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Prolegomena to a New Ecological Perspective in Entrepreneurship

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PROLEGOMENA TO A NEW ECOLOGICAL PERSPECTIVE IN ENTREPRENEURSHIP

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ABSTRACT

This paper offers preliminary discussion of a new ecological perspective in entrepreneurship research. Six principles of this perspective are developed. These principles are: (1) The new ecological perspective embraces two ontological platforms: ecosystems and ecological succession, (2) The new ecological perspective operates at multiple levels of analysis, (3) Ecological problems are complex and often non-reducible, (4) The new ecological perspective requires a holistic approach to understanding, (5) The new ecological perspective embraces theory and political reality, and (6) Ecosystems have their own rationality. Implications for researchers and practitioners of entrepreneurship are discussed.

INTRODUCTION

Prior empirical work by the authors (McKenzie & Sud, 2008) found that an ecological perspective afforded new insight into the study of entrepreneurial failure. This paper offers preliminary discussion of a new ecological perspective in entrepreneurship research.

Scholars have long felt that the field of entrepreneurship does not have a cohesive explanatory, predictive or normative theory (Amit et al., 1993) and lacks a conceptual framework (Shane & Venkataraman, 2000). Bygrave (1989a) criticized entrepreneurship researchers for being guilty of "physics envy", which he defines as the inappropriate imitation of the theoretical and empirical methods of advanced rational scientific paradigms. Bygrave (1989b) suggested that a research methodology suitable to the study of entrepreneurship "must be able to handle nonlinear, unstable discontinuities." The position of this paper is that a new ecological perspective could offer suitable research insights.

The paper proceeds as follows: first, the literature of entrepreneurship research is reviewed to establish the background for current entrepreneurial theories. Next, past research utilizing the new ecological perspective is reviewed to discover the historic boundaries of this perspective. The social circumstances surrounding the emergence of a new ecological perspective are described and propositions defining this new perspective are developed. The paper addresses the implications for researchers and practitioners in the field of entrepreneurship. The paper concludes that the new ecological perspective warrants further attention of entrepreneurship scholars.

LITERATURE REVIEW

Entrepreneurship research has three founding disciplines: economics (Schumpeter, 1934), psychology (McClelland, 1961) and sociology (Weber, 1904). While, the historical development of the term has been well documented by a number of researchers (Hisrich, 1986, Gartner, 1988, Hoselitz, 1960), the word "entrepreneurship" has come to mean different things to different people. Most researchers have defined the field solely in terms of who the entrepreneur is and what he or she does (Venkataraman, 1997 #803). Thus, the focus of the entrepreneurship literature has traditionally been restricted to the relative performance of individuals or firms in the context of small or new businesses. In contrast, Gartner (1988) attempted to move the field of entrepreneurship research towards the study of what the entrepreneur does and not just who the entrepreneur is.

The literature of entrepreneurship research can be grouped into three underlying themes (Stevenson & Jarillo, 1990). These three main streams of research are (1) what happens when entrepreneurs act? (2) why do entrepreneurs act? (3) how do entrepreneurs act? In the first theme, the researcher is concerned with the results of the actions of the entrepreneur. In the second the primary interest of the researcher is the cause of individual entrepreneurial action. The third theme has researchers attempting to analyze the characteristics of entrepreneurial management (i.e. how entrepreneurs are able to achieve their aims).

The theme of what happens when entrepreneurs act involves studying the results of entrepreneurship and studies the net effect on the general economic system. This field has been dominated by economists with the earliest interest being expressed by Cantillon (1755) who coined the term "entrepreneur" and observed that entrepreneurship entails bearing the risk of buying at certain prices and selling at uncertain prices. Say (1828) broadened the definition to include the concept of bringing together the factors of production thus making the entrepreneur the protagonist of economic activity in general. Schumpeter (1934) considered the carrying out of new combinations as enterprise while the individuals whose function it is to carry them out could be termed "the entrepreneur". Entrepreneurship is thus the process by which the economy as a whole moves forward with innovation as the essence.

The theme of why entrepreneurs act has its basic discipline in psychology/sociology and revolves around studying and analyzing the causes of entrepreneurship. Research in this theme has been at two levels of enquiry. The first conceptualizes entrepreneurship as a psychological characteristic of individuals, which can be described in terms such as creativity, daring, aggressiveness etc. (Wilken, 1979). A second level of enquiry conceptualizes entrepreneurship as a social role that may be enacted by individuals in different social positions. Pioneered by McClelland (1961), other contributions include research by Delacroix and Carrol (1983), Greenfield, (1979) and Pennings (1982).

