SUSTAINABILITY ENTREPRENEURSHIP:
DESIGN PRINCIPLES, PROCESSES, AND PARADIGMS

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The candidate confirms that the work submitted is his own and that appropriate credit has been given where reference has been made to the work of others.

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Dedication

I dedicate the positive potential created through this work to all of my teachers and students, in the past and future, from whom I learn so much, and to all who strive for a world of less suffering and greater compassion.

Abstract

Sustainability entrepreneurship is the process of creating new enterprises that survive and thrive by contributing to human wellbeing and the functioning of ecological systems. This study is an investigation of the principles, processes, and paradigms of successful sustainability entrepreneurship.

Based on a critical realist perspective, a multiple, embedded case study strategy was used to explore the unique design histories of successful sustainability-driven enterprises in four different regions and industries – one each in Europe, North America, East Africa, and Asia-Pacific, and in the marketing and finance, hospitality, training, and export-import-wholesaling sectors. Qualitative data consisting of interviews, documents, and observations from site visits were collected and analysed using combined comparative and narrative analyses. These methods enabled the actor logics that guided the unfolding enterprise design process to be identified and described. Institutional theory was used to educe the implications of these logics for the character and performance of emerging enterprises.

The first of three principal findings of this study is a cognitive model of sustainability entrepreneurship that specifies five design principles that guide problem solving. The second principal finding is a process model of sustainability entrepreneurship that demonstrates the way these design principles and the underpinning values become embedded in the enterprises' formal and informal structures, allowing the enterprises to maintain their intended purposes and character while necessarily evolving to ensure survival into the future. The third principal outcome is the proposition that this distinct approach to enterprise design represents the emergence of a new organising paradigm that eschews the dualistic divide between 'opportunistic' business and 'altruistic' charity in favour of a new logic based on the co-production of multiple benefit streams through the perpetuation of human and natural resource quality.

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The tree rustled. It had made music before they were born, and would continue after their deaths, but its song was of the moment.

E.M. Forster

Howards End (1910)

CHAPTER 1

SUSTAINABILITY ENTREPRENEURSHIP: MASTERING THE PARADOX

We had the sky up there, all speckled with stars, and we used to lay on our backs and look up at them, and discuss about whether they was made or only just happened.

Mark Twain

The Adventures of Huckleberry Finn (1885)

1.1 The Possibility of Sustainability Entrepreneurship

In studying the implications of human-environment interactions for the long-term wellbeing of humanity, the role of technological innovations has received the greatest attention (e.g. Dincer 2000; Kuehr 2007; Wambugu 1999). However, there is growing appreciation that it is *patterns of human activity* within social-ecological systems more generally which pose the greatest threats and opportunities for increasing and sustaining human wellbeing (see e.g. Norgaard 1994; Stern 1993; Western 2001). The concept of *sustainable development* is an ethnoecological model[1] that represents the integration and global exportation of Western European and North American concerns with environmentalism and developmentalism. As this model is imported by localities the world over, it is appropriated and reconciled with local ethnoecologies (Kottak 1999). Choosing to promote sustainable development, then,

[1] An 'ethnoecological' model is a "cultural model of the environment and its relation to people and society" (Kottak 1999: 26).

necessarily entails a commitment to culturally appropriate change that safeguards critical ecosystem functions and improves the human experience of life on earth.

If sustainable development is approached from the perspective of human activity patterns then the role of enterprise must take centre stage as organisations, particularly economic organisations, constitute one of the most pervasive forms of institutionalised human activity on the planet, ordering both people's lives and natural resource flows on a grand scale (Aldrich and Ruef 2006; Hall 1996; Perrow 1991; Reed 1992). Simon notes that organisations rather than markets are the dominant social artefacts of modern society's economic system (Simon 1991), to the extent that "organization-&-market economy" would be a more appropriate term (Simon 1996: 32).

The idea that enterprises possess the potential to meaningfully contribute to sustainable development is piquing the attention of researchers and practitioners alike. While innovative leaders of enterprise are making bold attempts to integrate sustainability into the structure and operations of their enterprises, researchers are beginning to explore ways in which the dynamic processes of ecological, socioeconomic, and organisational systems can interact to co-create a sustainable future of human wellbeing (Atkinson 2000; Keijzers 2002; Parrish 2007; Shrivastava 1995; Starik and Rands 1995).

Though of unproven efficacy, an extensive literature is proliferating on the subject of assisting existing enterprises to better embody the principles of sustainable development with a myriad of tools (see Robèrt et al. 2002) and management practices (e.g. Lesourd and Schilizzi 2001). The focus has traditionally been on large corporations, although the unique needs of small and medium-sized enterprises have received some attention (Hillary 2000; Rutherfoord et al. 2000; Tilley 2000). Surprisingly, comparatively little attention has been directed toward the needs of entrepreneurs who attempt to create new enterprises that, from their very inception, incorporate principles of sustainable development into the organisational designs.

In this respect, practitioners are outpacing academia as instances of sustainability-driven entrepreneurs designing enterprises with purposes that include making a contributory and restorative impact on environmental quality and social wellbeing are emerging in a number of countries and regions of the world. It is reasonable to believe that this *sustainability entrepreneurship* could benefit from the systema-

tisation of knowledge just as conventional entrepreneurship has. To that end, the aim of this thesis is to contribute to the knowledge and understanding of sustainability entrepreneurship by providing a social scientific account of the process of sustainability-driven enterprise design, with 'design' understood as the unfolding of entrepreneurial intentions and situational contingencies manifest as organisational 'becoming' (Steyaert 1998; Tsoukas and Chia 2002). In so doing, this study makes three principal contributions to knowledge:

- The first principal contribution is a cognitive model of sustainability enterprise design that specifies five design principles that guide problem solving during the design process (see Chapter 6);

- The second principal contribution is a process model of sustainability entrepreneurship that demonstrates the way these design principles and the underpinning values become embedded in the enterprises' formal and informal structures, allowing them to maintain their intended purposes and character while necessarily evolving to ensure survival into the future (see Chapter 7);

- The third principal contribution is the proposition that this distinct approach to enterprise design represents the emergence of a new organising paradigm that eschews the dualistic divide between 'opportunistic' business and 'altruistic' charity in favour of a new logic based on the co-production of multiple benefit streams through the perpetuation of human and natural resource quality (see Chapter 8).

In the remainder of this chapter, I first describe my understanding of what a 'social scientific account' entails, before considering why the extant business, economics, and entrepreneurship literatures render the concept of sustainability entrepreneurship paradoxical. Following this, I consider the importance of developing a theory of sustainability entrepreneurship, state the research questions that guided this study, and provide a brief preview of the chapters that follow.

1.2 A Scientific Approach to Knowledge Creation

Social science is one way of creating knowledge about humans and human activities. While other means, such as literature, art, and drama, can also provide important knowledge about humanity, social science is an approach rooted in the philosophies and methods of the scientific tradition (see Manicas 1987: 279). Science is a distinct process of knowledge creation that has developed over the last several centuries as an outgrowth of philosophy's rational approach to knowledge.[2] For millennia before this, philosophy has been concerned with pursuing knowledge through logical reasoning. The scientific approach builds on this tradition by pairing logical reasoning with empirical observation. As Gordon explains, "Medieval philosophy was based upon such reasoning and scholastic theologians were masters of Aristotelian logic. What distinguished the modern era is the linkage of rational thought to empirical data on concrete phenomena" (1991: 71).

As with all philosophy, the philosophies of science can be understood as reasoned, but untestable and improvable beliefs. As such, contemporary science is based on several divergent philosophical traditions, but because scientific methods are not tied to any one epistemological methodology, philosophers of science have a hard time providing an explicit definition of *the* scientific method (Chalmers 1999: 247-8). Although, Robson describes what he terms a "scientific attitude," which consists of being *systematic* in thought and method, *sceptical* with regards to observations and conclusions, and *ethical* in conduct (paraphrasing Robson 2002: 18).

While the products of science are justified on the basis of reasoning and empirical data, the scientific process of knowledge creation also includes an important element of creative interpretation. In the words of Bowler, "Scientific discovery is a process that mediates between the scientists' creative thinking – stimulated by a host of cultural factors – and their efforts to observe and interpret the external word" (1992: 30). Thus, the personal worldview, or belief system, of the scientist becomes an important component of the process, acting as both a potential obstacle and a great catalyst to stimulating insightful explanations of phenomena.

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[2] Environmental science has its roots in seventeenth-century natural philosophy, while eighteenth-century moral philosophy can be viewed as the beginning of a continuous stream of systematic inquiry that is today manifest as social science.

Knowledge is not fragmented in discrete segments, but rather, strung together in an interrelated and self-reinforcing "web of beliefs" (Quine and Ullian 1978), or "scientific paradigm" (Kuhn 1962). These webs constitute both the input and output to the scientific process. Existing beliefs form the basis on which objects of study are framed and research questions formulated, and it is the clarification, reformulation, or expansion of these beliefs that is the goal of the research processes. As new insights are realised and empirically and theoretically justified through the practice of science, beliefs are transformed and implications for other interrelated beliefs that result lead to modifications of knowledge. Both positive and normative beliefs play a role in this process.[3] Just as conventional entrepreneurship research is conducted in support of the normative goal of economic growth (Gibb 1996; Shane 1996), so too sustainability entrepreneurship research is conducted in support of the normative goal of sustainable development (cf. Jacobs 1995).

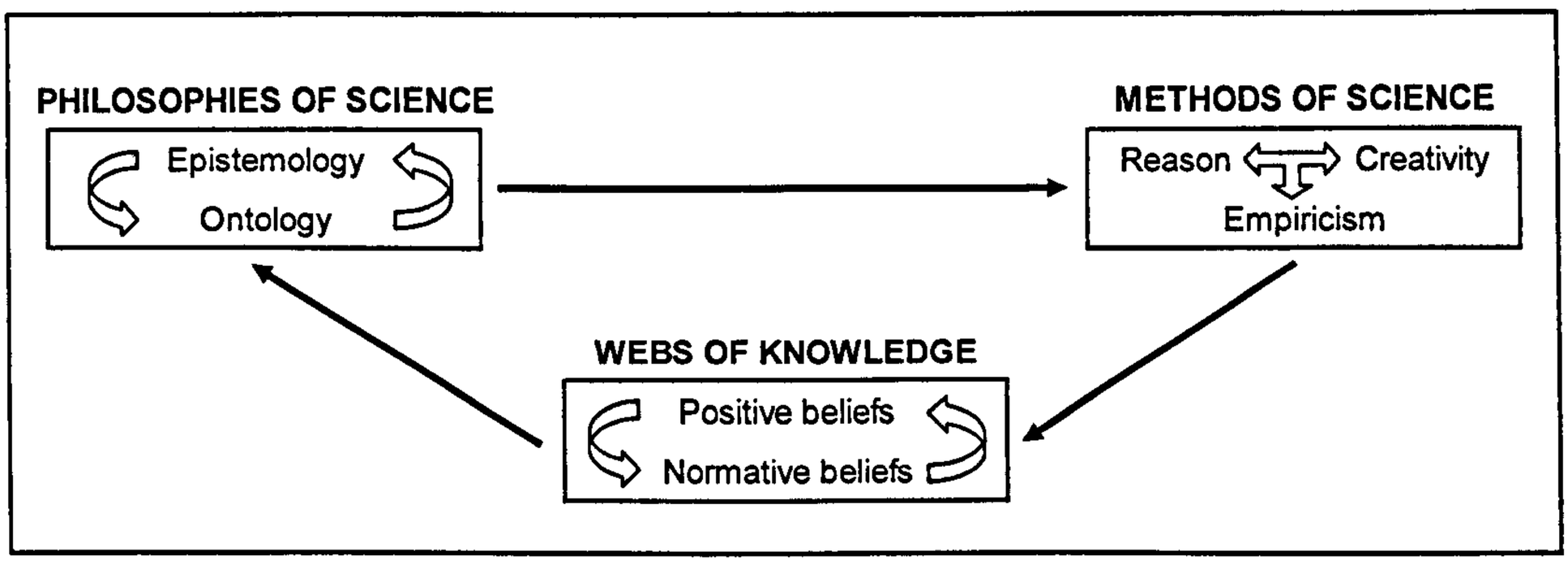

Figure 1.1 Scientific Approach to Knowledge Creation

If the cyclic process of scientific knowledge creation (see Figure 1.1) begins and ends in webs of knowledge, what sets the process into motion? Plato and Aristotle, among many others, believed that the pursuit of knowledge begins in won-

[3] Since the works of Kuhn (1962) and Feyerabend (1975), among others, the value-laden nature of science has been widely accepted, not only by the traditionally subjectivist philosophies but also by intellectual descendants of positivism such as Popper's critical rationalism.

der.[4] Like Huck Finn's contemplation on the origin of the stars, scientific inquiry is fuelled by the wonder of phenomena. Wonder results when our experience of a phenomenon does not align with our knowledge of it. In such cases we are presented with an intellectual paradox.[5] A paradox is an apparent contradiction that contains a possible truth. Science is about resolving paradoxes by making them understandable through explication. If a phenomenon could be explained with existing knowledge, "it would not be anomalous – it would not constitute a perplexing occasion for further inquiry" (Hanson 1965: 51). It is precisely the ability to provide counter-phenomenal explanations, or explanations that contradict the appearances of phenomena, that makes science useful (Collier 1994: 7). A social scientific account, then, is one that resolves an apparent paradox in our knowledge of social phenomena by providing explanations that make those phenomena more understandable.

1.3 The Paradox of Sustainability Entrepreneurship

As with any established field of knowledge, the economics, business, and entrepreneurship literatures tend to frame their explanations within the rubric of a dominant paradigm. The dominant paradigm in the literature concerning enterprises and entrepreneurship involves three common tenets: economic efficiency, profit maximisation, and capital accumulation.[6] As a rule, descriptive, instrumental, and normative dimensions of these concepts are mainstays in explanations used to understand activities in the economic sphere. They are not discrete elements, but constitute a self-reinforcing logic (web of knowledge). Stated in the briefest of terms, this paradigm's explanatory narratives include the following elements: The goal of economic actors is capital accumulation. Enterprises are established instrumentally to fulfil this purpose. The key to competing and surviving in the marketplace is economic efficiency,

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[4] For example, Plato had Socrates argue that "philosophy begins in wonder" in his *Theaetetus* 155d; Aristotle argued, in his *Metaphysics* A:1-2, that the search for knowledge begins in wonder; Francis Bacon held wonder to be the "seed" of knowledge in his *The Proficience and Advancement of Learning, Human and Divine*, 1:i-3 (1605).

[5] The articulation of this process in terms of resolving 'paradoxes' was inspired by Ramadier (2004). Although, contrary to the arguments presented here, he views discipline-based science as largely seeking to avoid, rather than resolve, paradoxes.

[6] This may be because, as Mitchell and colleagues (2007) suggest, entrepreneurship research has been heavily influenced by economically oriented strategy studies.

which is an outcome of the quest for profit maximisation. The personal values of entrepreneurs or other leaders of enterprise can play a role, but when they come into conflict with the requirements for economic efficiency they must give way for the enterprise to remain competitive. Those that do not will cease being competitive and will be expunged by the market.

In an attempt to reconcile the concept of sustainable development with this paradigmatic understanding, two themes have come to dominate the corporate responsibility, environment and business, and corporate sustainability literatures: the so-called 'business case' for sustainability and business opportunities in the environmental or social service sectors. The 'business case' for sustainability theme posits that reducing environmental harm resulting from business activities and engaging in corporate responsibility initiatives can reduce operating costs and improve brand and corporate image, thereby serving as a source of competitive advantage. This notion follows from the Brundtland report's focus on doing more with less (WCED 1987: 206-34), and is manifest in such 'business case' concepts as eco-efficiency (Schmidheiny 1992), industrial ecology (Frosch & Gallopoulos 1989), cleaner production (De Larderel 1993), and pollution prevention (Freeman and Randall 1993), among others. Business opportunities in the environmental or social service sectors, represented most notably by the 'bottom of the pyramid' works of Hart (2005) and Prahalad (2006), has been trumpeted as the "real business case" for sustainable development (Carpenter and White 2004). This theme focuses on using conventional business practices to satisfy growing humanitarian and ecological needs, such as the need for clean water, rural electrification, health services, cleanup of environmental toxins, and so forth. The argument is that satisfying society's most pressing quality-of-life needs represents a vast source of profitable, and largely untapped, business opportunities.

With both of these themes the taken-for-granted assumptions that entrepreneurs must maximise economic efficiency to successfully compete and survive in the marketplace, are driven primarily by a profit motive, and must fulfil the duty of maximising financial returns to shareholders or other investors, remain unquestioned. With the premises of the dominant paradigm unchallenged by this literature, the presence of social-, environmental-, or sustainability-driven enterprises that do not conform to these premises yet are not only surviving but thriving in the

competitive marketplace presents a paradox in need of redress. Our current understanding of enterprise and entrepreneurship is constrained by the theories and concepts currently available to the field. The possibility of developing theoretical insights that transcend these constraints to understanding is what makes the paradox of sustainability entrepreneurship such an intriguing one to pursue.

1.4 The Need for a Theory of Sustainability Entrepreneurship

While the responsible and sustainable business literatures overwhelmingly concentrate on 'greening' or otherwise modifying the activities of large, established corporations, scant attention has been paid to the study of the creation of new enterprises that, from the very beginning, incorporate principles of sustainable development into their organisational designs. Such enterprises may ultimately prove to be significantly more important to the advancement of sustainable development for at least five reasons.

First, research findings demonstrate that early development is crucial to the long-term character of an enterprise (Bamford et al. 1999; Boeker 1989; Cooper et al. 1994; Eisenhardt and Schoonhoven 1990; Stinchcombe 1965). For example, Miles and Randolph found that "choices made early in the development of organizations serve both to shape their enduring character and to constrain the range of options available to them in later stages of organizational life" (1980: 45).

Second, the early stages of enterprise formation and development show the highest innovation-selection dynamic, suggesting more innovative forms of sustainability enterprise can be found at this stage. Katz and Gartner reason that diversity in organisational forms is likely to be greatest when enterprises first emerge.

> "Because an emerging organization lacks structural inertia, agents may try and abandon many organizational forms until either some type of organizational fit (both internal and external) is made or failure occurs as resources are expended in the organizing process. This is because the costs of changing various goals, structures, and so forth are so much lower for the emerging versus established organization." (Katz and Gartner 1988: 436)

Third, the social expectations that accompany the role of 'entrepreneur' may allow individuals occupying such a role to experiment with enterprise designs that

transgress accepted organising conventions. Whittington argues that owner-managers, which most entrepreneurs are, "can be more rash, more conservative or just more eccentric than can professionals bound by norms of appropriate conduct and unsupported by entrepreneurial ideologies and capitalist rights" (1988: 533).

Fourth, entrepreneurship is a process with disproportionate power to drive and alter macro-level human activity patterns. As explained by Sarasvathy (2004b: 708), "Entrepreneurship creates value in society that is disproportionate to its role within the economy, and that persists over longer periods of history than any other functional area in business," and, "credible evidence for this has been found – whether entrepreneurship is modeled as innovation (Griliches 1984), or entry (Geroski 1989), or an independent organizational form (Shane 1995)."

