research field. The chapter shows that, in the last two decades, several scholars adopted the chaos and complexity sciences as important perspectives in the social sciences and especially in management sciences, small business and entrepreneurship. Then, the chapter aims also to introduce the pioneering contributions of these scholars intending to understand entrepreneurship (its conditions, properties and processes of emergence) through the chaos and complexity theories and produce valuable knowledge in this field. And finally, the chapter presents some discussions and implication for future entrepreneurship research perspectives related to three research mainstreams: social, strategic entrepreneurship and entrepreneurial learning. In conclusion, the chapter invites researchers to benefit from the chaos and complexity perspectives in order not to miss opportunity to enrich their theory building in entrepreneurship research.*

### **INTRODUCTION**

The 21<sup>st</sup> century seems marked by a gain of entrepreneurship as an important social (societal) and economic phenomenon driving economic growth and development of a country; as an emerging field of research in quest of scientific consensus among research community, and as an academic and teaching subject promoting a paradigm shifting in education and training at university (Davidsson, 2003; Gibb, 2002a; 2002b; Fayolle, 2007). Entrepreneurship has become a “burning issue” for everybody and ev-

DOI: 10.4018/978-1-5225-1923-2.ch008

erywhere. It has won and is occurring globally at higher rates and with more capital behind it than ever (Stevenson, 2000).

This chapter aims to cover entrepreneurship as an emergent field of scholarly inquiry in the social sciences. Four different dominant paradigms have been emerged and developed in this research field. And due to its dynamic and complex nature, this challenging field of research has to be understood by solid foundations from the social sciences as suggested by Bygrave & Hofer (1991).

Then, the chapter shows that, in the last two decades, several scholars adopted the chaos and complexity sciences as important perspectives in the social sciences and gave justification and rationale for their inclusion into them (Mathews, White, & Long, 1999). Others scholars pursued the same reasoning by appreciating chaos and complexity sciences as board ranging subject in organisation and management sciences (Brown & Eisenhardt, 1998; Lissack, 1997; 2005; McKelvey, 1999; McMillan, 2008; Smith & Humphries, 2004; Stacey, 1995; 2011), and especially in small business and entrepreneurship (Crawford & Kreiser, 2015; Fuller & Moran, 2000; Lichtenstein, 2011a; McKelvey, 2004).

After emphasising the importance of the chaos and complexity theories, the chapter aims to cover the pioneering contributions of theses scholars intending to understand entrepreneurship (its conditions, properties and processes of emergence) through these theories and produce valuable knowledge in the field (e.g., McKelvey, 2004; Lichtenstein, 2011a...).

The chapter presents, at the end, some discussions and implication for future entrepreneurship research perspectives and directions related to three research mainstreams: social entrepreneurship, strategic entrepreneurship and entrepreneurial learning. Recent advances in the chaos and complexity perspectives seize important promise for a more thorough understanding of the social entrepreneurial activities (Goldstein, & Hazy, 2008), for a modelling of the inherent dynamic and nonlinear outcomes of the strategic corporate entrepreneurship, and for a focusing on the interactions between different levels of entrepreneurial learning to establish how emergent properties emerge.

And finally, the chapter concludes its development by summing up the different applications of complexity sciences aiming to foster the study of entrepreneurship when focusing on dynamic and emergent entrepreneurial phenomena. As suggested by Zahra (2007), the chapter invites researchers to benefit from these sciences in order not to miss the opportunity to enrich their theory building in entrepreneurship research.

## **ENTREPRENEURSHIP, AN EMERGING FIELD OF RESEARCH**

### **Nature of Entrepreneurship and Dominant Paradigms**

Since several years, research in entrepreneurship did not stop attracting researchers from different disciplines of social sciences. The field of entrepreneurship exploded and spilled over almost all the soft sciences and management sciences (Filion, 1997). But, the difficulty to develop it resides in enduring the lack of theoretical basis and the absence of consensus for defining and legitimating it scientifically, and for identifying the boundaries of the paradigm (Low & McMillan, 1988; Bygrave, 1989a; Bygrave & Hofer, 1991; Gartner, 1990; 2001; Cunningham & Lischeron, 1991; Bruyat & Julian, 2001; Davidsson & Wiklund, 2001). This lack of consensus is due to the nature of the phenomenon: entrepreneurship is seen as a complex, heterogeneous, equivocal, multiform and multidimensional phenomenon (Cunningham & Lischeron, 1991; Bruyat & Julian, 2001; Gartner, 1985). It evokes a large variety of entrepreneurial

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