The theme of how entrepreneurs act covers the study of strategy formation in entrepreneurial firms and is now a legitimate area of inquiry (Mintzberg & McHugh, 1985). Stevenson and Jarillo

(1990) observed that there are two important areas of research in this domain. These are (1) studies concerned with different life cycles through which ventures pass and the problems entrepreneurs face as their company's mature (Gray & Ariss, 1985, Quinn & Cameron, 1983) and (2) studies that try to find predictors of success for new ventures by relating such success to either the entrepreneurs background, the chosen strategy, environmental considerations or some mixture of these (Cooper & Bruno, 1975, Dollinger, 1984, Miller, 1983). This stream of research covers the field of entrepreneurial management and hence focuses on understanding and improvement of actual managerial practice. Entrepreneurial and administrative behaviors are dimensions at two ends in a range of behavior, which extends between that of a trustee and of a promoter (Stevenson & Jarillo, 1990). A promoter would be confident of his ability to seize opportunities regardless of resources under current control while a trustee would emphasize efficient utilization of existing resources (Stevenson, 1983).

From these themes several broad definitions of entrepreneurship (Alvarez & Barney, 2000, Brockhaus & Horowitz, 1986, Bull & Willard, 1993, Hart et al., 1995, Sharma, 1998, Nodoushani & Nodoushani, 1999, McKenzie, Ugbah & Smothers, 2007), to name a few) have emerged and these definitions have enabled researchers to engage with both its individual and organizational manifestation. However, this perspective limits the study of the entrepreneurship by focusing on the actions of the individual and organization. Little study is given to the broad economic and social context in which the entrepreneur operates.

The limitation of contemporary approaches to entrepreneurship was brought to light in the recent work of Aldrich and Cliff (2003) which considers the intertwined nature of family and business. Evidence of this phenomenon was provided by (McKenzie, Ugbah & Smothers, 2007). Granovetter (1985, p.481) proposed "economic action is embedded in structures of social relations". This perspective stresses the importance of personal relationships and networks in the analysis of economic activity and suggests the importance of a holistic view in the study of business ventures.

In order to overcome the limitation of the study of the entrepreneurship on the actions of the individual and organization, inquiry needs to be expanded into the broad economic and social context in which the entrepreneur operates. This expansion forms the basis of the new ecological perspective.

THE ECOLOGICAL PERSPECTIVE

Background

Ecology, a term coined by Ernst Haeckel, studies "the relations of living organisms to the external world" (Tamm, 2004). Cowles (1898, 1899) is credited with establishing the concept of ecological succession. Thus, the new ecological perspective embraces two ontological platforms: ecosystems and ecological succession. Ecosystems are conceptualized as regulated natural systems

in a state of dynamic equilibrium unless disturbed by an outside force (Kingsland, 2005, p.106). Ecological succession is conceptualized as the process by which a natural community moves from a relatively simple level of organization to a relatively more complex level of organization. Allee (1932) showed that success and failure in biological terms was more complex than a mere struggle for survival; cooperation amongst competitive species and exogenous factors had to be taken into account in properly model the evolution of species.

The ecological perspective has been applied to a number of disciplines outside of the biological sciences. Steward (1955) proposed cultural ecology as a holistic viewpoint for anthropology. Gardner (2005) proposed a link between the ecological perspective and the study of social justice. Blewitt (2006) connects the ecological perspective to education. In the study of management, Sisaye (2006) has linked the ecological perspective to management accounting; Tisdale (2004) and Nelson and Winter (1974) have linked the ecological approach to economics. Ehrenfeld (2000) has linked the ecological perspective to management. Within the discipline of entrepreneurship research, the ecological perspective has been applied using both the ecosystems ontological platform and ecological succession ontological platform. The ecosystem ontological platform has been useful in the study of industry clusters. The ecological succession ontological platform has been useful in studies of organizational evolution.