Fifth, Sarasvathy (2001a) also suggests some societal problems may in fact be more effectively dealt with by an entrepreneurial approach to problem solving due to the nature of uncertainty involved, including such seemingly intractable issues as environmental pollution and global warming. Thus, sustainability entrepreneurship could play an important role in advancing sustainable development, not just because entrepreneurial actors are recognised change agents, but also because the entrepreneurial approach to problem solving may serve a unique function for society as it faces a range of social-ecological challenges with which conventional approaches to problem solving are unable to contend.

For these reasons, an examination of the 'organisation-in-creation' provides an important opportunity to study the formation of innovative organisational designs as they evolve with entrepreneurial vision and purpose. Katz and Gartner have stressed the importance of linking entrepreneurship research to organisation theory, and their insistence that we need to know more about "the process by which an organization evolves from nothing to something" is still recognised as an area in need of investigation (Katz and Gartner 1988: 433; Walsh et al. 2006). Aldrich argued that "we need to improve our mental maps of the organizational landscape", and that a "more realistic view should include the full range of diversity found in organizational communities, especially the organizations struggling to emerge from...the 'primordial soup' of creation" (2001: 124-5). And Mitchell and colleagues suggest we need to know more about how individuals "with personal motivations other than profit maximisation perceive opportunity, apply decision logics, etc." (2007: 15).

Due to the newness of the subject area, research on sustainability entrepreneurship has been concerned primarily with defining the phenomenon and describing its distinguishing features (cf. Crals and Vereeck 2004; Tilley and Parrish 2006; Tilley and Young 2004; Young and Tilley 2006), and secondarily with positioning it within theoretical schemes (Cohen and Winn 2007; Parrish 2007; Parrish and Tilley *n.d.*). Similarly, conventional entrepreneurship research has historically placed overwhelming emphasis on descriptions of the phenomenon. Bruyat and Julien argued that "it is high time to begin developing theoretical tools to enable the field to progress" (2000: 166). Yet most theoretical work that does exist in entrepreneurship has historically involved searching for correlations between initial conditions and performance outcomes, giving little attention to the processes in between (Pettigrew 1997; Van de Ven and Engleman 2004). What is needed is to unlock the 'black box' of process that links initial conditions with outcomes to explain *how* specific intentions come to be embedded in enterprise structure and operations.

If we want to understand the emergence of enterprises that are structured to positively contribute to sustainable development, then we need to investigate the *process* of new enterprise formation among those entrepreneurs who have successfully built enterprises that embody, as part of their fundamental purpose, the goal of contributing to the wellbeing of the social-ecological system – those who might be called sustainability entrepreneurs. To do so, this study is based on a conception of entrepreneurship as a form of expertise (Mitchell 1995; Sarasvathy 2001a) or 'maturity' (Thorpe et al. 2006), in which the practical and mostly intuitive knowledge and abilities of entrepreneurs are used to co-produce new opportunities and new possibilities through skilful interpretation and interaction with changing social and ecological contexts (Dimov 2007a; 2007b; Dutta and Crossan 2005; McMullen and Shepherd 2006; Sarason et al. 2006).

1.5 Research Questions and Organisation of the Thesis

This study used empirical research to develop a theoretical understanding of sustainability entrepreneurship. The research was initially guided by one overarching research question:

Guiding Research Question

- How can an entrepreneur create a lasting sustainability enterprise?

As the research project progressed the emerging results suggested there were two aspects to this question that needed to be addressed. For clarity, the guiding research question was rephrased as two separate but related questions:

Sub-Research Questions

- How can an entrepreneur create a sustainability enterprise?
- How can an entrepreneur ensure the sustainability character of the enterprise lasts into the future, beyond the involvement of the original founders?

To answer these questions the thesis is organised into nine chapters that roughly follow the unfolding process of scientific knowledge creation as outlined in section 1.2 above. I begin with a survey of the current knowledge base that can be used to understand the phenomenon of sustainability entrepreneurship (Chapter 2). The existing knowledge is synthesised to construct conceptual building blocks for the study, which are then used to develop a sensitising framework to aid data collection and analysis, and a theoretical perspective to aid in interpreting the results (Chapter 3). Following this, I discuss the philosophical perspective underpinning the study, the research design, and the methods of data collection and analysis employed (Chapter 4). This is followed by narrative summaries of the four case studies that served as the empirical basis for the study (Chapter 5). The study's findings are described in the next three chapters. The first develops a *cognitive model* of the principles of sustainability-driven enterprise design (Chapter 6). The second builds on these to develop a *process model* of sustainability-driven enterprise design (Chapter 7). Following this, I discuss the implications of these results for the emerging field of sustainability entrepreneurship, and consider the possibility of the emergence of a new organising paradigm (Chapter 8). I conclude by reflecting on the extent to which this study has resolved the paradox of sustainability entrepreneurship (Chapter 9).

CHAPTER 2

EMERGENCE, PROGRESS, AND POSSIBILITY

How did I get into the world? Why was I not asked about it and why was I not informed of the rules and regulations but just thrust into the ranks as if I had been bought by a peddling shanghaier of human beings? How did I get involved in this big enterprise called actuality? Why should I be involved? Isn't it a matter of choice? And if I am compelled to be involved, where is the manager—I have something to say about this. Is there no manager? To whom shall I make my complaint?

Søren Kierkegaard

Repetitions (1843)

2.1 Fields of Knowledge

This chapter explores the emergence, progress, and possibilities of sustainability entrepreneurship as a new field of knowledge. Sustainability entrepreneurship research has emerged from the larger body of business and environment and corporate responsibility research in response to questions of affecting change in business social and environmental practices. There is growing recognition that change in practice is co-dependent on change in the theoretical constructs used to understand such practice. Gladwin and colleagues posit to fellow management researchers that "by disassociating human organisation from the biosphere and the full human community, it is possible that our theories have tacitly encouraged organizations to

behave in ways that ultimately destroy their natural and social life-support systems" (1995: 896). They see the "primary transformational challenge for management theorists" as reintegration by reconceiving "their domain as one of organisations-in-full community, both social and ecological" (1995: 896).

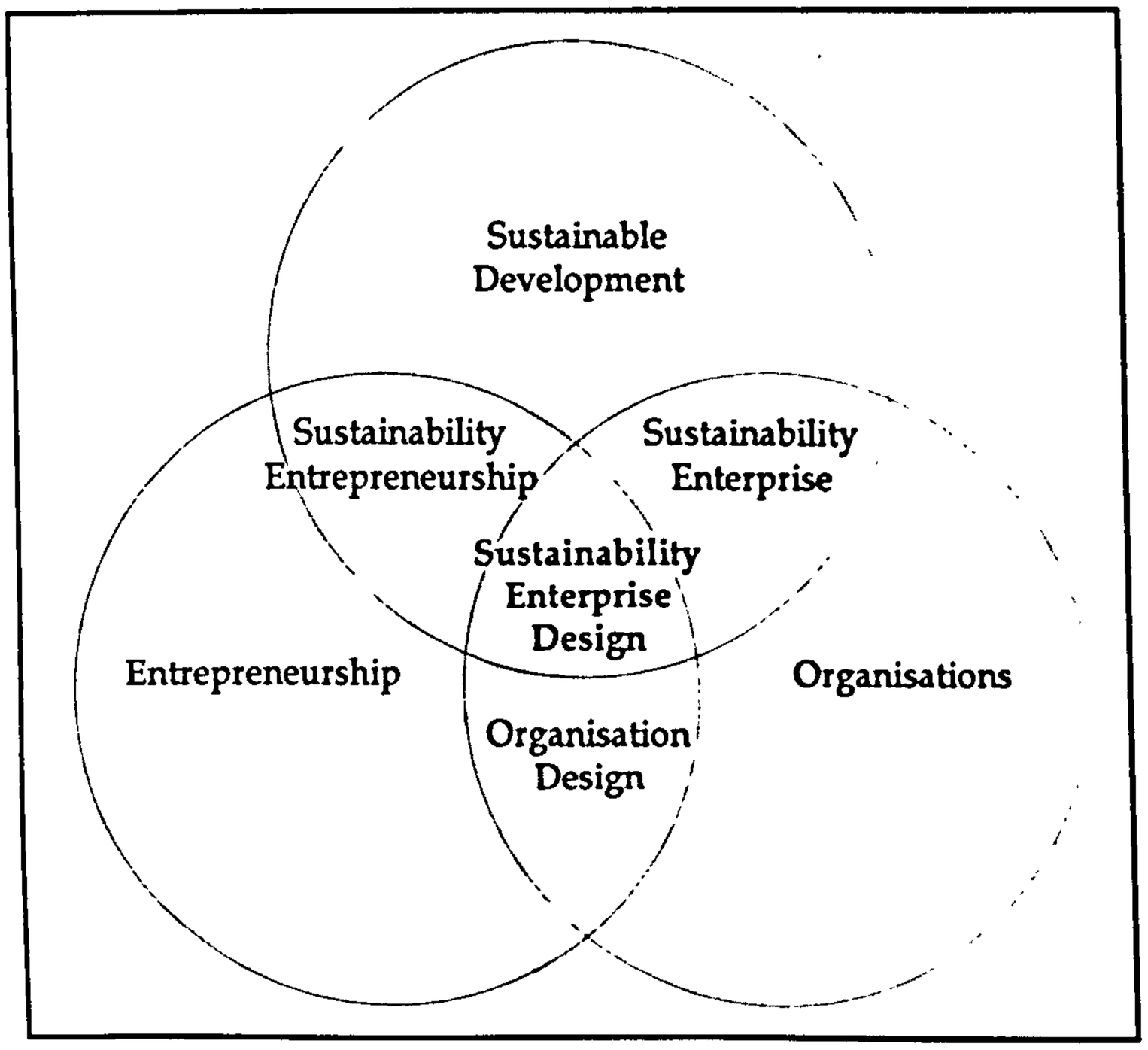

Figure 2.1 Fields of Knowledge

Sustainability entrepreneurship endeavours to these ends by linking our knowledge about entrepreneurship to our knowledge about sustainable development. The emerging field is therefore interdisciplinary by nature, and draws on a number of established fields that also tend to be interdisciplinary (see Figure 2.1). The focus of entrepreneurship research is on the activities of individual entrepreneurs or small entrepreneurial teams, and the impacts they have on the wider socio-economic system. The focus of sustainable development research is on the development and sustainability of whole societies and ecosystems. Thus, sustainability entrepreneurship research links micro-level entrepreneurship research with macro-level sustainable development research, but to do so the meso-level field of organi-

sation research also needs to be included. Organisations operate between entrepreneurship and sustainable development because on one hand they function as the essential tool of the entrepreneur, and on the other hand they constitute an important part of the institutional landscape of society. Therefore, this review first surveys these three foundational fields to see how they might help us to better understand sustainability entrepreneurship.

Following this, recent progress on studying the overlap of these fields is reviewed. In addition to sustainability entrepreneurship we see research taking place at the overlap between organisation studies and sustainable development, giving us sustainability enterprise as another interdisciplinary field of study. The overlap between entrepreneurship and organisations yields research on organisation design. Finally, the chapter concludes by looking at the point where all of these fields overlap, and suggesting the idea of 'sustainability enterprise design' as a unifying concept that could both draw on, and contribute to, knowledge in the other fields.

2.2 Emergence: Foundational Fields

2.2.1 Entrepreneurship

Interest in entrepreneurship as a phenomenon rests in the perceived contributions entrepreneurs make to public policy goals such as economic growth, increased productivity, job creation, technological innovation, deregulation and privatisation, and structural adjustments or realignments (Gibb 1996; Shane 1996). Although the effects of entrepreneurship are rarely contested, a common observation about the field of entrepreneurship research is that it lacks consensus about its object of study (Cornelius et al. 2006; Schildt et al. 2006). Bull and Willard lamented that "the term has been used for more than two centuries, but we continue to extend, reinterpret, and revise the definition" (1993: 185). It is worth exploring the conceptual legacy of entrepreneurship as an object of study, both to identify the essence of the construct and to provide perspective for contemporary understandings and possible future extensions.

Conceptualising and Defining Entrepreneurship

For 250 years, attempts to define and explain entrepreneurship as a phenomenon have been widely based on functional arguments. Differing interpretations of entrepreneurship can be distinguished based on how two related questions are answered: (1) what unique function does the entrepreneur play in the economy, and (2) what unique characteristics of individuals enable them to perform this function?

A medieval French term originally referring simply to 'people who get things done,' the meaning of the term 'entrepreneur' evolved by the early 18th century to refer to business contractors. Richard Cantillon, a practicing businessman of dubious means turned reflective penman of economic treatises, is credited with first imbuing the term with a new and more significant meaning. In 1755 Cantillon used the term to identify those individuals in the economic system who accept risk to make a financial profit rather than depend on a regular salary for income. These 'entrepreneurs' were thereafter demarcated as distinct from the masses, being postulated as the driving force behind the seemingly perpetual motion of the economy's circular flow of money and goods (Pressman 1999). Thus was the first formal conception of the 'risk-taking entrepreneur' as the catalyst of economic production.

Since Cantillon, attributing the catalytic power of entrepreneurship to the entrepreneur's willingness to take on risk has been a persistent theme among entrepreneurship scholars (see Hébert and Link 1988). Although, as the concept of risk-taking was debated and refined by successive scholars, over time differences of opinion emerged (cf. Brockhaus 1980; Koh 1996; Miner 1997). In the early 20th century, Knight made the distinction between uncertainty that is measurable, which he termed 'risk,' and uncertainty that is *not* measurable, which he termed 'true uncertainty' (1921: 20). Risk, he contended, could simply be insured. It is therefore in the area of meeting the challenge of uncertainty that a space for the entrepreneur is made in the economic system. To Knight, the entrepreneur is a specialist in uncertainty bearing – someone uniquely capable and willing to take responsibility for controlling productive resources in an uncertain environment (1921: 244-55).

Subsequent interpretations of the concept can be viewed with reference to a general equilibrium model of the economy (Chiles et al. 2007). On one side are the ideas of Schumpeter, considered by many to be the grandfather of contemporary entrepreneurship theory, who positioned entrepreneurs as the causal agents respon-

sible for creating disequilibrium in the economy (Schumpeter 1934; 1943). Schumpeter vehemently opposed the idea of the entrepreneur as a risk taker. Instead, he conceptualised entrepreneurship as the act of carrying out new combinations of productive resources. Schumpeter insisted that "'everyone is an entrepreneur only when he actually 'carries out new combinations'" (1934: 78). Thus, he viewed the *act* of innovation as the defining characteristic of an entrepreneur, although he takes pains to make clear that an entrepreneur is not the same as a technological inventor. Schumpeter saw his definition as a permutation consistent with the classic definition of Jean-Baptiste Say, that "the entrepreneur's function is to combine the productive factors, to bring them together" (Schumpeter 1934: 76). Schumpeter's ideas spawned one of the most influential and lasting concepts in the study of entrepreneurship – that of the 'innovative entrepreneur' (e.g. Baumol 1993; Drucker 1985).

In direct contrast, Kirzner positioned entrepreneurs as the causal agents that move an economy back toward equilibrium. He argued that the defining act is that of 'opportunity discovery', and the unique characteristic of entrepreneurs is their attentiveness to opportunity. In this way, valuable opportunities arising from economic disequilibrium are recognised, and through the pursuit of these opportunities for profit, economic equilibrium is gradually restored (Kirzner 1973; 1997a; 1997b). Based on Kirzner's ideas, the concept of entrepreneurship as essentially the "processes of discovery, evaluation, and exploitation of opportunities" (Shane and Venkataraman 2000: 218) sits among risk-bearing and innovation as one of the most widely accepted definitions of the field.

While these theorists postulated both the unique function and unique characteristics of entrepreneurs, researchers have since tended to focus on one or the other of these. Those who focused on the distinguishing characteristics of entrepreneurs often took what came to be known as the 'traits' approach, while those who focused on the distinguishing entrepreneurial function took what came to be known as the 'behavioural' approach. The traits approach drew largely on the field of psychology to try to identify a range of attitudes and personality traits that could distinguish entrepreneurs from non-entrepreneurs, or successful entrepreneurs from unsuccessful entrepreneurs (e.g. Hornaday 1982; Hull et al. 1980; Timmons et al. 1985). This was closely tied to studies drawing on the strategic management field that attempted to use entrepreneurial traits as a predictor of new venture success

(e.g. Sandberg and Hofer 1987; Vesper 1980). Although the traits approach proved unsuccessful and was largely discontinued after the 1980s (Gartner 1989), the strategic management quest to link entrepreneurship to new venture performance has continued to the present. This often involves looking for correlations between entrepreneurial variables, such as resources controlled or industry structure during market entry, with new venture performance variables, such as firm survival or growth (e.g. Bamford et al. 1999; Gundry and Welsch 2001; Kunkel 1991; Littunen and Tohomo 2003).

In addition to risk-bearing, innovation, and opportunity discovery, those who took the behavioural approach argued for a number of defining acts to distinguish the phenomenon of entrepreneurship. Foremost among these was the act of new organisation creation (Aldrich 2005; Gartner 1985; 1993; Katz and Gartner 1988; Low and MacMillan 1988). To reconcile these disparate views, Bruyat and Julien (2000) proposed defining and bounding entrepreneurship with the concept of 'new value creation'. They argued that in so doing the most salient features of the entrepreneurship phenomenon are included, while lines of inquiry that are better suited to other fields, such as strategic management, are usefully excluded. With this formulation, new organisation creation, opportunity identification and innovation are simply viewed as different ways of creating new value. But, as Schumpeter pointed out, entrepreneurs contribute both "will and action" to the process (1934: 134). In this respect, Bird's (1988; 1989; 1992) work on entrepreneurial intention, which focused on the way entrepreneurs' values and motivations guide their entrepreneurial actions, adds an otherwise-neglected dimension (Dimov 2007b; Krueger Jr et al. 2000). Taken together, entrepreneurship could be regarded as intentional acts of new value creation.

From a process perspective this definition specifies the starting conditions and functional endpoints of entrepreneurship, but does not speak to the "black box" of processes that connect the two (see Van de Ven and Huber 1990). Process approaches are increasingly viewed as necessary to explain entrepreneurship because they are more capable of accommodating the dynamic realities of entrepreneurial action (Low and MacMillan 1988; Steyaert 1998; Ucbasaran et al. 2001; Van de Ven and Engleman 2004). Mitchell and colleagues (2002: 96), following Stevenson and Jarillo (1990), suggest this process "is about individuals who create opportunities

where others do not, and who attempt to exploit those opportunities through various modes of organizing."[7] A synthesis of these ideas suggests a process view of entrepreneurship can be defined as *intentional acts of new value creation in which opportunities are created and realised through various modes of organising* (see Figure 2.2).

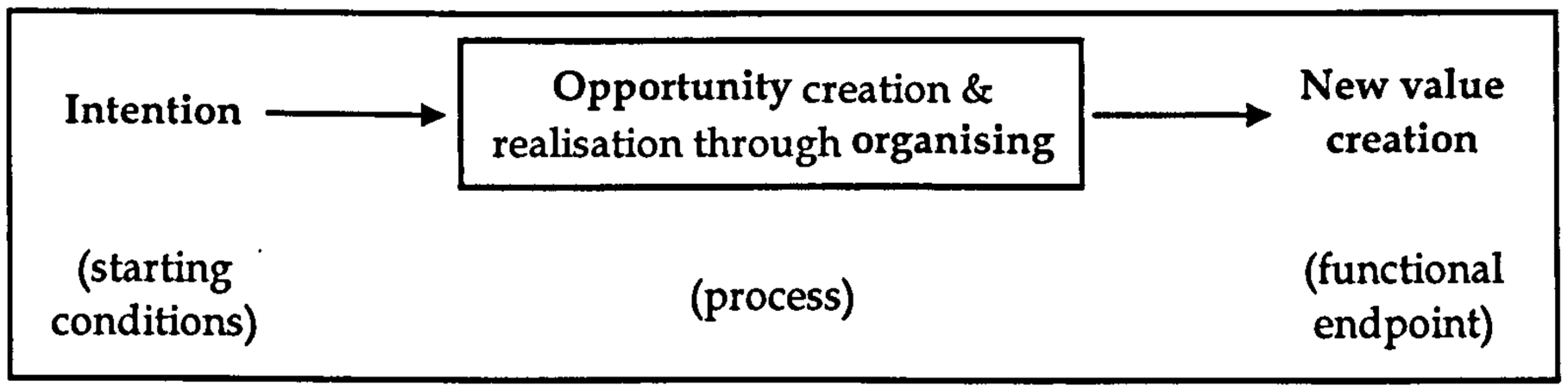

Figure 2.2 A Process Interpretation of Entrepreneurship

Toward a Contemporary Interpretation of Entrepreneurship

More recent perspectives on entrepreneurship have reinterpreted some of the long-running themes of the field, such as opportunity identification, unique entrepreneurial characteristics, risk or uncertainty-bearing, and the link between entrepreneurs and enterprise success. Historically, the entrepreneur was positioned as a lone individual who scanned the external environment to discover new opportunities (Dimov 2007a; Van de Ven 1993). In this interpretation the opportunity is thought to exist apart from the entrepreneur. However, a parallel interpretation that has been gaining currency holds that opportunities are a joint product of the changing socio-economic environment and idiosyncrasies of the entrepreneur (Dutta and Crossan 2005; McMullen and Shepherd 2006). In this view, entrepreneurs do not *discover* opportunities but *create* them through an interactive process of action and interaction (Bruyat and Julien 2000; Dimov 2007b; Gartner et al. 2003; Sarason et al. 2006). This perspective suggests that not only is the process of organising to realise opportunities a social process (Choi and Shepherd 2004; Jack and Anderson 2002; Kodithu-

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[7] They also suggest these activities are done "without regard to resources currently controlled" (Mitchell et al. 2992: 96). Following Stevenson and colleagues (1985) reference to this feature is common in the literature. However, work by Sarasvathy (2001) and others suggests the resources to which an entrepreneur has access may be a vital determinant of the types of opportunities created. For this reason I have left the role of resources controlled by the entrepreneur out of the above synthesis.

wakku and Roas 2002), but so too is the process of creating the opportunities. Thus, Van de Ven argues "the process of entrepreneurship is a collective achievement" (1993: 226).

As a corollary to this view, attention is directed to the particular way entrepreneurs think and act to enable the creation and realisation of new opportunities. This "thinking-doing connection" (Mitchell et al. 2007) has led to the study of successful entrepreneurship as a form of expertise (Mitchell 1995) or 'maturity' (Thorpe et al. 2006). Successful entrepreneurship as a form of expertise brings psychology back into entrepreneurship research by investigating the cognitive processes, or knowledge structures, that entrepreneurs use while interacting with other people and the wider environment (Mitchell et al. 1997; Mitchell et al. 2002). In a separate but related interpretation, successful entrepreneurship as a form of 'maturity' avoids the information processing view of individuals, "preferring to analyse cognition as the largely intuitive and habitual recognition of patterns and pattern fit" (Thorpe et al. 2006). In both interpretations what becomes important is how socially embedded entrepreneurs approach their interactions with other people and the wider environment to make ambiguous and uncertain situations meaningful for the creation and realisation of new value creating opportunities.

As the longest running theme in the field, the seemingly exceptional ability of entrepreneurs to confront risk or uncertainty underpins most interpretation of entrepreneurship. This ability is usually explained by attributing to the entrepreneur either a greater propensity to bear uncertainty, or unique access to knowledge that renders the situation less uncertain for the entrepreneur relative to others (McMullen and Shepherd 2006). In either case uncertainty is framed as something problematic, something to be avoided or at least reduced as far as possible. However, using the concept of entrepreneurship as a form of expertise, Sarasvathy (2001a) argued that entrepreneurs thrive in uncertain environments because uncertainty itself is used to create opportunities. She suggested the entrepreneurial approach to realising and controlling the creation of opportunities involves three distinguishing principles: (1) "affordable loss rather than expected return," (2) "partners rather than competitive analyses," and (3) "leveraging contingencies rather than avoiding them... This principle makes uncertainty a friend and an asset, eliminating the need to overcome it" (Sarasvathy 2003: 210).

Not only has the necessary ingredients for successful entrepreneurship undergone significant reinterpretations, but the notion of what constitutes *success* in entrepreneurship has also been reconsidered. The traditional focus on financial return, venture growth, and even venture survival have all become suspect indicators of entrepreneurial success as the presence of several different types of entrepreneurs, including serial (Wright et al. 1997), portfolio (Carter and Ram 2003), and lifestyle entrepreneurs (Marcketti et al. 2006) have challenged conventional assumptions about the goals a new venture are intended to serve. Even when firms do prematurely cease trading or under perform according to an entrepreneur's aspirations, Sarasvathy argues that success versus failure is not a simple dichotomy. In a process resonant with Weick's (1984a) notion of "small wins", Sarasvathy suggests "entrepreneurial experience is composed of a temporal stream of varying degrees of successes and failures. Entrepreneurship therefore becomes the art of learning to outlive failures and accumulate successes over time" (Sarasvathy 2002).

Recent Critiques and Opportunities for Expansion

The close relationship between entrepreneurship studies and the fields of economics and strategic management are credited with imbuing entrepreneurship studies with assumptions that no longer appear appropriate, or that are appropriate for only a small subsection of cases (McMullen and Shepherd 2006). Mitchell and colleagues explain that "the highly economic orientation of strategy research led many studies to equate entrepreneurial motive with the desire for profit", and suggest more needs to be known about how "individuals with personal motivations other than profit maximization perceive opportunity, apply decision logics, etc." (2007: 15). With the recognition that entrepreneurship is a fully social process, from the formation of entrepreneurial intentions to the creation of opportunities, their realisation through various modes of organising, and the new value that is created, there is growing appreciation of just how much entrepreneurship is a product of its times, as entrepreneurs continue to both "reproduce and challenge the existing social order" (Aldrich 2005: 451).

From this vantage, it should be no surprise to Bull and Willard that "the term has been used for more than two centuries, but we continue to extend, reinterpret, and revise the definition" (1993: 185). It is in this process of periodic reinterpre-

tation that opportunity lies for entrepreneurship to contribute to society in new and significant ways. Entrepreneurship may have gained prominence based on its promise to fulfil public policy goals such as economic growth and increased productivity, but with rising social and ecological challenges to sustained human wellbeing, the stage is set for entrepreneurship to contribute to new and more pressing concerns. With each interpretation of entrepreneurship, from the time of Cantillon to the present, two common themes have endured: the notion of the entrepreneur as someone who 'gets things done,' and the notion of entrepreneurship as a process with disproportionate power to drive and alter socioeconomic institutions. As Sarasvathy (2004b) argues, entrepreneurship provides a means "to create the society we want to live in from the society we have to live in".

2.2.2 *Organisations*

The widespread interest in organisations as a phenomenon across the social sciences is founded on the prominent role organisations play in shaping social processes. The role of formal organisations has been particularly prominent in modern, western societies, though with globalisation this is increasingly becoming a global phenomenon. Aldrich and Ruef (2006) suggested organisations are the basic building blocks of modern society, and Reed (1992) argued that modern social systems depend on formal organisations for their very existence. Simon noted that organisations rather than markets are the dominant social artefacts of modern society's economic system (Simon 1991), to the extent that "organization-&-market economy" would be a more appropriate term (1996: 32). Looking beyond the economy, Hall (1996) described the pervasiveness of organisations in almost all aspects of society, while Perrow suggested organisations have "absorbed society" in that "activities that once were performed by relatively autonomous and usually small informal groups...and small autonomous organizations...are now performed by large bureaucracies" (Perrow 1991: 726). Despite their ubiquity, or perhaps because of it, consensus about organisations as an object of study has not withstood the test of time. As with our look at entrepreneurship, an exploration of the concept of formal organisation as an object of study will allow us to identify the essential elements of

the construct, to account for shifts in contemporary understandings, and to locate opportunities for possible future extensions.

Conceptualising and Defining Organisations

The study of organisations has a long history (Starbuck 2003a), though the mid-19th century works of Barnard (1938) and Selznick (1948) represented a turning point by focusing on the organisation itself as the unit of analysis (Scott 2004). Hall (1996) notes that important definitional statements were made in the 1960s as organisation research began to distinguish itself from the general study of sociology. The essential features of two seminal definitions by Etzioni (1964) and Scott (1964) are consistent with one another. Scott offers the following: "organizations are defined as collectives...that have been established for the pursuit of relatively specific objectives on a more or less continuous basis" (1964: 488). This description includes a number of features reflected in the broader literature.

Foremost, organisations are composed of humans and human relationships. This means that organisations are social: they "consist of the patterned activities of a number of individuals" (Katz and Kahn 1978: 20). But more than activity patterns, the nexus of human relationships that take the form of a formal organisation were held to constitute social systems in which the complex whole is qualitatively different than the aggregate of its constituent elements (Barnard 1938; Etzioni 1960; Katz and Kahn 1978; Thompson 1967; Weick 1979). The emergence of organisation research as a distinct field coincided with the emergence of complex systems theory in the social sciences. As a result, this feature came to dominate the attention of organisation theorists for a time, and though a formal systems perspective is now seldom used, the view of organisations as distinct social systems embedded within larger social systems is an implicit assumption of most organisation studies (Clegg 1990). With the view of organisations as social systems distinct from the wider social environment came a focus on boundary maintenance (Scott 1964). The attention to boundaries gradually expanded to the study of the many ways organisational processes and environmental processes cross those boundaries to interact (Aldrich 1979; Davis 2005; Scott 2004).

In addition, Etzioni and Scott's seminal definitions suggested organisations are persistent, meaning they are produced and reproduced over time (Gross and Etzioni 1985). The dynamics of this production, reproduction, and transformation have been a long-running theme in organisation studies, particularly in behavioural theories of the firm (Argote and Greve 2007; Cyert and March 1963), and evolutionary approaches (Aldrich 1979; Aldrich and Ruef 2006; Nelson and Winter 1982). Describing organisations as "collectives" with "patterned activities" suggests human activity within organisations is not random, it is structured. That is, human activity is coordinated (Barnard 1938; Ouchi 1980) toward one or several desired goals (Perrow 1970; Thompson and McEwen 1958). Similarly, Etzioni (1964) described organisations as deliberate entities, meaning their activities are intentional. This feature has been questioned, most notably by Simon (1964), who observed that organisational members can have many diverse and often conflicting goals. Resolution of the apparent contradiction between the coordinated activities of an organisation and the multiple goals of its members was provided by the political perspective of organisations in which conflicting goals were seen to be subordinated by the goals of a 'dominant coalition' (March 1962; Pettigrew 1973; Pfeffer 1981). Being deliberate, goal-directed systems, organisations are widely held to be instrumental entities. This is in sharp contrast to most other social artefacts, such as institutions, and implies that organisations are inherently rational systems, meaning they have means-ends instrumentality (Scott 1992; Weber 1947).

As described, each of these distinguishing organisational features has spawned distinct themes, or lines of inquiry, within the field. Together, they serve to distinguish the object of study from other types of social phenomenon. Thus, the field of organisation research can be described as the study of *goal-directed social systems that are coordinated, boundary-maintaining, and relatively persistent.*

Toward a Contemporary Interpretation of Organisations

With this broad concept of formal organisations, research in the field has been challenged by the great diversity found in organisational forms and features. The primary means by which organisation scholars have attempted to make sense of this diversity has been to construct typologies that break the expansive class 'organisa-

tion' down into more homogenous subclasses. Typologies can be constructed based on any set of organisational characteristics, and in fact, thinking about organisations in this way has become a taken-for-granted approach to the subject matter. For example, we are used to thinking of organisations according to classifications such as profit (for-profit or not-for-profit), ownership (public or private), output (products or services), sector (primary, secondary, or tertiary), and so on. Blau and Scott (1963) described a number of such typologies before suggesting their own based on who the primary beneficiary of the organisation is intended to be. In this *"cui bono"* typology four archetypical organisational forms are identified, each with a dominant organising principle (see Figure 2.3).

This classification is useful because organisations are instrumental constructions – their basic nature depends on the purpose for which they are formed. In each case, their intended purposes result in distinct organising principle, or means of operating, that serves that purpose. The typology is meaningful because difficulties would arise by applying an organising principle to an organisational form that does not match. These categories are archetypical and do not exhaustively represent all organisational forms. But they are basic enough that other organisational forms could be seen as variations of a theme, or as hybrids of these archetypes. For example, a cooperative could be seen as a blend of the mutual-benefit association and the business concern, which explains why maintaining both operational efficiency and internal democracy is of concern. Or, a university could be seen as a blend between a service organisation (teaching) and a commonweal organisation (research) which explains why both procedural fairness and external democracy, or accountability, are expected to be maintained.

Archetypical form	**Mutual-benefit association**	**Business concern**	**Service organisation**	**Commonweal organisation**
Intended beneficiary	Membership	Owners	Client group	Public-at-large
Organising principle	Internal democracy	Operational efficiency	Procedural fairness	External democracy

Figure 2.3 Typology of Organisations (adapted from Blau and Scott 1963)

This typology could be further aggregated by noting that the left two types, mutual benefit associations and business concerns, are fundamentally concerned with self interest, while the right two types, service organisations and commonweal organisations, are fundamentally concerned with the interests of others. This dichotomy helps to explain the historical concerns of organisation research. As Walsh and colleagues (2006) pointed out, the early empirical research of the 1960s focused largely on public organisations, such as Blau's (1974) studies of government agencies, academic institutions, and teaching hospitals, or Aiken's studies of social welfare and health agencies (Hage and Aiken 1969), which operated in relatively stable, undynamic, uncompetitive environments. Thus, organisations were viewed as closed systems (Clegg 1990), and the resulting theories focused on internal concerns, such as control, rational administration, and performance as goal achievement (Walsh et al. 2006). By the 1970s and '80s the empirical focus shifted toward business firms while the business environment itself was rapidly changing. This ushered in a period of open systems theorising in which the dependence of organisations on their environment was recognised. The resulting theories from this period, including contingency theory (Galbraith 1973), resource dependence theory (Pfeffer and Salancik 1978), population ecology (Hannan and Freeman 1977), network theory (Burt 1983), and new institutional theory (Meyer and Rowan 1977) all addressed the ways in which organisations are impacted by their external environments. Research interest shifted to concerns of competitiveness and adaptation, and assessments of performance shifted from goal achievement to survival (Walsh et al. 2006).

A consistent theme throughout these shifting trends in organisation research has been the idea that organisations exist as a means of coping with an uncertain world (see Davis 2005). In early interpretations organisation structure and action were seen as a way of sealing off the outside world of high uncertainty so that inside rational planning could enable a technical core to flourish (Thompson 1967). However, other interpretations suggested the situation was less straightforward. Organisational actors were seen as less rational, in the sense of calculated, preplanned behaviour, although they still had rationales, in the sense of having reasons for their actions (Brunsson 1982). Weick (1979) suggested organisations represent collective efforts to deal with uncertainty by reducing equivocality in interpretations of events. In fact, he suggested organisations should not be thought of as fixed enti-

ties with rigid boundaries, but as a continual *process* of organising consisting of "a set of recipes for connecting episodes of social interaction in an orderly manner" (Weick 1979: 45; see also Weick 2001).

With both interpretations organisations are viewed instrumentally as a means of creating order in an uncertain world. Presently, with an appreciation for the permeability of an organisation's boundaries (Pfeffer 1997), researchers are increasingly concerned with the way the internal and external worlds of organisations condition one another. For example, institutional theory is concerned both with how external, taken-for-granted regulative, normative, and cultural-cognitive features penetrate the organisation to condition organisational activities (DiMaggio and Powell 1983; Meyer and Rowan 1977), and also how organisational deviations from these can influence the regulative, normative, and cultural-cognitive features of wider society (Lounsbury and Crumley 2007; Scott 2001). From a complex systems perspective, attention has turned toward how organisations and their environments 'coevolve' through intentional and contingent interactions (Lewin et al. 1999; Lewin and Volberda 1999). And from a more general sociological perspective, researchers are beginning to consider the role of organisations in reproducing prevailing social conditions, such as social inequality, both inside and outside the organisation (Davis 2005; Perrow 1991; Scott 2004; Walsh et al. 2006). In fact, Morgan argues that "Organizations do not exist in any way that is separate from their environment", and that "the fundamental challenge is to think in terms of gestalt patterns, not just in terms of immediate organization-environment relations" (1997: 298).

Recent Critiques and Opportunities for Expansion

Walsh and colleagues (2006) contend that the field is preoccupied with large, publicly-traded corporations, and that this distorts our understanding of organisations. The shift in affiliation of organisation researchers from social science departments to business schools in the 1980s is believed to have resulted in a legacy of organisation research being 'captured' by prevailing business interests (Dunbar and Starbuck 2006; Walsh et al. 2006). Walsh and colleagues (2003) found that since 1980 there has been a significant increase in the percentage of organisation studies that rely on reasoning drawn from economics (see also Scott 2004). As a result, 'humanitarian' con-

cerns have been subordinated to the economic concerns of financial performance and wealth generation. As evidence, Walsh and colleagues point to the importance placed on finding a link between corporate social performance (CSP) and corporate financial performance (CFP). They suggest that "Unless it is linked to wealth creation, CSP has little standing within organizational theory" (2006: 665). Thus we see studies investigating the links between CSP and reputation (Schneitz and Epstein 2005), competitive advantage (Porter and Kramer 2002), and opportunities for profit (Hart 2005; Prahalad 2006). Recently there have been calls in the field for organisation research to investigate the implications of "market incursions into sacred domains" (Davis and Marquis 2005: 341) and to contribute more to the interests of human welfare and less to the interests of corporate owners and managers (Dunbar and Starbuck 2006; Starbuck 2003b).

These present limitations in the scope of the field of organisation research and the interpretation of organisations as processes of organising that reproduce and transform social realities within and without provide opportunities for expanding and realigning our understanding of organisations and their role in society. Since the early days of organisation research when Stinchcombe (1965) stressed that organisations are an inescapable product of the social environments in which they are formed, this lesson has been learned repeatedly (Davis and Marquis 2005; Walsh et al. 2006). Throughout its history, organisation theory has gone through periodic phases of renewal and reinterpretation as social realities brought new concerns to organisation researchers (Scott 2004). The immediacy and scale of current ecological and social challenges to human wellbeing present an important opportunity for organisation researchers to address the way modes of human organisation instigate, exacerbate, or ameliorate these challenges.