Ecosystems

The study of industry clusters has focused on the presumed impact that clusters have on regional economic development and national competitiveness (Rocha, 2004, p.368). Marshall (1890, p.225). A comprehensive review of the literature on industry clusters has been presented by Rocha(2004). Rocha and Sternberg (2005) have argued that industry clusters involve more than the spatial proximity proposed by Marshall. They concluded that the economic power of clusters stems from the personal relationships derived from geographical proximity, inter-firm networks and inter-organizational networks (Rocha & Sternberg, 2005, p.288).

Thorton (1999, p.21) reviewed interdisciplinary literatures on organization theory to suggest : "The idea that individuals and organizations affect and are affected by their social context is a seminal argument in both classic and contemporary sociology and has been applied to the study of entrepreneurship at different levels of analysis." Thorton concluded that Weber's (1904) theory of the entrepreneurial spirit underlies the dominant perspectives of entrepreneurship and that it is time to shift to multilevel models, which embrace the ecological perspective. Studies into the cluster of entrepreneurship in Silicon Valley by English-Lueck (2002), Kenney (2000), Koepp (2002) and Saxenian (1994) have highlighted the value of the holistic approach to research embodied in the ecological perspective.

Ecological Succession

Van de Ven and Poole (1995) suggest four theoretical explanations for how and why change occurs: life-cycle theory, teleological theory, dialectical theory and evolutionary theory. According to life-cycle theory, the developing venture has pre-configured form which moves the venture towards its subsequent form. Empirical evidence for this view in entrepreneurship has been found by researchers such as Bamford et al (2000). Teleological theory suggests that the philosophical doctrine or goal of the entity forms its guiding movement. Empirical evidence for this view in entrepreneurship has been found by researchers such as Lumpkin et al (1998). Dialectical theory assumes that organizations exist and compete in a pluralistic world. Empirical evidence for this view in entrepreneurship has been found by researchers such as Covin et al (2000). Evolutionary theory (referred to in this paper as ecological succession theory) is not a set of deductively linked law like statements but is more like a system of loose but apparently true and heuristic propositions and enables the generation of testable hypothesis (Langton, 1984, p.352). Van de Ven and Poole (1995, pp.533-534) conclude: "…observed change and development processes in organizations often are more complex than any on of these theories suggests because conditions may exist to trigger interplay amongst several change motors and produce interdependent cycles of change."

Ecological succession can be traced to Hannon and Freeman (1977) who analyzed the effects of environment on organizational structure and proposed this as an alternate to then dominant adaptation perspective. Ecological succession studies populations of organizations focusing on how they change over time especially through demographic processes. It considers the rise of new organizational forms and the demise or transformation of existing ones while paying attention to population dynamics especially the processes of competition among diverse organizations for limited resources such as membership, capital and legitimacy (Hannan & Freeman, 1989).

Ecological succession unites in a single coherent framework a concern for entrepreneurial outcomes and the processes and contexts making them possible using the basic concepts of variation, selection, retention and struggle over scarce resources (Aldrich, 1999, p.21). Variation refers to a departure from routine or tradition and has been aptly described by Aldrich as the raw material from which the next stage selection process "culls those that are most suitable" (Aldrich & Ruef, 2006, p.18). Variation may be both intentional (which occurs when people actively attempt to generate alternatives and seek solutions to problems) or blind (which occurs independently of the environment or selection process). Selection is the process which ensures the differential elimination of certain types of variations and can be external (forces external to the organization that affect its routines and competencies) or internal (forces internal to an organization). Retention is the process whereby selected variations are preserved, duplicated or otherwise reproduced while the scarcity of resources ensures a contest to obtain them.

Ecological succession seeks to explain how particular forms of organizations come to exist in specific kinds of environments. Aldrich (2006, p.26) observed that these processes occur

simultaneously rather than sequentially and that they are linked in continuous feedback loops and cycles.

We can summarize the current application of the new ecological perspective in entrepreneurship with:

Proposition 1: *The new ecological perspective embraces two ontological platforms: ecosystems and ecological succession.*

LIMITS TO THE CURRENT ECOLOGICAL PERSPECTIVE

The ecological perspective operates at four levels of analysis: group, organization, population and community. However, researchers in the field of entrepreneurship have tended to limit their focus to studies of groups and organizations. For example, Aldrich (1990) has suggested that using an ecological perspective highlights the salience of organizations as key components of the environment. Other scholars, such as Thorton (1999) have observed that relatively little is known about the specific context of organizational founding others have attempted to pay more attention to the early days of rganizations, populations and communities (Aldrich & Ruef, 2006).

Dryzek(1983, p.26) has noted, "ecosystems exhibit a high degree of interpenetration." Interpenetration means that action at one level of analysis causes reaction as some other level of analysis. Allen et al (1987) have pointed to the difficulty ecologists face when confronted with studying complex systems at different levels of analysis. They note that moving to higher or to lower levels sometimes demands observation of entities that are hard to perceive and that observations must be conceptually linked before the structure can emerge (Allen et al., 1987, p.63). They also note that observation at different levels of analysis also may involve moving through boundaries that contain levels of analysis. These boundaries are often impenetrable and so linkages between the sides of the boundaries can be very difficult (Allen et al., 1987, pp.67-71). This broad perspective can be summarized in

Proposition 2: *The new ecological perspective operates at multiple levels of analysis.*

Homer-Dixon has developed a thesis that there is a gap between the scientific thinking that can be applied to the solution of social problems such as pollution, global warming and overpopulation and the humanistic thinking required to successfully define the problems within an acceptable social context. Homer-Dixon (1995, p.591) describes technical solutions to social problems as *technological ingenuity* and the definition of social problems as *social ingenuity*. He refers to the missing knowledge between these two types of ingenuity as the *ingenuity gap* (Homer-Dixon, 2000, p.193).

Smith (2003) has highlighted the need for integration of social and ecological science. Allen et al (2003, p.27) noted, "…the term *ecosystem approach* explicitly includes an economic component." Luke (1997, p.1) has noted that the conflicting agendas of environmentalism and consumerism have become complimentary. Luke (2006, p263) attempts to explain this integration of conflicting agendas through the introduction of Foucault's (1978) unification of biologic and historical reasoning. Ulanowicz (1997) noted that ecological researchers face many problems arising out of the need to work concurrently at multiple levels of analysis. Theoretical paradigms that work at one level of analysis often conflict with those that operate at another level of analysis. Hagen (1992, pp.136-138) has noted that the holistic nature of ecological problems makes them non-reducible and thus difficult to conceptualize and to solve.

Proposition 3: *Ecological problems are complex and often non-reducible.*

Studies of industry evolution by Arthur et al (2001) and Lindsay (2005) utilized complexity theory to develop new understanding of the development of industrial clusters. In both these studies, the researchers have found that that new insight can be derived from the ontological perspective of interpretive inquiry.

Interpretive inquiry includes a broad set of epistemological perspectives including deconstructive, hermeneutic, literary, reflexive, structural and symbolic analysis (Lett, 1997, p.5). The breadth of these perspectives has led to Gadamar's (1975, p.350) assertion that "all understanding is interpretation". Interpretation offers an alternative to scientific inquiry. Whereas scientific inquiry attempts to refute skepticism, interpretation attempts to contextualize skepticism. James Bohman (1991, p.130) outlined skeptical contextualism as a two-part thesis: (1) that interpretation is universal and (2) that interpretation is holistic. This leads to the statement:

Proposition 4: *The new ecological perspective requires a holistic approach to understanding.*

THE NEW ECOLOGICAL PERSPECTIVE IN ENTREPRENEURSHIP

A significant body of literature has built around the framework of what Jameson (1997) described as the "cultural logic of late capitalism". While Man and Nature (Marsh, 1864) is credited as the seminal work of the conservation movement (Magoc, 2006), Silent Spring (Carson, 1962) is seen as the text which introduced the paradigm of ecology to mainstream Americans (Wessels, 2006, pp.61-62). The potential for catastrophic climate change documented in the film, An Inconvenient Truth (Guggenheim, 2006), has caused politicians and citizens to examine the limits of sustainable economic development (Leonard, 2007). Korten (2006) has referred to the shifting public awareness of the limits to growth and the need for a re-thinking of the fundamentals

as "the great turning." Hawken (2007, p.13) claimed: "The movement for equity and environmental sustainability comes as global conditions are changing dramatically and becoming more demanding."