2.2.3 *Sustainable Development*

Sustainable development is a contested concept. It is contested because it is complex and it is high stakes. The concept is complex because it addresses some of the most basic concerns of the human condition – our wellbeing and our place in the natural world. It is high stakes because answers to these basic questions will affect who stands to gain and who stands to lose from movements in social values and priori-

ties (see Pezzoli 1997). While interpretations abound of these two words – *sustainable development* – it is worth exploring some of the intellectual history and contemporary interpretations of the ideas that are bound up in this concept. Following a review of these interpretations I offer a critique of the reduced form currently in widespread use and discuss the need for expanding the concept to embrace the full range of means and ends as originally embodied by the idea of sustainable development.

Conceptualising and Defining Sustainable Development

Threads of the sustainable development concept can be traced back for centuries (Lumley and Armstrong 2004), although the real synthesis occurred in the last quarter of the twentieth century. As the post World War quest for economic regeneration evolved into a more general pursuit for sustained economic growth based on Keynesian *General Theory* (1935) in Western Europe and North America and Rostowian-style growth theories (1960) aimed at newly independent, post-colonial countries, a general optimism of modernity prevailed in the West. At the same time early glimpses of modern environmentalism began to emerge, personified most clearly in Aldo Leopold's shift from the rational Progressivism of his *Game Management* (1933) to the environmental ethics of his *Sand County Almanac* (1949).

By the 1960s and '70s, as the economists focused on a 'circular flow' of money and goods, ecologists began to focus on the biophysical inputs and outputs of a linear economic process that begins and ends in ecosystems (Hall et al. 2001; Odum 1997). Implications of limits to the economic system at both ends of the process entered the public discourse as works such as Meadows and colleague's *Limits to Growth* (1972) drew attention to the earth's natural resource limits, and works such as Carson's *Silent Spring* (1962) drew attention to the earth's limited capacity to absorb industrial throughputs. By the early 1970s the public consciousness was faced with a conflict between a modernist panacea provided by the 'Growth' ideology and threats to that panacea provided by ecological critiques (see Pepper 1996). The concept of sustainable development emerged as an attempt to reconcile this conflict in some of Western society's most deep-seated values and beliefs. These ideas first received a global platform at the 1972 United Nations Conference on the Human En-

vironment in Stockholm, Sweden. The declaration that resulted from this conference read in part:

> "Man has the fundamental right to freedom, equality and adequate conditions of life, in an environment of quality that permits a life of dignity and well-being, and he bears a solemn responsibility to protect and improve the environment for present and future generations... The capacity of the earth to produce vital renewable resources must be maintained and wherever practicable restored or improved... Man has a special responsibility to safeguard and wisely manage the heritage of wildlife and its habitat which are now gravely imperilled... The non-renewable resources of the earth must be employed in such a way as to guard against the danger of their future exhaustion and to ensure the benefits from such employment are shared by all mankind...The discharge of toxic substances or of other substances and the release of heat, in such quantities of concentrations as to exceed the capacity of the environment to render them harmless, must be halted..." (United Nations Conference on the Human Environment 1972).

Thus the central themes of improved and sustained human wellbeing, critical limits and improved environmental quality, and a long term time horizon were laid out. At this time, whether treated by groups with a primarily social mission, such as the World Council of Churches (Abrecht 1979), or a primarily environmental mission, such as the International Union for the Conservation of Nature and Natural Resources (IUCN 1980), there was remarkable consensus on the essence of the sustainable development concept. For example, in 1976 the Working Group on Church and Society stated:

> "The twin issues around which the world's future revolves are justice and ecology. 'Justice' points to the necessity of correcting maldistribution of the products of the earth and of bridging the gap between rich and poor countries. 'Ecology' points to humanity's dependence upon the earth. Society must be so organized as to sustain the earth so that a sufficient quality of material and cultural life for humanity may itself be sustained indefinitely. A sustainable society which is unjust can hardly be worth sustaining. A just society that is unsustainable is self-defeating." (quoted by Abrecht 1979: 5)

This concern for the *interdependence* of ecosystem health on sustained human wellbeing and conversely for human organisation on sustained ecosystem health is remarkably similar to the IUCN's *World Conservations Strategy* published in 1980:

> "Development is defined here as: the modification of the biosphere and the application of human, financial, living and non-living resources to satisfy

> human needs and improve quality of human life. For development to be sustainable it must take account of social and ecological factors, as well as economic ones; of the living and non-living resource base; and of the long term as well as the short term advantages and disadvantages of alternative actions." (IUCN 1980: 2)

All three documents reflected a concern with how human activities could be organised so as to ensure long term improvements in human wellbeing in the context of the biophysical realities of the earth's ecosystems. In 1987 this concept was politically popularised by the World Commission on Environment and Development (WCED 1987), and has been greatly elaborated upon ever since. In the process, much of the consensus evident in the 1970s has subsequently been lost. Perhaps Kottak (1999) explained the phenomenon of the *concept* of sustainable development best when he suggested it is an ethnoecological model[8] that represents the integration and global exportation of longstanding Western European and North American concerns with environmentalism and developmentalism. As this model is imported by localities the world over, it is necessarily appropriated and reconciled with local ethnoecologies. When viewed in this way, the vast array of interpretations that have followed the WCED publication are an understandable outcome of people's attempts to reconcile the concept with their own worldviews.

Contemporary Interpretations: Three Pillars?

By far the most prolific interpretation is to view sustainable development in terms of three distinct but interrelated spheres: economy, society, and environment. This trichotomy of sustainability has been used extensively and is widely accepted by businesses, governments, NGOs, and academia. For example, Harris and Goodwin (2001) present the three dimensions as a 'tripartite goal' for the social system; Erekson and colleagues (1999) as components of social system resilience; and Elkington (1997) as indicators of business performance in the form of the 'triple bottom line.' Of its manifold uses, Thin observed:

> "The 'three-pillars' motif has been one of the sustainable development movement's most influential and oft-repeated catch-phrases. It appears not only in most theoretical and policy texts on sustainable development, but in

[8] An 'ethnoecological' model is a "cultural model of the environment and its relation to people and society" (Kottak 1999: 26).

> local community strategies, national indicator frameworks, and (slightly transformed) in literature and plans for corporate social responsibility as the 'triple bottom line' in the world of business." (Thin 2002: 1)

Various rationales are given for distinguishing these three dimensions. Harris and Goodwin justified analysis based on these dimensions on the grounds that "there has been a growing recognition" of these three aspects, and that they "have resonance at a common-sense level" (2001: xxix). Goodland made the case on operational grounds. He opined that "defining each component of sustainability distinctly may help organize the action required to approach global sustainability in real life" (1995: 2). Dyllick and Hockerts offered a more substantial justification grounded in social values, both historical and emergent. They reasoned that the "quest for economic growth and social equity has been a major concern for most of the past 150 years. By adding concern for the carrying capacity of natural systems sustainability thus ties together the current main challenges facing humanity" (2002: 130).

Despite its popularity, the three-pillars model does not stand up well to serious scrutiny. Giddings and colleagues (2002) identified important drawbacks to conceptualising sustainability in terms of three distinct spheres, leading them to also conclude that the economy and society distinction is artificial and unhelpful. They argued that the assumed autonomy of the economy, society, and environment embedded in the three pillars idea "can be used to justify a concentration on a part, rather than the whole" and "risks approaching and tackling issues of sustainable development in a compartmentalized manner...leading to assumptions that trade-offs can be made between the three sectors" (2002: 190, 188). In addition, they viewed the three sector separation as diverting "attention from asking questions that are important to getting to the core of sustainable development such as those about the nature of our society, what the policy priorities are, how decisions are made and in whose interest" (2002: 189-90). They concluded by suggesting the economy and society domains be merged into one domain of 'human activity and wellbeing,' and that this domain be embedded with a 'fuzzy' boundary into the environment domain.

Similarly, Thin argued that the economy does not constitute a distinct domain of sustainability, as "money, for example, is an expression of relationships between people and a tool for mediating relationships between people" (2002: 25). He

colourfully dismissed the three pillar model "as two pins (the environmental and social critiques) bursting a balloon (naïve economism)", where the environmental critique refers to biophysical constraints on economic growth and the importance of a future orientation, and the social critique refers to the necessity of social change and the distinction between instrumental value of economic growth compared to the ends of quality of life and social justice (2002: 24). Consistent with Giddings and colleagues, he proposed an alternative approach with stronger theoretical grounding is to classify development in just two realms: biophysical and social.

Contemporary Interpretations: A Social-Ecological System?

More recently there has been a move amongst researchers toward a model of sustainable development in which human development and its sustainability is viewed as a joint product of the interactions between an ecosystem, consisting of a web of complex relationships between biotic and abiotic elements, and a social system, consisting of humans and the artefacts of human interaction such as technology, organisations, and institutions (Westley et al. 2002). The range of perspectives in the literature on sustainable development can usefully be charted based on how authors view the relationship between these two systems (summarised in Figure 2.4).

A first division can be identified between a 'humans-*and*-ecosystems' perspective and a 'humans-*in*-ecosystems perspective' (Davidson-Hunt and Berkes 2003). The former describes those who see a Cartesian divide between the social system and the ecosystem, while the latter describes those who see the social system as being contained within the ecosystem. Those in the humans-*and*-ecosystems group tend to define sustainable development in terms of sustainable economic growth. Alkire explained the logical progression of equating development with economic growth:

> "In the neoclassical approach, income was the metric that conveyed utility, or value; therefore, a respectable economic strategy was to maximize national income per capita, with some correction for externalities and distribution." (Alkire 2002:182-83)[9]

[9] Although she also notes that "most discussions now acknowledge that income per capita is a necessary but insufficient proxy of well-being" (Alkire 2002: 183).

Interpretations of Sustainable Development			
Humans *and* Ecosystems (seek 'betterment' via quantitative growth)		Humans *in* Ecosystems (seek 'betterment' via qualitative change)	
Self-Correcting Markets Perspective	**Technocratic Interventionist Perspective**	**Commodity / Ecosystem Service Perspective**	**Dynamic Co-evolutionary Perspective**
SD is redundant and possibly harmful; Market-induced innovations will correct own problems and enable sustainable growth	Technological and technocratic interventions are needed to redress market failures for sustainable growth	Technical rules to sustain ecosystem support of increased human wellbeing (broadly defined)	Human wellbeing (broadly defined) dependent on dynamic co-evolution of social-ecological complex; Supported by diversity and discursive communities
e.g. Beckerman (2003)	e.g. Pearce (1988)	e.g. Daly (1996)	e.g. Gunderson & Holling (2002); Norgaard (1994)

Figure 2.4 Interpretations of Sustainable Development

Proponents of this perspective tend to be technocentric in that they see ecological limits as a constraint to be overcome with technological advances. In sociology this perspective has come to be known as 'ecological modernisation' theory (Hajer 1995). Adherents to this perspective can further be split into two groups. One group sees the concept of sustainable development as redundant and possibly even counterproductive, because they expect liberal economic markets to self-correct for any ecological limits encountered by producing profit incentives for the creation of technological substitutes that will allow the economy to continue growing indefinitely (e.g. Beckerman 1994; 2003). The other group still sees sustainable development as consistent with economic growth, but they recognise a need for technological and technocratic interventions to correct for market failures (e.g. Pearce 1988; Pearce et al. 1989).

Those in the humans-*in*-ecosystems group tend to define development in terms of qualitative 'betterment'. For example, Daly argues for recognising the difference between growth and development. He makes the following distinction:

> "Growth is a quantitative increase in the physical scale of throughput. Qualitative improvement of the use made of a given scale of throughput, resulting either from improved technical knowledge or from a deeper understanding of purpose, is called 'development'." (Daly 1996: 31)[10]

Lutz argued that "authentic development" means "meeting the basic material human needs of all" (1992: 166). But development has come to be understood as encompassing a much wider spectrum than just economic activity. Cowen and Shenton asserted that understanding development as a 'sub-discipline' of economics is wholly misplaced. They argued "the modern idea of development was created in the crucible of the first half-century of Western European transition to industrial capitalism" as a means of constructing order out of "the social disorders of rapid urban migration, poverty and unemployment" (1996: 12, 5). The focus on material needs is too narrow for some authors, who seek to encompass more holistic human needs. For example, Rahman (1992: 174) argued that "the basic *human* need [is] to fulfil our creative potential in ever newer ways." Alkire (2002) surveyed various lists of basic human needs and concluded that human development must be understood as a multidimensional concept. Common to all of these concepts of development, from the most narrow economic to the list with the largest number of human needs included, is the idea of improving the experience of human life on earth.

Adherents to this perspective can also be further divided into two groups (see Holling et al. 1998). One group takes a 'commodity' or ecosystem service perspective (e.g. Daly 1990; 1996). Within this perspective society is viewed as being embedded in, but still distinguishable from, the greater ecosystem. As a result the biophysical environment is seen in terms of stocks and flows that provide critical resources and services to humans and human society (Costanza 2000; De Groot 1987; De Groot et al. 2002). This perspective also tends to take more of a technocratic approach. They propose three technical principles for human development to be ecologically sustainable: the use of ecosystem resources must not exceed their rate of regeneration, waste emissions must not exceed the ecosystem's assimilative capac-

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[10] Schumpeter came to a similar conclusion. As part of his treatment of economic development he states: "Nor will the mere growth of the economy, as shown by the growth of populations and wealth, be designated here as a process of development. For it calls forth no qualitatively new phenomena" (1934: 63).

ity, and use of non-renewable resources must not exceed the rate of investment in renewable substitutes (Goodland and Daly 1996).

The other portion of the humans-*in*-ecosystems group tends to take a dynamic co-evolutionary perspective. Rather than viewing social systems as embedded in but distinguishable from ecosystems, this perspective is based on a view of the social-ecological system as a single complex in which causes and effects as neither 'ecological' nor 'social' because they are necessarily a co-product of both (Ingold 1997). For example, Holling and colleagues (2002) suggested sustainable development represents the capacity of dynamic processes and structures within the social-ecological system to maintain both adaptive capacity and potential for novel self-organisation. Norgaard (1994) argued sustainable development is about the co-evolution of human values, organisation, knowledge, and technology with the environment. In this view humanity's 'development' is no longer a linear progression, but instead can take many forms and simply reflects whether human values and capabilities are compatible with ecosystem states. Rather than proposing technical rules for sustainable development, adherents to this perspective emphasise the need for more collaborative, discursive strategies that encourage quicker learning, flexibility, and diversity (Gunderson and Holling 2002; Norgaard 1994).

A Critique and the Need for Expansion

The discussion so far has surveyed a range of interpretations of sustainable development. However, in practice, the mainstream interpretation lies someplace in the middle of this spectrum. As Lélé described, sustainable development is usually understood as "a form of societal change that, in addition to traditional development objectives, has the objective or constraint of ecological sustainability" (1991: 610). Viewed as a constraint, the biophysical dimension takes prominence as the chief obstacle to sustained human progress (cf. Hueting and Reijnders 1998). Pearson (2003) suggested the post-WCED focus on sustainability has favoured the biophysical realm for two reasons: (1) an appreciation that society is constrained within 'critical limits' resulting from states of the environment and technology has resurfaced, and (2) the attempt by governments to rapidly operationalise sustainable development

led to the search for quantifiable measurements, which was more easily applied to biophysical characteristics.

With this almost exclusive focus on the biophysical constraints to human development, much work on advancing sustainable development has therefore focused on the role of technology, particularly environmental technologies (e.g. Dincer 2000; Kuehr 2007; Wambugu 1999). Where the need for systematic social change is recognised it is usually invoked to support the diffusion of new technological innovations (e.g. Falk and Ryan 2007; Kemp 1994). However, it is not human technology so much as patterns of human activity that are challenging the sustainability of human development (Maiteny 2000; Norgaard 1994; Stern 1993). The overwhelming attention scientists and practitioners afford to technological means of redressing degradation of biophysical systems represents a reduction of the concept of sustainable development to an 'Enviro-Tech' paradigm (see Figure 2.5). Remedy for this reduction lies in recognising that, at their core, both sustainability and development are necessarily human-centred concepts. As Clark explains:

> "When we talk about the sustainable future of the planet, surely we mean to say a sustainable future for the planet with human beings...Sustainability, then, refers to the sustainability of human life, and that ultimately depends on how we humans behave." (Clark 1994: 180)

Sustainable development describes more than a future in which humans simply self-perpetuate. As Elgin observes, "If we do no more than work for a sustainable future, then we are in danger of creating a world in which living is little more than 'only not dying'" (1994: 235). More than mere survival, sustainable development is, as Malaska (2001) suggests, a post-modern vision of progress. By this he means that sustainable development provides a vision that eclipses modernity's concept of progress by redefining the intellectual and ethical challenges involved. Visions of the future informed by sustainable development couple the long-term survival of humanity with a qualitative improvement in the human experience of life on earth. This makes sustainable development both a goal and a process, as it represents both a vision of the future worthy of human aspiration and an unending process of adapting human activities to correspond with that aspired future.

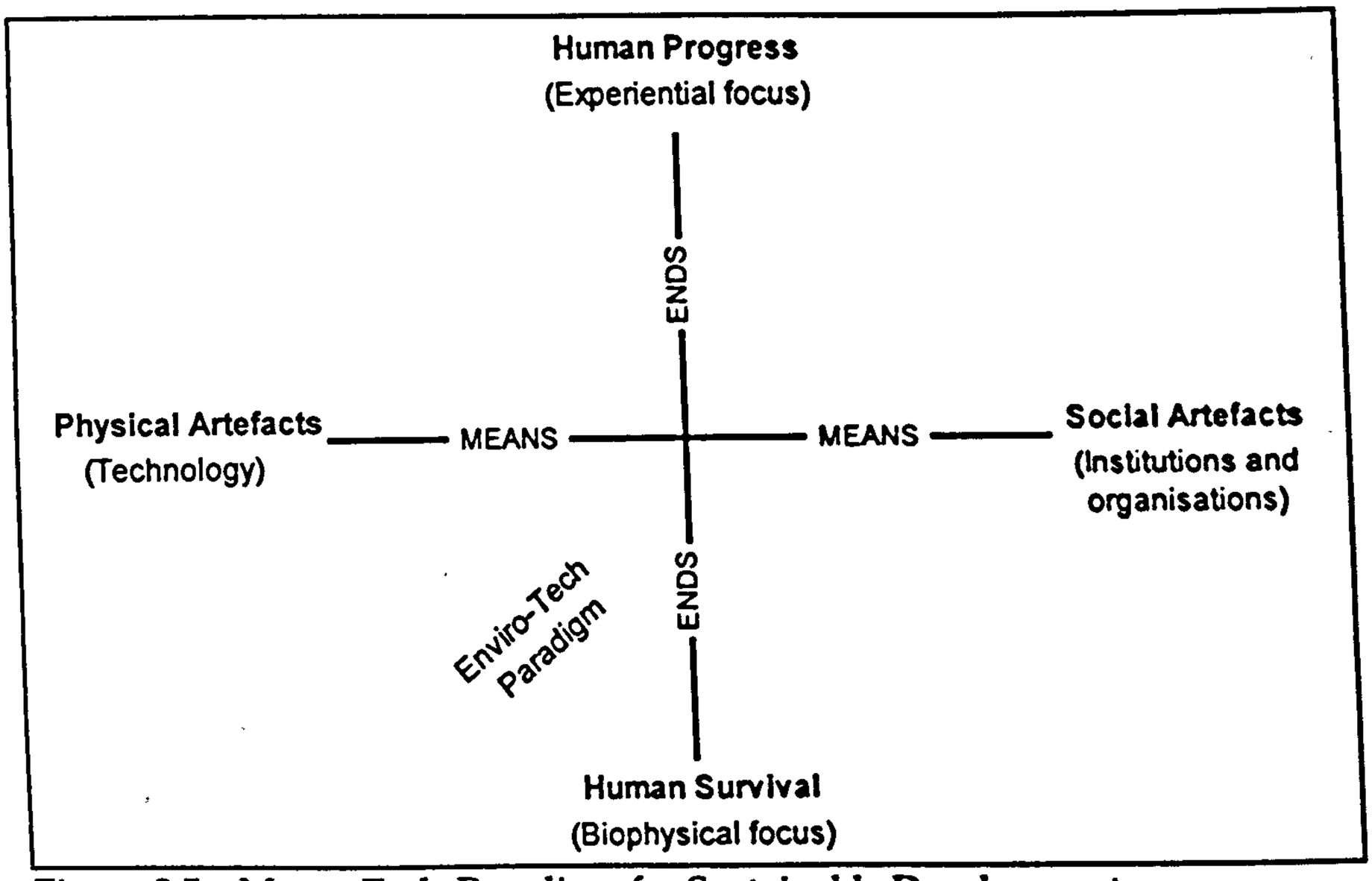

Figure 2.5 Means-Ends Paradigm for Sustainable Development

The ever-changing social-ecological system in which humans must navigate in pursuit of this vision includes humans and the artefacts of human interaction. It is this body of artefacts that provides the means for systematic change of the larger social-ecological system (Westley et al. 2002). 'Artefacts' refer to human-made objects and phenomena, distinguishable from 'natural' objects and phenomena that are products of the ecological system and occur regardless of human involvement (Simon 1996). The physical artefacts produced by human society are what we commonly know as technology. Social artefacts are institutionalised activity systems. They represent the patterns that result as we humans organise our activities through repeated interactions with one another.