Kottak (2006, p.40) has noted that the new ecological perspective "blends theory with political awareness and policy concerns". Dryzek (1983, pp.150-156) has referred to this process as *moral persuasion* which can take a number of forms: education, propaganda, discussion, reasoning, linguistic manipulation and exhortation. These observations lead to the statement:

Proposition 5: *New ecological perspective embraces theory and political reality.*

Central to this new paradigm is a concept that Dryzek (1983) termed *ecological rationality*. Ecological rationality proposed that ecosystems have their own rationality. Dryzek (1987, p.44) makes the claim that "in the absence of human interests, ecological rationality may be recognized in terms of an ecosystem's provision of life support to itself." Dryzek's frames the decision making of ecological rationality on the criteria of negative feedback, coordination, robustness, flexibility and resilience. Princen (2005, pp.351-352) has extended Dryzek's concept into practical terms, describing ecological rationality as:

> …an inclination toward long-term societal investment, an understanding of the environment as life support, a sense of excess, a belief that meaning derives from engagement, a recognition of humans' capacity to self-organize and innovate for collective self-management and restraint…underpin what I have termed ecological rationality.

Ecological rationality has been criticized for its circular reasoning (Princen, 2005, p.46). However, Nobel Laureate, Smith (2003) contrasted ecological rationality with the constructivist rationality of the standard socioeconomic science model and came to the conclusion that both rational orders exist simultaneously and that both rational orders are essential for understanding of socioeconomic life. This leads to the statement:

Proposition 6: *Ecosystems have their own rationality.*

DISCUSSION

The insights into a new ecological perspective developed in this paper have important implications for both researchers and practitioners. Researchers can benefit new ways of conceptualizing research problems and from new methodologies suggested by the new ecological

perspective. Practitioners can gain valuable insight into new ways of identifying opportunities and better positioning their new ventures to achieve sustainable competitive advantage.

Implications for Researchers

The implication of Proposition 1, "The new ecological perspective embraces two ontological platforms: ecosystems and ecological succession," is that the new ecological perspective is likely to continue to provide researchers with understanding of the relationship of new ventures to their environment and understanding of the success and/or failure of new ventures. Prior entrepreneurship research into industrial districts and industry clusters have proven fruitful both in increasing the understanding of entrepreneurship and increasing our understanding of the relationship between the entrepreneur and his or her environment. These studies show that new ecological perspective can provide a vehicle for gaining understanding of the entrepreneurial ecosystem. Aldrich (1990) has noted that the ecological perspective holds promise for combining our understanding of the traits and rates approaches to organizational founding through the metaphor of ecological succession.

The implication of Proposition 2, "The new ecological perspective operates at multiple levels of analysis," is that the new ecological perspective can serve as a tool allowing researchers protocols for the study of entrepreneurship over time and space. Allen et al (2003, pp.167-171) have noted the importance of criteria and scale as components of observation. Criteria are used to define what phenomena are in the foreground and therefore what phenomena are in the background. Scale creates boundaries of the fineness of distinction and scope of observation.

The implication of Proposition 3, "Ecological problems are complex and often non-reducible," for researchers using the new ecological perspective is that complexity theory offers a methodology suitable for the study of entrepreneurship. The new ecological perspective suggests that researchers in entrepreneurship might benefit from the use of complexity theory. Selvin and Covin (1997) have noted: "The high-growth firm is in a constant battle against disorder and chaos." Lichtenstein (2000, p.128) has suggested that complex system theories offer researchers a new approach to describe this dynamism. Studies such as those done by Arthur et al (2001) and Lindsay (2005) have shown that complexity theory can provide entrepreneurship researchers with new understanding.

The implication of Proposition 4, "The new ecological perspective requires a holistic approach to understanding, " suggests that researcher's are wrong in expecting predictive power from entrepreneurship theory. Guth (1995, p.171) has defined the criteria for good theory in entrepreneurship theoreticians as theory "that is capable of being refuted empirically and that provides explanation as well as prediction." However, Cooper (1993) has noted that research examining predictors of new firm performance has shown mixed results and limited findings to date. Dryzek (1983, p.194) has claimed "ecology is not a predictive science, only an explanatory one."

Since ecological problems are complex, the solutions are not teleological in nature, but rather derive from the self-organizing, self regulating nature of the ecosystems.

The implication of Proposition 5, "The new ecological perspective embraces theory and political reality," is that the new ecological perspective deals with practical reality and is likely to be conducive to fieldwork methodologies such as active research (Reason & Bradbury, 2001), institutional ethnography (Smith, 2005) and case study (Scholz & Tietje, 2002). In 2006, Bill Joy, founder of Sun Microsystems and partner in the venture capital firm Kleiner Perkins Caufield & Byers, told a reporter for BusinessWeek: "I think the greatest legal creation of wealth today is in the green area -- not just in the U.S. but in the developed world" (Bartiromo, 2006). Joy's strength has always been the development of new products out of his vision of current theory. Gary Erikson, the founder of Clif Bar, Inc. parlayed his understanding of the new ecological perspective into sole ownership of a multi-million dollar baking company (Erickson & Lorentzen, 2004).

Proposition 6, "Ecosystems have their own rationality," provides an explanation for the logic of Sarasvathy's effectuation theory. Sarasvathy (2002, p.95) has made the claim: "economics has failed to develop a useful theory of entrepreneurship because of its inability to break out of the static equilibrium framework." The alternative framework that she suggests is effectuation theory (Sarasvathy, 2001). Briefly stated, "effectuation processes take a set of means as given and focus on selecting between possible effects that can be created with that set of means" (Sarasvathy, 2001, p.245). Implied in this theory is the notion that entrepreneurship has its own rationality.

Implications for practitioners

Practitioners can gain two important lessons from the new ecological perspective. First, they can use this perspective as a new form of opportunity recognition; second, they can use this perspective as a means of better positioning their new venture in the community.

The new ecological perspective shifts the focus of opportunity recognition away from the over-simplified paradigm of neoclassical economics such as that presented by Hills and Shrader (1998). Shane (2000, p.449) found that:

> …(1) any given technological change will generate a range of entrepreneurial opportunities that are not obvious to all potential entrepreneurs; (2) entrepreneurs can and will discover these opportunities without searching for them ; and (3) any given entrepreneur will discover only those opportunities related to his or her prior knowledge.

Singh et al (1999) found that social networks are important at both the idea identification and opportunity recognition stages of the process. The new ecological perspective suggests that entrepreneurs can successfully identify opportunities by the societal level instead of at the

technological level. It would appear that there is empirical evidence to support this suggestion. Derwall et al (2005) found that socially responsible investing led to superior portfolio performance.

The new ecological perspective can serve practitioners by assisting them to better position their new venture in community. Jack and Anderson (2002, p.468) use the term embeddedness to identify "the nature, depth and extend of an individual's ties into the environment." They found that embeddedness provided the entrepreneur with increased support during the founding of the venture and a likelihood of increased competitive advantage.

This view is very different from the more traditional view of the relationship between the entrepreneur and the environment expressed by Hunt (2000), which views the environment as a source of resources for the firm. The central concept of resource advantage theory is that a firm's portfolio of resources can mean "comparative advantage in resources" leading to production at higher profits. The ecological perspective would suggest that resource advantage theory provides a short-sighted strategy. The longer-sighted vision provided by the holistic approach of the ecological perspective suggests that resources are public goods and in the long term will succumb to over use as outlined by Hardin (1968) in his allegory: The Tragedy of the Commons. Greenfield and Strickon (1979, p.348) have cautioned entrepreneurs:

> The consequences of some changes…may not always be viewed as beneficial by all members of the community in which they occur. In fact, from the perspective of the values and definitions of the members of a given population, they even result in reduced access to resources by some, perhaps as a consequence of new and increased constraints

The ecological perspective suggests that entrepreneurs would be better off building competitive advantage by embracing environmental citizenship. Szersynski (2006) has defined environmental citizenship as "a distinctive way of linking environmental concern, the public and the policy process." Porter and Van Der Linde (1995) point out that real competitive advantage can arise from good environmental citizenship. They cite the example of how German and Japanese car makers developed lighter and more fuel efficient cars in response to new fuel consumption standards. American automakers chose to fight the standards and lost billions of dollars and competitive advantage by attempting to avoid good citizenship.

CONCLUSIONS

This analysis has shown that the new ecological perspective is complex in nature. However, we have been able to establish propositions which outline some of the important principles in this new perspective. These principles are:

1. The new ecological perspective embraces two ontological platforms: ecosystems and ecological succession.
2. The new ecological perspective operates at multiple levels of analysis.
3. Ecological problems are complex and often non-reducible.
4. The new ecological perspective requires a holistic approach to understanding.
5. The new ecological perspective embraces theory and political reality.
6. Ecosystems have their own rationality.

The paper concludes that the new ecological perspective warrants further attention of entrepreneurship scholars.

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