To reclaim the full meaning of sustainable development as represented in the early definitions of the 1970s, both the ends and the means of sustainable development must expand from the 'Enviro-Tech' paradigm, represented by the lower-left quadrant of Figure 2.5, to include a more comprehensive perspective and approach, represented by the entire spectrum spanning all four quadrants. Though technology is no doubt a crucial factor, it must be employed in the service of human activities that enhance sustainable human development, understood as an ecologically compatible qualitative improvement in the experience of life on earth. With this fuller understanding of sustainable development the importance of organisations and en-

trepreneurship becomes much more evident. While inventors of new technologies belong to the left side of the spectrum, entrepreneurs – innovators of human organisation – belong to the right side.

2.3 Progress: Interdisciplinary Forays

2.3.1 Sustainability Entrepreneurship

The concept of sustainability entrepreneurship, or more precisely, sustainability-driven entrepreneurship, as a unique phenomenon worthy of academic inquiry is still in its infancy. In fact, both academics and practitioners are just beginning to grapple with what sustainability entrepreneurship means, what it might look like, and how relevant it is likely to become. Just as conventional entrepreneurship research is conducted in support of the normative goal of economic growth (Gibb 1996; Shane 1996), so too sustainability entrepreneurship research is conducted in support of the normative goal of sustainable development (cf. Jacobs 1995). The impetus to experiment with cross-fertilising the traditions of entrepreneurship and sustainable development comes from both subject areas. At a time when the sustainable development agenda is growing in both legitimacy and urgency, the powerful and deeply entrenched notion of entrepreneurs as people who both 'get things done' and have a disproportionate ability to drive and alter socioeconomic systems provides hope for a bottom-up solution to the need for large-scale, fundamental change to the current trajectory of the socioeconomic system. The possibility that individuals can affect dramatic change by engaging with the society's existing institutions rather than standing outside or in opposition to them provides an alternative course of action for those who seek to promote sustainable development. Sustainability entrepreneurship has potential to be a more immediate and inclusive approach than the seemingly protracted and exclusive realm of multi-state conventions and global institutions. At the same time, entrepreneurship researchers are seeking to escape the narrow confines of conventional business and economic applications of the concept to explore how the general concept of entrepreneurship may be usefully applied in wider contexts (e.g. Venkataraman 1997).

When this research project was begun there was little precedent for the concept of sustainability entrepreneurship other than the works of Tilley and Young (Tilley and Young 2004; Young and Tilley 2003), and works on the related but not identical subjects of social and environmental entrepreneurship. However, in the last year a handful of conceptual works have emerged along with two empirical studies. Therefore, this review first briefly addresses the social and environmental entrepreneurship literatures in the context of being both important precursors and allied fields. Following this, a review of the recently emerging literature on sustainability entrepreneurship is used to put the present study in the context of developments in this emerging field. Finally, this review is used to chart a conceptual map of the field.

Social Entrepreneurship

While the practice of social entrepreneurship is not considered to be a new phenomenon, social entrepreneurship as a field of research only crystallised in the late 1990s (Dees 1998; Leadbetter 1997) and has, in a short period of time, bourgeoned in both academia and the popular press (e.g. Bornstein 2003; Nicholls 2006). In this time social entrepreneurship has become a catch-all for any entrepreneurial activity not driven (strictly) by a profit motive. Perrini and Vurro suggested the concept "is a composite phenomenon and can initially be explained by the strengthening requests from various stakeholders to the nonprofit sector to enhance its economic efficiency and effectiveness, as well as to the for-profit sector to encourage the adoption of socially responsible behavior" (2006: 58). Mair and Marti (2006) identified three general clusters to the literature. The first and by far the most dominant interpretation is the introduction of business principles to non-profit organisations (e.g. Dees et al. 2002). A second use of the term applies to socially responsible commercial businesses with cross sector partnerships (e.g. Sagawa and Segal 2000; Waddock 1988). A third use of the term applies more generally to innovative pursuits that catalyse social transformations and provide solutions to social problems (e.g. Perrini and Vurro 2006; Robinson 2006), including environmental problems (e.g. Clifford and Dixon 2006; Seelos et al. 2006).

The emphasis on *social* purpose as the distinguishing characteristic of social entrepreneurship led to the field focusing predominantly on entrepreneurial non-profit management (e.g. Thompson 2002) and community ventures (e.g. Haugh 2007; Haugh and Pardy 1999). Much of this literature is concerned with exploring the differences between conventional and social entrepreneurship. For example Mair and Martí (2006) explored how applicable the concepts and definitions of entrepreneurship are to initiatives with a social mission as their core purpose. Austin and colleagues (2006) conducted a more systematic examination of the similarities and differences between 'commercial' and 'social' entrepreneurship using Sahlman's (1996) framework for analysing entrepreneurial management. They concluded that instead of the 'deal' that is at the heart of a commercial venture, a "core social value proposition (SVP)" is at the heart of a social venture due to "the centrality of the social purpose" (2006: 16).

Weerawardena and Mort (2006) conducted a grounded theory study of nine social entrepreneurial nonprofits to identify the unique characteristic of social entrepreneurs and the contexts in which they operate. They develop a model of social entrepreneurship as a problem of 'constrained optimisation' in which efforts to sustain the organisation and environmental dynamics both act to constrain the entrepreneur's ability to create social value. Both Weerawardena and Mort (2006) and Austin and colleagues (2006) emphasised the dangers of goal displacement from organisational maintenance taking priority over the social mission. This concern perhaps reflects the positioning of social entrepreneurship within the paradigm of non-profit management. However, there is also a growing interest within the field in 'social purpose business ventures' as for-profit businesses that exist for a primarily social purpose (e.g. Choi and Kiesner 2007; Wallace 1999). For example, Hockerts (2006) examined three areas of opportunity for such ventures – activism, self-help, and philanthropy – and for each area identified where economic value propositions and social value propositions might converge to create 'blended value' opportunities.

Paredo and McLean (2006) attempted a reconciliation of these disparate views of social entrepreneurship by developing a pair-wise spectrum of social goals and commercial goals to show how the two combine to produce a range of organisation types. At one extreme are non-profit organisations and at the other extreme are

commercial businesses that engage in 'cause-branding'. Another stream of the literature focuses more explicitly on the role of social entrepreneurship in solving social problems and catalysing social transformations. With this perspective the precise legal form (i.e. for profit or nonprofit) becomes less important as the function of social entrepreneurs as society's change agents is brought to the fore. For example Seelos and colleagues (2006) sought to find a link between social entrepreneurship and progress toward the UN General Assembly's Millennium Development Goals. Perrini and Vurro examined the process by which social entrepreneurs 'manage social change', including the identification of social problems, how these problems are paired with economic opportunities, and how the entrepreneurs organise in efforts to bring about transformative change.

Two of the field's crosscutting themes – innovative solutions to social problems and catalysing social transformation – have also been the targets of critique. For example, Thompson and colleagues (2000), among others, questioned whether social entrepreneurship represents a shift to the private sector of social services that should rightfully be provided by governments as public goods. Cho focused on social entrepreneurship's "juxtaposition of 'social' objectives and the instruments of private enterprise" (2006: 36). He questioned whether social entrepreneurship is "a substitute for, rather than a complement to, concerted public action" (2006: 51), and suggested that by focusing on the symptoms of social pathologies it may actual prevent more profound social transformations from addressing the root causes of those problems. As a field of research, Hockerts criticised the broad scope of the field by suggesting contributions to knowledge may get lost in a "quagmire of definitions". By contrast other authors seem to relish the field's diverse scope of subject matter (e.g. Mair and Martí 2006).

Environmental Entrepreneurship

Schaper (2002) identified three general types of entrepreneurship in existence today: classic entrepreneurship as individuals who start their own businesses, intrapreneurship as entrepreneurs operating within large organisations, and social entrepreneurship as entrepreneurs working within non-profit organisations. To these he suggested a fourth type was emerging: environmental entrepreneurship. Use of the

terms 'environmental entrepreneurship', 'eco-entrepreneurship', and 'ecopreneurship' emerged in the early 1990s as the idea that growing demand for environmental quality might represent new business opportunities and also might help to redress some of the environmental damage caused by industry (Bennefft 1991; Berle 1991; Blue 1990). This early literature largely dealt with opportunities for existing small businesses, but when the term re-emerged in the late '90s in a book by Isaak (1999), issues of the journals *Organizational Change Management* and *Greener Management International*, and a subsequent edited volume by Schaper (2005), it was grounded more explicitly in a view of entrepreneurship as innovation. Although some authors dealt with issues of corporate venturing, or intrapreneurship (Azzone and Noci 1998; Krueger Jr 1998; Post and Altman 1994), the vast majority of authors focused on innovative new ventures. The three themes that dominated this literature were: development of typologies to distinguish varieties of environmental entrepreneurship, identifying the push and pull factors that constrain and promote environmental entrepreneurship, and exploring how environmental entrepreneurs might catalyse larger transformations in the economy.

For example, Isaak (2002) made the distinction between what he called 'green businesses' and 'green-green businesses'. The former is a conventional business that has subsequently "discovered the cost and innovation and marketing advantages, if not the ethical arguments, for 'greening' their existing operations" (Isaak 2002: 82). This idea corresponds to what is termed in this study as environmentally responsible business. According to Isaak, a 'green-green business' "is one that is designed to be green in its processes and products from scratch, as a start-up, and, furthermore, is intended to transform socially the industrial sector in which it is located towards a model of sustainable development" (Isaak 2002: 82). This idea corresponds to what is considered in this study to be environmentally-driven entrepreneurship.

As with Isaak's typology, the values and motives of entrepreneurs is a key dimension of all of the suggested typologies. For example, Linnanen distinguished between a desire to change the world and a desire to make money, and suggested a "virtuous cycle of ecopreneurship" can result when entrepreneurs are driven by both motives (2002: 79). Similarly, Pastakia distinguished between 'commercial ecopreneurs' and 'social ecopreneurs' depending on whether an individual is driven

primarily to maximise personal gains or to promote an "eco-friendly idea/product/technology" (1998: 159). In a study of environmental influences at business incubators, Schick and colleagues (2002) distinguished between 'eco-dedicated', 'eco-open', and 'eco-reluctant' start-ups.

Other authors also added an external dimension to their typologies. For example, Schaltegger (2002) identified five types of environmental entrepreneurs based on priority of the environment as a business goal and the market effects of the business. He suggested "companies contribute most to the overall environmental progress of an economy and society if their business deals with environmental solutions and environmentally superior products and if their innovations substantially influence the mass market" (2002: 48). Walley and Taylor (2002) based their typology on Giddens' framework linking structure and action. They developed a framework with two dimensions. One described an entrepreneur's motives on a spectrum from 'economically oriented' to 'sustainability oriented', and the other described the social structural influences on a spectrum from 'soft (e.g. personal networks) structures' to 'hard (e.g. economic) structures'. They argued that entrepreneurs from any of the resulting categories can contribute to a sustainable society, even if they are 'opportunistically green' or 'accidentally green'. Pastakia (2002) constructed a framework to explore the internal drivers, such as personal values and competitive advantage of eco-friendly products, and external drivers, such as the power of stakeholders and the power of legislative and regulative policies, of environmental entrepreneurship.

In an interesting inversion from the rest of the field's interest on the impacts of environmental entrepreneurs on society, Bryant and Bryant (1998) use four historical case studies to explore how changes in social values influence changes in entrepreneurial behaviour. Anderson (1998) provides theoretical support for both approaches by using the concept of 'value' to link the traditions of environmentalism and entrepreneurship. He argues that even though environmentalism emerged as a "reaction to the excesses of industrial modernity", both environmentalism and entrepreneurship are "embedded in the "subjective 'rationality'" of society, and this "is why entrepreneurship is most likely to sustain environmentalism than any other form of imposed change" (1998: 136, 135, 139).

Most of the empirical work in the field consists of illustrative case studies used as examples of typological categories. However, Volery (2002) conducted a single case study of 'commercialised conservation' from which he found support for the importance of the founder in shaping company values, and concluded that even though it may not be the main driver, the financial 'bottom line' is still the most urgent bottom line. Beveridge and Guy (2005) suggested the literature on environmental entrepreneurship has usefully demonstrated that an entrepreneur's motivations and values, and the contextual conditions that influence their ability to instigate change in society, are critical explanatory factors. However they caution that "the literature is in danger of narrowing our focus to make innovation appear like a linear process in which motivated individuals with 'positive' environmental attitudes flourish or flounder as a result of external structural forces." They suggested more attention needs to be devoted to "processes and practices of emergence, negotiation and innovation" (2005: 672).

Sustainability Entrepreneurship

There are currently only a handful of works that directly address sustainability entrepreneurship. [11] Among these, some authors explore the contribution more conventional forms of entrepreneurship can make to sustainable development, such as providing employment opportunities, facilitating a shift to cleaner industries, and as a source of technology and innovation for new products and services (e.g. Ahmed and McQuaid 2005). Others self-identify their object of study as sustainability entrepreneurship but limit their focus exclusively to environmental issues, which is here considered to be the domain of environmental entrepreneurship (e.g. Dean and McMullen 2007). Others still are really addressing sustainable management practices of conventional enterprises (e.g. Crals and Vereeck 2004). While all of these approaches may make contributions to sustainable development in their own ways, they are not consistent with what is considered here to be 'sustainability entrepre-

[11] At the First World Symposium on Sustainable Entrepreneurship held 15-17 July 2007 at the University of Leeds, the delegates discussed 'sustainability entrepreneurship' as being a more precise description of the topic domain. For that reason and for consistency I refer to the work of all authors in this field using that term, even though most authors discussed here have used the term 'sustainable entrepreneurship' in their works.

neurship'. To remain faithful to the understanding of sustainable development as discussed in section 2.2.3 above, sustainability entrepreneurship is here understood as entrepreneurship that explicitly instils both environmental- and social-purpose dimensions in a single enterprise. The purpose and level of commitment for these enterprises exceeds what is usually discussed as corporate social responsibility and eco-efficiency (see section 2.3.2 below). Figure 2.6 clarifies the distinction between social, environmental, and sustainability entrepreneurship by showing where each engages with the means and ends of sustainable development.

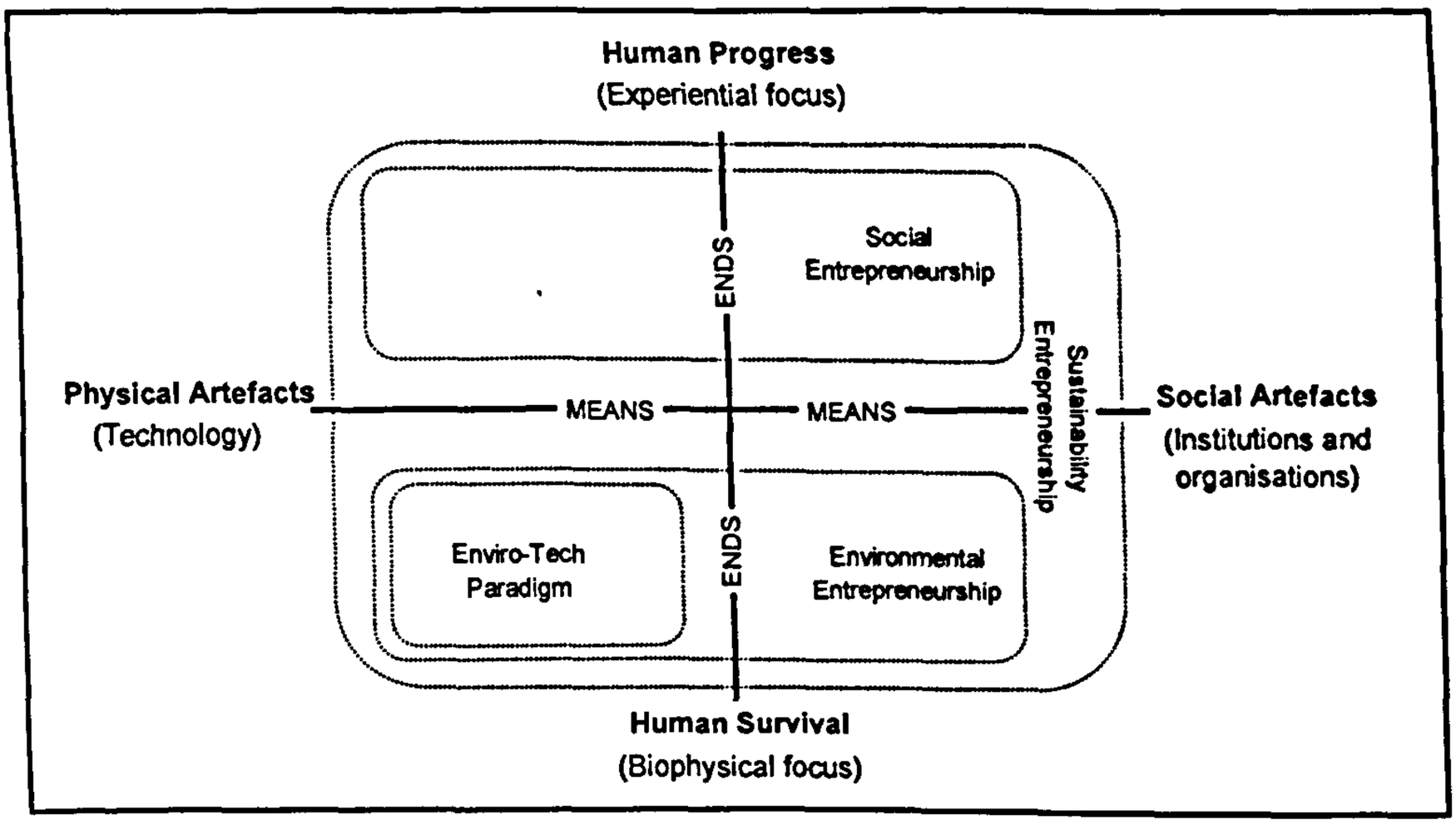

Figure 2.6 Social-, Environmental-, and Sustainability-Driven Entrepreneurship

In an effort to demonstrate the limits of relying on concepts such as eco-efficiency for achieving sustainable development, Young and Tilley (2003, later published as Young and Tilley 2006) developed a model of sustainability entrepreneurship based in part on Dyllick and Hockerts' (2002) model of corporate sustainability and McDonough and Braungart's (2002) model for sustainable design processes. Young and Tilley used this model to make four arguments. First, they suggested there is a current trend for entrepreneurs to cluster around one of three philosophies, as either economic (conventional), social, or environmental entrepreneurs. Second, they showed how the sustainability agenda is interpreted from each of these vantages. For example, when viewed through the lens of the efficiency con-

cerns of economic enterprises, environmental and social issues get interpreted as eco-efficiency and socio-efficiency. Third, they argued that even if an entrepreneur were to adopt all six criteria, representing the sum of all three perspectives, this is still insufficient to achieve sustainability entrepreneurship. This is because each criterion represents the primacy of one purpose over the other two, and therefore fails to provide an integrative, holistic perspective. Finally, they argue that the additional elements of a long-term time horizon and appreciation for critical limits of the social-ecological system are necessary components for the realisation of sustainability entrepreneurship. In subsequent articles, Tilley and Parrish (2006) elaborated on the pressures for compartmentalisation to one of the three poles, and the challenges to holistic integration for entrepreneurs; and Tilley and Young (2004) explored the potential for sustainability entrepreneurs to contribute more fully to society as the concepts of 'entrepreneurship' and 'wealth' are reinterpreted in light of the needs and values of contemporary society.

The articles of Dean and McMullen (2007) and Cohen and Winn (2007) represent a different approach to the subject. These authors used economic theories of entrepreneurship to demonstrate some of the sources of opportunities for entrepreneurs to profit by contributing to sustainable development. Both sets of authors use the neoclassical economic theory of market failures to show how market inefficiencies, externalities, imperfect information, flawed pricing mechanisms, government interventions, and monopoly power result in environmental degradation and therefore produce market conditions in which entrepreneurs can earn entrepreneurial rents by reducing environmental harm. Both sets of authors acknowledge that the concept of sustainable development is broader than the issues addressed by this framework. However, Dean and McMullen do define sustainability entrepreneurship strictly in terms of correcting "market failures that detract from sustainability" (2007: 58). Cohen and Winn allow for a broader interpretation by suggesting sustainability entrepreneurship is about the economic, psychological, social, and environmental consequences of future goods and services (2007: 35).

Both sets of authors present a similar picture, in which sustainability entrepreneurs are attracted by the prospects of earning entrepreneurial rents from market failures to redress some of the environmental harm that results from those failures. However, the authors each reach different conclusions from this analysis. Dean and

McMullen argue that their theoretical discussion of sustainability entrepreneurship demonstrates "that market systems and the institutions that define them evolve over time in a manner that can resolve social ills" (2007: 72), thereby positioning sustainability entrepreneurship within ecological modernisation theory (see Hajer 1995). Cohen and Winn, on the other hand, envisage a broader role of sustainability entrepreneurs as agents of Schumpeterian "creative destruction of unsustainable practices and their replacement with sustainable technologies, business models and resulting lifestyles" (2007: 46). Because of this they also suggest the 'dependent variables' or performance indicators for studying sustainability entrepreneurship need to be multifaceted to account for these entrepreneurs' 'triple bottom line' impacts.

Cohen, Smith, and Mitchell (*Forthcoming*) follow up on this last suggestion by exploring a range of possible 'dependent variables' for the value created by sustainability entrepreneurship. They suggest a list of indicators for the value created from economic, environmental, and social processes, activities, and impacts, as well as overlaps between each sphere such as eco-efficiency for the overlap between economic and environmental spheres, socio-efficiency for the overlap between economic and social spheres, stewardship for the overlap between environmental and social spheres, and sustainability for the overlap of all three. They seem to depart from Cohen and Winn (2007) by developing the argument that entrepreneurs can be motivated by concerns other than capturing entrepreneurial rents. In fact, they argue that the "primary value creation strategies and focal positioning" of enterprises will be different depending on which value sphere the entrepreneurial motives place them, with sustainability entrepreneurs being motivated by all three value spheres (Cohen et al. *Forthcoming*). They provide results from a review of empirical articles that suggest the most active overlapping domains are between economic and social spheres, with the environmental and sustainability spheres almost completely neglected.

Finally, two empirical studies by two sets of researchers were conducted during roughly the same period as this study. One of these studies, by Clifford and Dixon (Clifford and Dixon 2006; Dixon and Clifford 2007), is a qualitative study of the launch and early stage development of a single UK-based enterprise that operates on earned income and seeks to reduce solid waste and the use of virgin materials in the furniture industry while providing opportunities for disadvantaged mem-

bers of society. While these authors do not use the term 'sustainability entrepreneurship', this case study is congruent with the meaning of the concept as defined in this study. The key finding of their study was that this enterprise was able to succeed because it developed a symbiotic business model within an embedded network of other organizations which included larger, conventional companies and 'social franchises'. This suggests the social contexts within which entrepreneurs and enterprises operate are likely as important as the activities of the entrepreneur.

Schlange has contributed both conceptual and empirical work on the topic. In a conceptual paper he developed a model of stakeholder identification that addresses the unique motives of sustainability entrepreneurs (Schlange 2007). This model was based on a concept of sustainability entrepreneurship similar to Young and Tilley's model, in which the importance of long-term time horizons is recognised and sustainability entrepreneurship is viewed holistically as operating above and beyond the sum of economic, social, and environmental goals. In a related empirical study, semi-structured interviews were conducted with the founders of ten enterprises in eastern Switzerland that scored high against a set of environmental, social-ethical, and economic sustainability criteria (Schlange 2006). Schlange found that sustainability entrepreneurs are motivated by a desire to catalyse regional development and, in so doing, instil their values into the regional economy and broader social system. In practice these entrepreneurs were notable for their ability to simultaneously meet competing objectives in the environmental, social-ethical, and economic realms. This suggests that not only are the values and motivations of sustainability entrepreneurs distinct from other types of entrepreneurs, but also that they exhibit distinct capabilities.

Each of the authors discussed in this section have contributed to expanding the concept of entrepreneurship to explore how entrepreneurship might contribute to sustainable development. However, some of the conceptions of sustainability entrepreneurship are more restricted by conventional economic assumptions of entrepreneurial motives than others. As the primacy of the profit motive is relaxed, the potential contribution of entrepreneurial ventures to sustainable development increases and the possibility-space of sustainability entrepreneurship as a concept expands. My interpretation of where these authors' concepts of sustainability entrepreneurship fall in this possibility-space is presented in Figure 2.6.

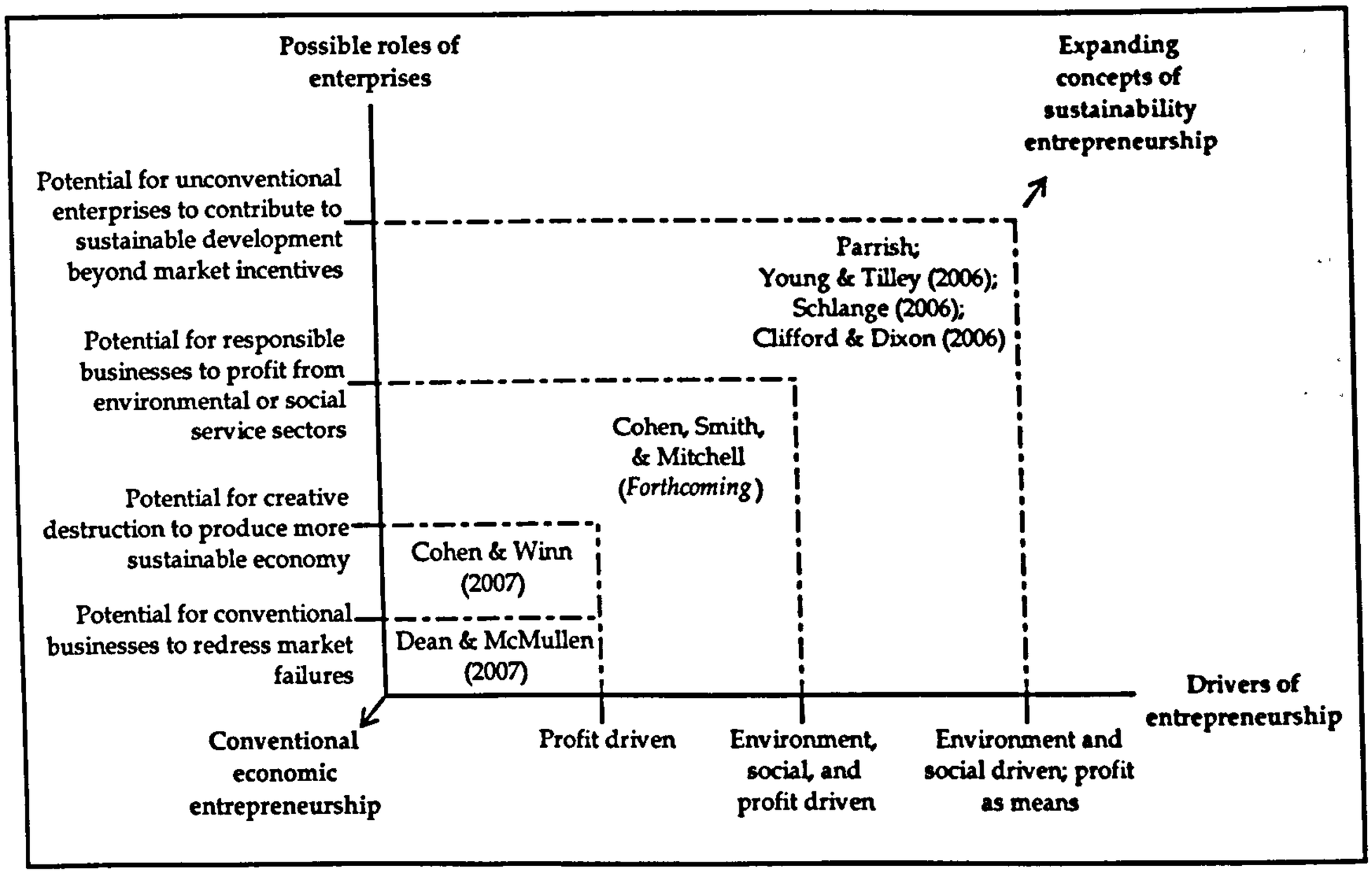

Figure 2.7 Possibility-Space for Concepts of Sustainability Entrepreneurship

2.3.2 *Sustainability Enterprise*

Research on sustainability enterprise takes place at the intersection of organisation and sustainable development research. Here an enterprise is understood as a formal organisation that operates through earned income, making the class 'enterprise' a subset of the class 'organisation'. Research on sustainability enterprise usually goes under the heading of 'corporate sustainability'. To date, most of this research has focused on how environmental and social concerns can be incorporated into business operations and management. In this way 'corporate sustainability' becomes synonymous with 'corporate responsibility' (e.g. Blackburn 2007), and when put into practice becomes a mixture of corporate social responsibility initiatives and eco-efficiency initiatives. For example, the World Business Council for Sustainable Development writes of "promoting the role of eco-efficiency, innovation, and corporate social responsibility toward sustainable development" (WBCSD 2002: 2). Birkin (2001) reviewed a number of these approaches, including environmental and social accounting, stakeholder management, environmental management systems, energy

and mass balance accounts, and efforts to internalise externalities. He then identified a number of dimensions in which these conventional approaches to corporate sustainability need to be extended, including the need for new knowledge, values, skills, metrics, and goals that embody an appreciation for "the interconnectedness and interdependence of 'individuals' within an ecosystem", and that are expressed in practice (2001: 55, 51).

This suggests an important distinction between those enterprises that are driven by a sense of *duty* to act responsibly toward society and the environment as they pursue their private interests, and those enterprises that are driven by a sense of *purpose* to contribute to the sustainable development of the social-ecological system of which they are a part. Both are important to understand, but the literature focuses almost entirely on the former to the exclusion of the latter. This focus has resulted in a plethora of studies that examine how enterprises can effectively manage their environmental and social impacts while pursuing financial goals, and have resulted in recommendations for achieving 'sustainable business' by, for example, addressing the communication challenges between an environmental manager and the 'mainstream' manager (Sweet et al. 2003), developing environmentally sensitive enterprise strategies (Stead and Stead 1994), or packaging 'green reforms' in the language of self-interest (Egri and Pinfield 1996). As Birkin states: "If what we are really working for is money in the bank, then environmental and social aspects will always remain obstacles to our 'real' goals" (2001: 54). While these studies have their place, they provide little insight for understanding how sustainability purpose-driven enterprises can achieve their goals.

In contemplating "what is a sustainable corporation?", Sharma suggested it "is possible that by integrating the concepts of carrying capacity and the laws of thermodynamics...as well as measuring and reporting an organization's ecological footprint and the triple bottom line, we will provide clues to sustainable organizational forms" (2002: 13-4). The 'triple bottom line' (Elkington 1997), together with a stakeholder perspective (Clarkson 1995; Freeman 1984) are probably the most common frameworks used to apply principles of sustainable development at the organisational level. For example, Tencati and Perrini defined a "sustainability-oriented company" as one that "develops over time by taking into consideration the economic, social and environmental dimensions of its processes and performance af-

fecting the quality of stakeholder relationships" (2006: 95). Similarly, Dyllick and Hockerts defined corporate sustainability as "meeting the needs of a firm's direct and indirect stakeholders...without compromising its ability to meet the needs of future stakeholders as well" (2002: 131). They argued that to do this an enterprise must focus on the 'triple bottom line' by growing their economic, social, and natural capital basis. However, Springett (2003) cautioned against using standard business discourse to imbue such concepts with meaning. For example, she noted that the triple bottom line "is a handy indicator for full-cost accounting, but not an equivalent for sustainable development", and instead argued for taking a wider view to avoid reifying sustainable development discourse to this trichotomy and other concepts based in eco-modernism (2003: 72). She suggested that some concepts, such as 'needs,' can be construed to mean "the 'creation of need' to raise consumption and thereby production and profit", while other terms central to sustainable development, such as 'futurity,' are only vaguely understood (2003: 73).

At a practitioner level Rossi and colleagues observed that "most businesses continue to equate sustainability performance with environmental performance" (2000: 277). Similarly, Sharma and Ruud observed that "Extant scholarship in corporate sustainability has been mainly focused on theoretical and empirical advances in describing and explaining how organizations interact with the natural environment at various levels of analysis" (2003: 207). For example, Starik and Rands use a contingency theory approach to suggest ecologically sustainable organisations become so by strategically adapting to ecological feedback signals at multiple levels. They focused on the obstacles such organisations face and speculated on a number of characteristics that an organisation would exhibit as they approach ecological sustainability. These characteristics include "absence of targeted protests by environmental activists", "encouragement of pro-sustainability legislation", "utilization of natural resource inputs at sustainable rates", and 24 others (Starik and Rands 1995: 516). However, they refrained from speculating on how an organisation can actually achieve ecological sustainability.

Keijzers (2002) suggested an agenda for the 'modern' sustainability enterprise consisting of energy-related issues, resource stock dissipation, and encroachment on scarce land, and the then detailed a fairly standard programme for enterprises and governments to meet these challenges, including increased stakeholder

dialogue and incentives for technological innovations to address resource constraints. In contrast to this technical and technocratic approach, Purser and colleagues (1995) argued that there is a need for an 'ecocentric responsibility paradigm' in which 'ecological choice', 'ecological learning', and 'ecological democracy' will emancipate humans and ecosystems from the exploitation and control of management hierarchies. Gladwin and colleagues argued that both the technocentric and ecocentric paradigms, "by setting in motion self-defeating counterforces, fail to promote development or to conserve nature" (1995: 889). They attempted to bridge these two extremes with an integrated paradigm of 'sustaincentrism', which the authors suggested "offers a vision of development which is both people centered (concentrating on improvements in the human condition) and conservation based (maintaining the variety and integrity of nonhuman nature)" (1995: 894).

One point of consensus in the literature is that enterprises exist within an interactive network of individuals, groups, agencies, and other organisations (Miles et al. 1974: 244), and that this should be reflected in the way the concept of sustainable development is applied at the enterprise level. While a static view of sustainability enterprise attempts to apply the concept of sustainability to an organisation directly, a dynamic view focuses on how the organisation contributes to macro-level sustainable development (Atkinson 2000; Figge and Hahn 2004). Sandström criticised this perspective by arguing that "Casting the firm as merely one actor out of many in a complicated web of interdependent relations can play down each actor's responsibility to change any destructive structures. It might also play down the crucial role that certain, more powerful, actors have in the network" (2005: 156). However, if one recognises the systemic nature of both organisational life and sustainable development, then there is really no alternative but to take a dynamic view of sustainability enterprise. Thus, at a basic level, sustainability enterprise can be understood as an enterprise that is able to sustain its own activities while contributing to sustainable development of the larger social-ecological system of which it is a part. As Atkinson explained:

> "From society's point of view the interesting question can be thought of in terms of the contribution of a given entity (e.g. business or sector) to sustainability defined in the wider sense (e.g. nation). From the entity's own perspective, the extent to which its contribution impinges on the sustainability

> of its own activity will also be of concern. The key to defining corporate sustainability is to reconcile these two outlooks..." (Atkinson 2000: 240)

This perspective provides a useful definition of sustainability enterprise, but two important questions that remain are how can an enterprise truly contribute to sustainable development, and how can an enterprise achieve concordance between this contribution and sustaining its own activities? O'Hara provided a useful clue to the first question in her discussion of sustainable production, which she defined as "production which sustains the social and biophysical context within which it takes place" (1997: 142). She identified ecological sustaining services such as maintaining atmospheric gas balances, nutrient cycles, and absorptive capacity of ecosystems to maintain water quality, and social sustaining services such as the physical, emotional, and spiritual support provided by households and communities, and argued that sustaining production requires that these social-ecological system functions be maintained. Thus, one way to think about the contribution of enterprises to sustainable development is to consider the ways in which they can bolster these sustaining services. A complementary perspective is offered by Twomey, who suggested that for a sustainability enterprise to achieve its purpose of "creating long-term success for itself by serving social needs", this purpose must be manifest in the enterprise's "core principles and values evidenced in ongoing bevahiors and relationships" (2006: 13, 15). In so doing, he argued, a sustainability enterprise becomes "an organic, mutually emergent system that is connected economically, environmentally, and socially to the world" (2006: 12). Together, O'Hare and Twomey's ideas provide useful starting points for considering how an enterprise might be able to contribute to sustainable development, as understood by either of the 'humans-*in*-ecosystems' perspectives described in section 2.2.3 above.

2.3.3 *Organisation Design*

As conventionally understood, organisation design is about the way human actors structure their organisations to achieve their purposes within the context of a wider environment. It is in this problem space that the fields of entrepreneurship and organisations intersect, though each field has approached the topic from different perspectives (Katz and Gartner 1988). As Dunbar and Starbuck (2006) explain, organi-

sation researchers have viewed organisation design as a technical problem concerning the best *fit* between organisation *structure* and the *environment*, for a given *goal* (e.g. Galbraith 1973; Lawrence and Lorsch 1969; Perrow 1970; Woodward 1970). 'Structure' was historically viewed in terms of formal structures, technologies, and coordination mechanisms, though the concept has since been broadened to include organisation processes such as decision making, information processing, leadership style, and so on (Daft and Lewin 1990; Volberda 1998). But in either case the subject is very much approached as a technical problem requiring a technical solution. As Daft and Lewin state: "the point of organization design research is to discover how things work and how they ought to work" (1990: 3).

In the field of entrepreneurship, organisation design is usually studied as new venture creation or organisation emergence. Thus, entrepreneurship researchers have tended to study organisation design as an interactive process of mobilising resources, building social networks, acquiring knowledge, and establishing exchange relations with the environment, all configured around a negotiated vision or purpose (e.g. Jack and Anderson 2002; Katz and Gartner 1988; Lichtenstein et al. 2006; Starr and Fondas 1992; Ucbasaran et al. 2001; Van de Ven 1993; Yamada 2004). From this perspective organisation design research is more about understanding how certain interactive design processes produce the outcomes that they do. As Sarasvathy suggests, organisations are "an outcome (however unexpected or novel) of serious design, motivated and negotiated by particular aspirations forged in entrepreneur-stakeholder networks that evolve over time" (2004a: 522).

Recently a number of organisation design researchers have based their work on Simon's ideas of a science of design (1996). A review of this literature suggests the elaboration of these ideas have generally produced two different approaches that correspond to the technical and interactive process views discussed, both of which stem fundamentally from the way organisations are viewed. The technical approach arises from the early view of organisations as akin to machines, and later as akin to organisms (Morgan 1997). From this view organisation design research is often compared with research in other design-intervention fields such as engineering and medicine (Van Aken 2004). The technical approach focuses on developing *technological* or *prescriptive rules* to achieve a preconceived result. As Van Aken explains, "a technological rule is 'a chunk of general knowledge linking an interven-

tion or artefact with an expected outcome or performance in a certain field of application'", taking the form of "if you want to achieve Y in situation Z, then perform action X" (2005: 23). This rational, calculated approach assumes a static organisation with well-defined properties and well-defined problem situations, none of which is well suited to the constant flux of dynamic organisations in dynamic environments. As Romme explains, the "technical, instrumental concept used by managers trying to bring their organisations under control...is no longer useful or relevant" because "managers are not viewed as all-powerful architects of organizations: Their influence on organizational processes is assumed to be limited, because they are not the only participants in the discursive and collaborative processes that shape organizational systems" (2003: 565).

By contrast, the interactive process approach is based on a view of organisations as sites of flux and transformation (Morgan 1997). As Gartner argues, "New venture creation is the organizing (in the Weickian sense) of new organizations" (1993: 232). In this view, organisation design is part of an ongoing process of organisational 'becoming' in which organisational actors continuously reweave their "webs of beliefs and habits of actions to accommodate new experiences obtained through interaction"(Tsoukas and Chia 2002: 567). Victor Papanek, a prominent 20th century Austrian-American designer, defined design as "the conscious and intuitive effort to impose meaningful order" (1984: 4). If, as discussed in section 2.2.2 above, organisations are collective endeavours to create order in an uncertain world, then organisation design is more aptly understood as the efforts of people to consciously and intuitively order their activities and resource flows as coordinated, boundary-maintaining, relatively persistent systems that engage with an uncertain world to achieve intended purposes.

Papanek's emphasis on both "conscious" and "intuitive" efforts is important. Navigating the dynamic process of organisation design, entrepreneurs cannot rely on rational thought alone, as Bird (1988) made clear in her description of the interplay between rational and intuitive thinking during organisation emergence. But if we recognise that organisation design is a purposeful activity and therefore inherently instrumental, and also acknowledge that the role of both rational and intuitive reasoning precludes a strictly technical approach, how can organisation design re-

search, as "explicit efforts to improve organizations" (Dunbar and Starbuck 2006: 171), proceed?

An alternative approach to assisting organisation designers focuses on identifying *generative rules* to create new possibilities for realising design intentions. Rather than prescribing strict imperatives, this approach assumes design "is rule-governed to the extent that the process is guided by general rules of action" (Niiniluoto 2001: 375). MacIntosh and MacLean explain that "Whilst the exact form of such emergent structures cannot be predicted, the range of broad possibilities is to some extent contained within the set of simple rules which was applied to generate the new order" (1999: 301). In a similar but slightly different interpretation of the design process, Yoo and colleagues suggest research should focus on the use of *design gestalts*, which have a "generative, form-giving capacity" (2006: 227). These approaches embrace both novelty and unity in design (Yoo et al. 2006), by moving from the 'how/why?' questions of technical design research to questions of 'how/why?' and 'what-if?' (see Ravetz 1997).

The capacity for generative rules and design gestalts to both fulfil and transcend design purposes by generating new possibilities resonates with the views of successful entrepreneurship as a form of expertise or 'maturity' discussed previously in section 2.2.1. Thorpe and colleagues suggested "The entrepreneur is someone who is acutely aware of the reality in which they find themselves, and yet able to adopt sufficient critical distance to see how it might be otherwise" (2006: 239). And Sarasvathy suggested that "In the firm design perspective of entrepreneurship, what is *found* in the world is not opportunity but *possibility*. Designing entrepreneurs take up possibility as a tool and fashion it into opportunity through imaginative interaction both with their tools and with the society in which they live" (Sarasvathy 2004a: 526).

2.4 Possibility: Sustainability Enterprise Design

Taken as a group, what do these research fields tell us about the relationship between entrepreneurship, enterprise, and sustainable development? First, it is evident that we are dealing with a phenomenon that operates at *multiple levels*, from the acts of individual entrepreneurs to the coordinated activities of organisations, and

the institutionalised activities of whole societies. Second, whether it is the process of creating and realising opportunities for new value creation we call 'entrepreneurship', or the coordinated organising process of multiple actors we call 'organisation', or the unending process of adapting human activities to correspond with a vision of the future worthy of human aspiration we call 'sustainable development', each level constitutes an ongoing *process* of flows and flux.

Third, these multilevel processes are *interactive*, in that they influence and are influenced by one another in complex ways. The social-ecological context provides the medium with which entrepreneurs construct their new visions, and yet their actions can lead to large-scale transformations of this social-ecological system. And in between the two, organisations restrict the activity choice of participants, but also expand both the spatial and temporal reach of human influence. Organisations have been shown to reproduce the prevailing social conditions both inside and out, but they have also demonstrated deviations that can shift the regulative, normative, and cultural-cognitive features of wider society. Fourth, each of these processes is driven by the interplay between *intention* and *contingency*. Sustainable development represents a vision for the relationship between humans and the environment, but both human systems and ecosystems are characterised by surprise and unpredictability. Organisations are formed around organisational goals, and yet they must contend with an ever-changing operating environment to realise those goals. And entrepreneurship is driven by entrepreneurial intention, though it thrives by leveraging unexpected contingencies to realise those intentions. Taken together, these points suggest we need to appreciate the phenomenon as multilevel, interactive processes that are ongoing outcomes of both intentions and contingencies.

With this view, two crosscutting themes seem particularly relevant. One theme is that both entrepreneurship and organisations have been shown to be continuously reinterpreted for their times. With the concept of sustainable development, and the vision that it describes, becoming increasingly prevalent the world over, it is perhaps inevitable that entrepreneurship and organisations will start to be reinterpreted in light of this vision. The challenge is to determine which of our current assumptions about entrepreneurship and enterprise should be relaxed to accommodate this new vision, and which provide promise for deepening our understanding of it.

The other crosscutting theme is the role of intentions in the face of uncertainty. The concept of sustainable development arose out of uncertainties about the prospects for the future wellbeing of humanity. The enormous amount of effort and resources being devoted to initiatives to understand and improve humanity's prospects for sustaining improvements to the human experience of life on earth can be viewed as a large-scale effort to reduce this uncertainty. This brings the role of enterprise and entrepreneurship more clearly to the fore. Organisations have been described as a coordinated attempt to reduce uncertainty, and entrepreneurship has been described as a process of leveraging uncertainties into new opportunities to create value for society. This suggests that sustainability entrepreneurship and sustainability enterprise could play an important role in advancing sustainable development, not just because entrepreneurial actors are recognised change agents, but also because the entrepreneurial approach to problem solving may serve a unique function for society as it faces a range of social-ecological challenges with which conventional approaches to problem solving are unable to contend.

To that end, I suggest the concept of 'sustainability enterprise design' could act as a useful unifying concept to link these various research fields. Sustainability enterprise design describes the process of creating sustainability enterprises that are able to contribute to the sustainable development of the greater social-ecological system while also sustaining their own activities indefinitely. This unifying concept can accommodate both sustainability management and sustainability entrepreneurship. In distinguishing the two the difference might be framed as a matter of degree in organisational changes sought. If the focus is on designing *incremental* changes to the organising process it would be about 'sustainability-driven management' (see Boland and Collopy 2004). If the focus is on designing *new* or *radical* changes to the organising process it would be about 'sustainability-driven entrepreneurship'.

However, it is possible the two may be different in kind rather than in degree. Gilbert (2002) sees entrepreneurs and managers as fundamentally different, based on their capacity to use the word 'no'. He suggested the logic of management renders managers incapable of ever saying 'no' to the ongoing pursuits of their enterprise. This raises the question of whether the concept of 'sustainability management' can ever be more than an empty and misleading construct as managers are fundamentally unable to stop their enterprises from infringing on the critical limits

of society or the ecosystem. Gilbert raised the possibility of the entrepreneur as being at heart an existentialist who rejects the meaning and values of their situation and seeks instead to create new meaning for their pursuits. He suggested such an entrepreneur is someone who *"autonomously incorporates 'no' into the definition and conduct of her personal projects"*, and for these entrepreneurs a new venture "is, in effect, a declaration of 'no' about a currently dominant way of arranging economic activities" (2002: 117). From this perspective, a sustainability entrepreneur is an existentialist who says 'no' to our dominant assumptions about the way to organise, and through saying 'no' is liberated to build a new form of organisation based on a new set of values, principles, and ideals that reflect the vision of sustainable development. Sustainability entrepreneurship, then, becomes less a technical exercise of reducing negative impacts, and more an expressive exercise of new possibilities for the ways humans can positively interact with each other and the natural environment that are supportive, restorative, and contributory.

CHAPTER 3

SENSITISING FRAMEWORK AND THEORETICAL PERSPECTIVE

It suddenly struck me that that tiny pea, pretty and blue, was the earth…so small I could blot it out of the universe simply by holding up my thumb…I didn't feel like a giant. I felt very, very small.

Michael Collins, Apollo 11 Astronaut

Private papers (1969)

3.1 The Use of Concepts and Theories in this Study

The chapter begins by developing a sensitising framework for the study, based on the extant literature and the experiences of previous researchers investigating new venture creation. This framework was developed prior to data collection and analysis and was used as a starting point for guiding the study. Following this is a description of the theoretical perspective that was used near the end of the data analysis process to provide a consistent framework for interpreting the results, and to help develop deeper insights about the findings that emerged. This description includes a brief review of the perspective in general, followed by a discussion of a number of key concepts and themes that were used as conceptual building blocks for the account of sustainability entrepreneurship provided in Chapters 6, 7, and 8. The chapter concludes with a summary of the use of concepts and theories in this study.

3.2 Sensitising Framework

Because this is exploratory research it is not possible to approach the study with a highly specified analytical framework. Rather, what is needed is a starting point based on the experiences of previous researchers, but one that does not too tightly constrain the study's explorations. Pettigrew (1990) suggested such a focus is derived in part from an explicit meta-level framework. This can be accomplished by creating a set of analytic categories (Miles and Huberman 1994: 17). Blaikie (2000), following Blumer (1969), called such a loose starting point a 'sensitising' framework. He suggested, "sensitizing concepts provide clues and suggestions about what to look for...[and] an orientation to the research topic" (Blaikie 2000: 137). For the purposes of this study, a useful starting place is Gartner's (1985) proposed framework for describing new venture creation (see Figure 3.1). This framework has been highly regarded and usefully employed by other researchers in the field (Bird 1989, cited in Steyaert 1998), because it orders the many variables that have been used to describe the phenomenon of new venture creation into four dimensions: individual(s), organization, environment, and process.

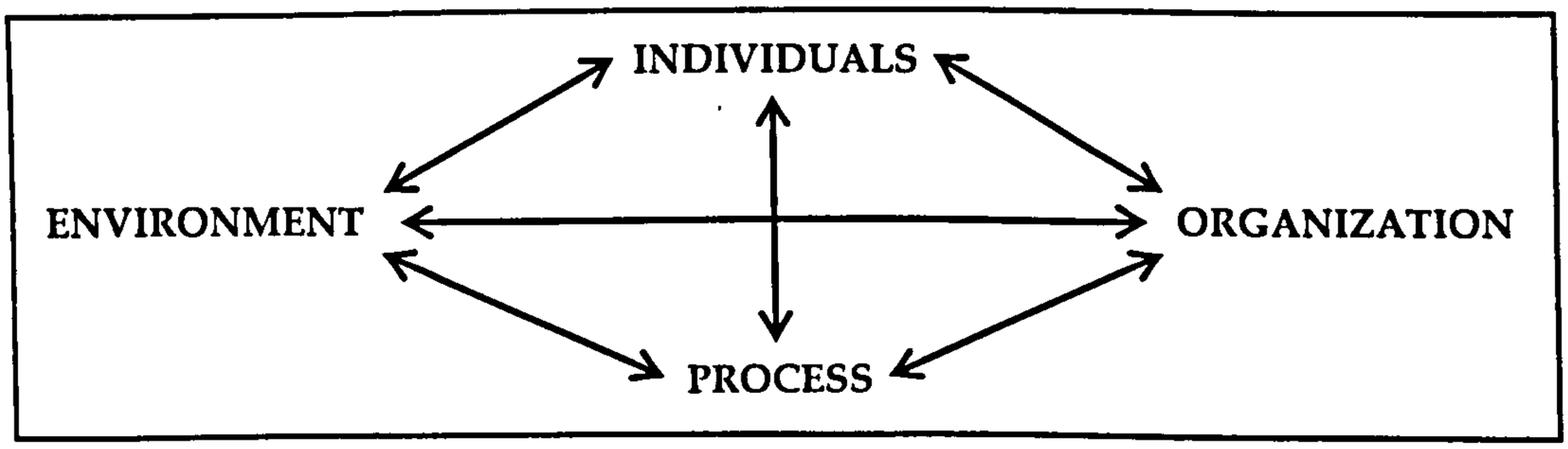

Figure 3.1 Gartner's (1985) Framework for Describing New Venture Creation

Using this as a starting point for the development of this study's sensitising framework, some dimensions were modified or reconceived to reflect recent developments in the field and the particular needs of this study. An examination of each dimension is undertaken, followed by a presentation of the modified framework.

3.2.1 *Business Environment*

The *environment* is considered to be "whatever lies outside the 'boundary' of a system" (Arbnor and Bjerke 1997: 112), in this case the enterprise system. Enterprises exist within an interactive network of individuals, groups, agencies, and other organisations (Miles et al. 1974: 244). Of most interest to this research is not the notion of an enterprise's structural 'fit' with the environment, but the ways in which the enterprise's environmental interactions are dealt with during the process of new enterprise formation. This interaction is best described as coevolutionary in nature (Huygens et al. 2001; Lewin et al. 1999; Lewin and Volberda 1999; Van den Bosch et al. 1999). Coevolution can be defined as "the joint outcome of managerial intentionality, environment, and institutional effects" (Lewin and Volberda 1999: 562). Lewin and Volberda consider a number of properties of the coevolutionary relationship between enterprises and their environments. These include the properties of 'multidirectional causality', and 'multilevelness' or 'embeddedness'.

Multidirectional causality does away with the conceptualisation of a unidirectional relationship between environment and enterprise (cf. DiMaggio and Powell 1983; Hannan and Freeman 1977), and instead suggests a reciprocal relationship. For example, Scott (1964: 520) noted that enterprises which are pursuing goals that society at large finds socially significant are better positioned to obtain necessary resources. While at the same time, Sarasvathy discussed the ways in which entrepreneurs create market environments. She noted that, "As early as 1939, Schumpeter pointed out, 'it was not enough to produce satisfactory soap, it was also necessary to induce people to wash' (Schumpeter 1939: 243)" (Sarasvathy 2003: 217). Thus, the relationship between an enterprise and its environment is viewed as a two-way relationship – both influencing and being influenced by each other.

Multilevelness or embeddedness refers to the idea that explanations of enterprise change should be linked to higher and lower levels. Pettigrew explained that "context is not just the stimulus environment but a nested arrangement of structures and processes where the subjective interpretations of actors perceiving, comprehending, learning and remembering help shape process" (1990: 270). He described the higher level of 'outer context' as including "the economic, social, political competitive and sectoral environments in which the firm is located" (1997: 340).

Of course this outer environment must also include the relationship with larger scale ecological functions on which the enterprise both depends and influences. Together, the two coevolutionary principles of multidirectional causality and multilevelness provide a useful means of conceptualising the relationship between individuals, the enterprise, and the environment.

However considering the entirety of the external environment would be overwhelming. To simplify the environment to just those areas which are relevant to the enterprise, we can focus on the notions of domain consensus (Thompson 1967) and the associated task environment (Dill 1958). As explained by Thompson:

> "Domain consensus defines a set of expectations both for members of an organization and for others with whom they interact, about what the organization will and will not do. It provides, although imperfectly, an image of the organization's role in a larger system, which in turn serves as a guide for the ordering of action in certain directions and not in others. Using the concept of domain consensus, we need not assume that the formal statement of goals found in charters, articles of incorporation, or institutional advertising is in fact the criterion upon which...choices of action alternative are made." (Thompson 1967: 29)

It is in fact the choice of this domain that specifies the social environment in which the enterprise is embedded. The choice of the enterprise's operating domain will determine "those parts of the environment which are 'relevant or potentially relevant to goal setting and goal attainment'" (Dill 1958, cited in Thompson 1967: 27). For an enterprise with contributions to sustainable development as part of its purpose, this task environment will extend beyond the usual list of industry competitors, regulators, and so on. It may in fact include a broad range of stakeholders who the firm deliberately seeks to impact.

3.2.2 *Process*

Pettigrew defined *process* as: "A sequence of individual and collective events, actions, and activities unfolding over time in context" (1997: 337). He noted that "in their theorising and empiricism most social scientists do not appear to have given much time to time" (1997: 337). Despite this neglect, process is an important part of entrepreneurship for at least two reasons. First, the qualitative state of the enterprise

may or may not be aligned with the qualitative state of its operating environment at a certain time. Bird explained that just as critical as the behavioural activities of organisation formation "is the timing of that behavior – the sequencing, synchronizing, and pacing of actions, events, and experiences. Being 'ahead of the times' or late to market can be critical problems or clever strategies for the entrepreneur" (1992: 12).

Second, the qualitative state of an enterprise at a certain time emerges from its previous qualitative state. In other words, the new organisation formation process is path dependent, or in the words of Aldrich, "history matters" (1990: 20). Miles and Randolph's study found that "organizations cannot be understood apart from their history" (1980: 72), and Kimberly argued that "the conditions under which an organization is born and the course of its early development in infancy have nontrivial consequences for its later life" (1979: 438). Both recognise two distinct problem spaces in organisation formation: (1) "getting off the ground", and (2) "'institutionalizing' of effective organizational structures and processes" (Kimberly 1979; Miles and Randolph 1980: 46). These formative phases must contend with the liability of newness (Stinchcombe 1965) and the liability of adolescence (Brüderl and Schüssler 1990) respectively.

It is suggested that the first formative phase is characterised by negotiation as new values, rules, and roles are developed, and the organisational structure begins to emerge, while the second formative phase is characterised by the institutionalisation of structures and processes that seem to work (Kimberly 1979; Miles and Randolph 1980). Kimberly suggested that when an organisation is both new and different, as is the case with sustainability entrepreneurship, transitioning between the two phases is likely to be problematic, and the focus of analysis may have to shift from an emphasis on individual to structural explanations (Kimberly 1979: 455). To heed Gartner's (1993: 235) advice that "time must be accounted for", this study addressed the flow of events in the process of new enterprise formation.

3.2.3 *Entrepreneur ⇔ Enterprise Dialogic*

Bruyat and Julien defined an *entrepreneur* as "the individual responsible for the process of creating new value (an innovation and/or a new organization)—in other

words, the individual without whom the new value would not be created" (2000: 169). At this point it is the entrepreneur who begets the enterprise. Or, more precisely, it is the entrepreneur's actions guided by his or her aspirations that initially beget the enterprise. Thus, according to Bruyat and Julien the entrepreneurship process begins with:

Individual (I) ⇨ New Value Creation (NVC)

Once the process has begun, there is not such a clear-cut case of agency dictating structure. As Bruyat and Julien explained, "The individual builds and manages something (an enterprise, an innovation, etc.), but is, at the same time, constrained and created by the object constructed" (2000: 169). This is what Giddens (1976) terms the 'duality of structure'. He described structure as both constraining and enabling human agency. Structures define the limits but not the contents of entrepreneurial actions (Whittington 1988). Thus, once the entrepreneurship process has begun the relationship becomes:

Individual (I) ⇔ New Value Creation (NVC)

Bruyat and Julien refered to this as a 'subject/object dialogic'. In other words, it is a dual direction logic system with circular causality that "cannot be divided if it is to be understood, even though for utilitarian reasons, we sometimes have to isolate its components in order to analyze it" (Bruyat and Julien 2000: 169). Thus, as depicted in Figure 3.2, Bruyat and Julien present a re-conceptualisation of Gartner's framework with the I ⇔ NVC dialogic at its core.

However, some modifications to this conceptualisation are needed. The negotiated enterprise-level outcomes of this dialogic can be seen to involve at least three strategic dimensions. The first, as discussed, is the specific operational domain in which the enterprise is placed. This requires that a 'domain consensus' be established between the entrepreneur and stakeholder partners (Thompson 1967). The next strategic dimension is the enterprise's 'business model', or the method in which the enterprise will solicit and distribute flows of valued resources from and to the environment (Amit and Zott 2001). It is the business model which provides a strat-

egy for how the enterprise will meet its survival and purposive needs as a going concern. The final strategic dimension is the organisation structure, or the specific configuration of interactive relationships embodied by the enterprise (Ranson et al. 1980).

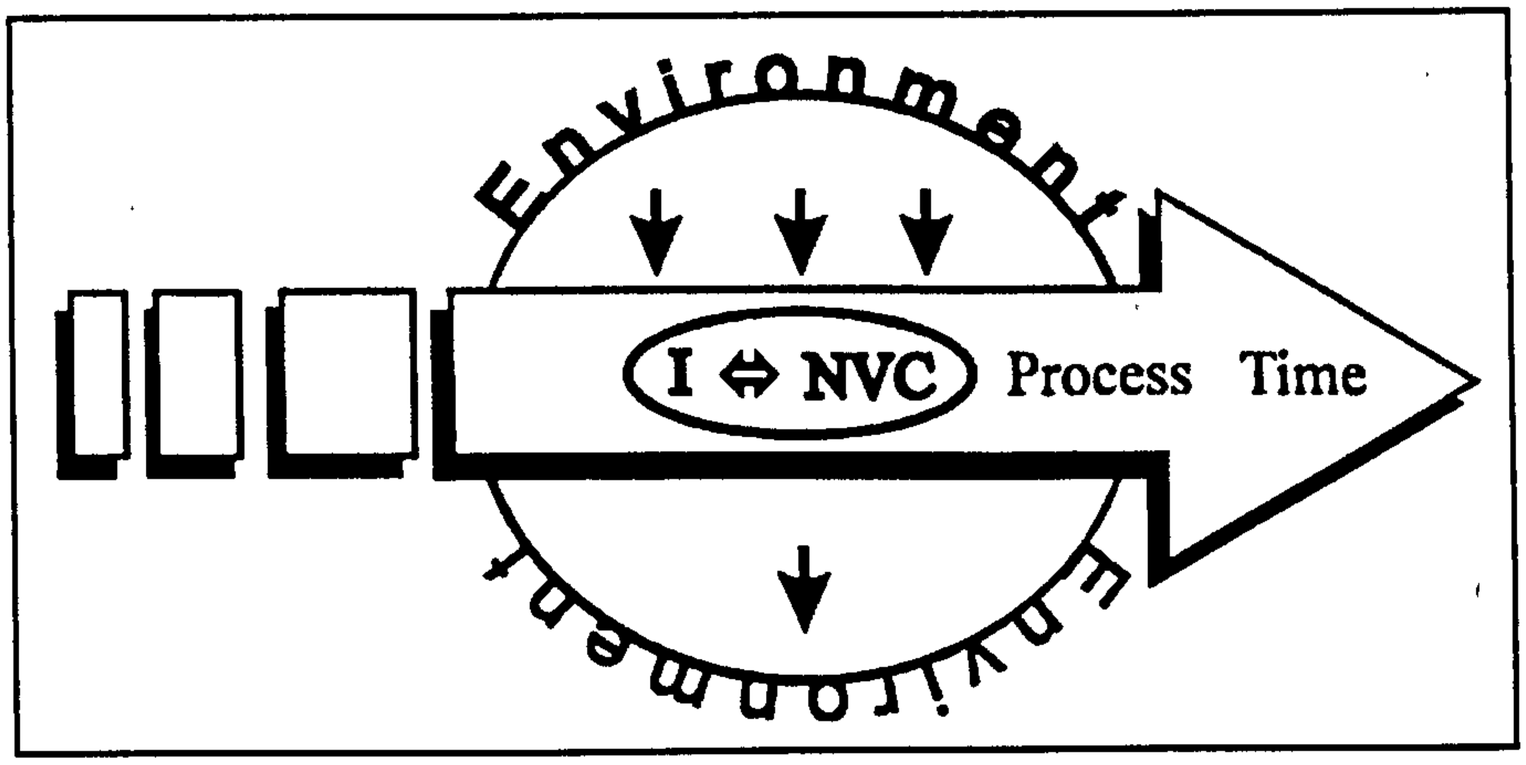

Figure 3.2 Bruyat and Julien's (2000) Diagram of the Entrepreneurial Process

But what is missing from the framework is a mechanism that ties the entrepreneur to the emerging enterprise. Reed argued that approaching the problem of human agency and structure as a process in time "requires that the analytical focus of organizational studies be directed on those social practices through which social structures are created, maintained and transformed over time" (1988: 42). To understand how changes in agency and changes in structure affect each other we need to understand the mechanism through which the two interact. This mechanism can be addressed with the concepts of generative rules and development logic.

3.2.4 *Generative Rules and Development Logics*

Whittington maintained that "structures are transformable through the intentional exercise of human agency" (1988: 528). Yet, as explained by Yamada (2004: 295), "Entrepreneurial activities do not result from a single decision or process but are a diachronic process based on multiple decisions and actions." Guiding rules come into use as a heuristic device to guide human behavioural activities. "The function of rules lies in their selective reduction of complexity" (Frank and Lueger 1998: 40).

The concept of structure emanating from generative rules is received from complex systems theory (Morgan 1986). For example, in approaching organisations from a complexity theory perspective, MacIntosh and McLean asserted that "new structures take shape in accordance with the operations of a set of simple order-generating rules" (1999: 301). Although rules emerge as a method of facilitating necessary activity in complex environments, they in effect produce a distinct pattern of coordinated human activity over an indefinite period of time. Frank and Lueger explained that the "rules of action of a system...have a long-term impact and can only be understood as a complex of interrelated changes"; and that "such an understanding of development processes combine[s] incidences of intentional structuring with self-dynamic elements which emerge, irrespective of the intentions of the protagonists, on the basis of an interactive evolution of meaning" (1998: 36). In the words of Czarniawska (1998), it is "impossible to understand human conduct by ignoring its intentions, it is impossible to understand human intentions by ignoring the settings in which they make sense" (quoted in Perren and Ram 2004: 94) A study by Kogut (2000) of the formation of organisational networks demonstrates the power of using the concept of generative rules to explain the emergence of structure.

While generative rules are responsible for producing structure from the activities of individuals, rules themselves are based on underlying development logics. Logics are the reasoning, or justification, whether explicit or implicit, that allows a rule to exist and continue to reproduce itself in a social system. Morgan explained that "discrete events that make up our experience of change...are generated by a logic unfolded in the process of change itself"(1986: 267). To this, Pettigrew adds that, "Understanding these underlying logics in the process of change is the goal, and this requires data on events, interpretations of patterns in those events, when they occur in socially meaningful time cycles, and the logics which may explain how and why these patterns occur in particular chronological sequences" (1990: 273). The usefulness of analysing logics as the underlying force behind structure formation is demonstrated by Dijksterhuis and colleague's (1999) study of macro-level management logics, and Galunic and Eisenhardt's (2001) study of meso-level management logics.

3.2.5 *Framework for Understanding New Enterprise Formation*

The elements discussed in this section have been integrated into Gartner's framework as displayed in Figure 3.3. This sensitising framework provides a strong conceptual basis to help order complexity by drawing attention to important relationships while excluding much of the 'noise' that accompanies the complex phenomenon of entrepreneurship. Pettigrew (1997) lists crucial issues as time, agency, structure, context, emergence, and development, all of which are given due regard in this analytical framework. This framework provides the basis for research questions and methods that seek to explain, in the words of Pettigrew, "the what, why and how of the links between context, processes and outcomes" as they relate to sustainability entrepreneurship (1997: 340).

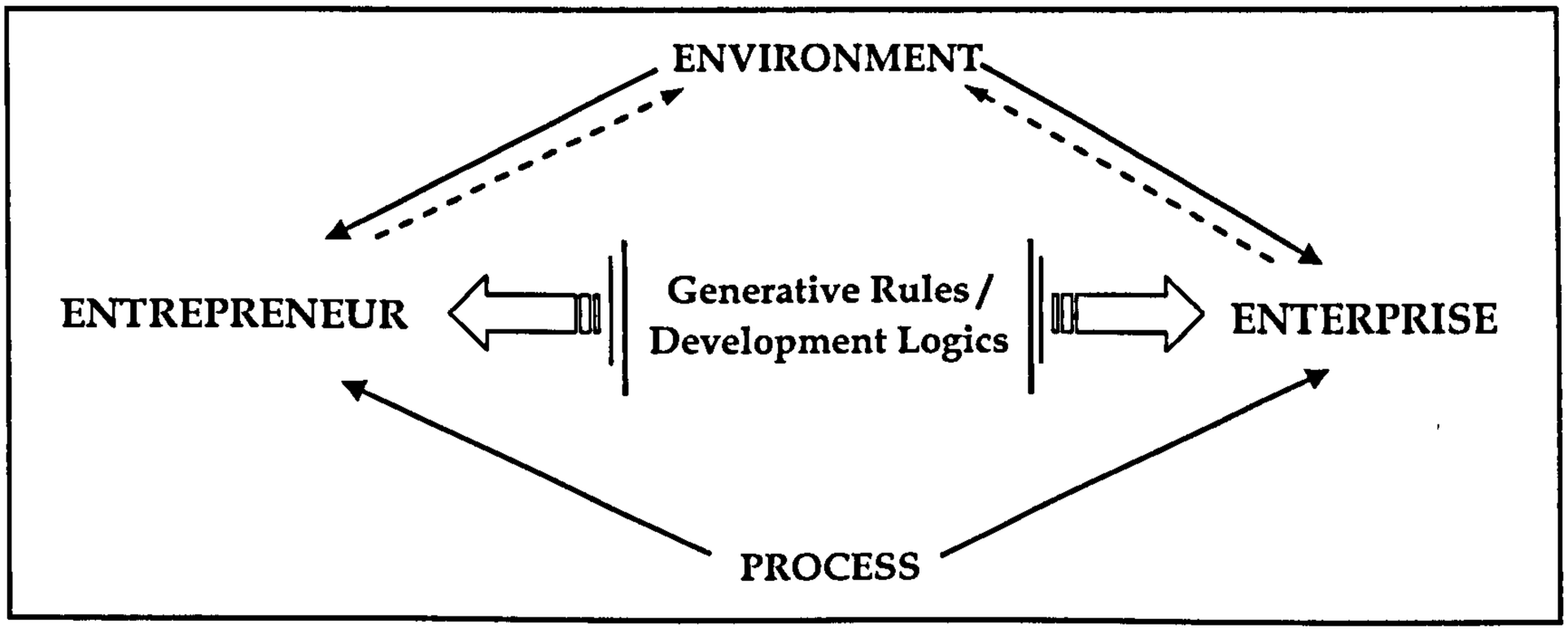

Figure 3.3 A Framework for Understanding the Process of New Enterprise Design

3.3 Theoretical Perspective

A 'theoretical perspective' is a compendium of core concepts in which "classical and contemporary theorists who share common ontological assumptions and ways of understanding social life are grouped together, and the common elements of their theories are abstracted" (Blaikie 2000: 159). As elaborated in section 4.6.3, a theoretical perspective was used at the end of the data analysis process to assist with constructing an explanatory framework that would both account for the cases studied

and provide a more general understanding of sustainability entrepreneurship. Through a process of 'juxtaposition', empirical data, analytical findings, and the extant theoretical perspective acted as reference points for the explanatory framework that emerged (Pauwels and Matthyssens 2004).

The theoretical perspective was not used in a strict, or formal theoretic sense, but rather was used as a loose but robust framework of ideas to help interpret the results. Well established concepts provided by the theoretical perspective provided a lens through which to view the analytical results, and in this way enabled a deeper understanding of sustainability entrepreneurship to be developed. As Blaikie explained, "A *theoretical perspective* provides a particular language, a conceptual framework, or collection of 'theoretical' concepts and related propositions, within which society and social life can be described and explained... In general, theoretical perspectives provide images of society or social life (ontologies), but they do not provide rigorously developed and logically organized theoretical statements" (Blaikie 2000: 160).

Institutionalism was the theoretical perspective chosen for this study. Institutionalism represents a pan-disciplinary theoretical perspective that focuses attention to the institutional context in which social actors must operate (Ingram and Clay 2000). This perspective was chosen because its key premises resonated with the analytical findings that were emerging. Key to the accounts of sustainability entrepreneurship that emerged from this study was a focus on expressing personal values in new organisational forms, the role of unconventional cognitive design logics in building these enterprises, critical challenges posed by existing institutions, and a drive to change prevailing practices and perspectives in a wider social arena. All of these themes lent themselves to an integrative institutional perspective that consists of a number of well-established, crosscutting concepts that draw attention to regulative, normative, and cultural-cognitive processes operating at multiple levels of analysis, and that account for stability and change in organising activities (Scott 2001). The institutional perspective emphasises the constraints faced by sustainability entrepreneurs, but more importantly it provides an account of the social media that constitute the raw materials with which entrepreneurs must create their new realities.

The rest of this section is divided in two parts. First a brief review of institutionalism is provided, including both the 'old' and 'new' institutionalisms, and the subsequent calls for a reintegration of the perspective. The second part explores some key themes from the institutional perspective that were used as conceptual building blocks of the account of sustainability entrepreneurship provided in chapters 6, 7, and 8 of this study.

3.3.1 Institutionalism

Institutionalism is not "an entirely homogenous body of thought", although it does have a common flavour (Abell 1995: 3). The central insight of institutionalism is that organisations and organisational actors must contend not only with a technical environment, but also with a social or 'institutional' environment (Scott 2004). Scott (2001) traced the roots of contemporary institutionalism in the fields of economics, political science, and sociology. The works of Weber figure prominently in all three traditions, confirming his place as one of the most important pioneering theorists of this tradition. Scott observed that "more contemporary analysts of institutions lay claim to Weber as their guiding genius than to any other early theorist", although Weber never explicitly used the concept of institution in his work (2001: 13). Weber is noted for the importance he placed on addressing both material and ideational aspects of social action (Alexander 1983: 25). Interestingly, these two aspects have been largely divorced in contemporary approaches to institutional analysis, with some variants of institutionalism stressing material realities of institutions, such as the transaction cost economists' concern with efficiency, and others stressing ideational objectifications of institutions, such as the sociological intuitionalists' concern with values and cognitions (Nee 2005).

In addition to the divide in materialist-idealist foci, institutionalism can also be segmented into what has become known as 'old' institutionalism and 'new' institutionalism (DiMaggio and Powell 1991). This segmentation is characterised by a division in focus in a number of dimensions (summarised in Figure 3.4), most notably between the organisational level analysis of values, norms, and vested interests as dynamics of change, and a field level analysis of cultures, cognitions, and external legitimacy as sources of stability and conformity (Hirsch and Lounsbury 1997).

Dimension	*'Old' Institutionalism*	*'New' Institutionalism*
Conflicts of interest	Central	Peripheral
Sources of inertia	Vested interests	Environmental legitimacy
Level of analysis	Focal organisations	Field, sector, society
Institutional locus	Organisational values, culture	Abstracted, societal
Behavioural emphasis	Commitment	Habits, rules
Organisational dynamics	Change	Persistence
Key forms of cognition	Values, norms, attitudes	Classification, scripts, scheme
Social psychology	Socialisation	Attribution
Goals	Negotiable	Symbolic
Structural emphasis	Informal networks	Formal administration

Figure 3.4 Comparison of 'Old' and 'New' Institutionalisms adapted from DiMaggio and Powell (1991) by Hirsch and Lounsbury (1997)

The works of Selznick (1953) and Parsons (1951) are often held to epitomise the theoretical concerns and explanatory frameworks of old institutionalism in sociology. Selznick (Broom and Selznick 1973; Selznick 1957) described institutions as 'socially integrating', and argued that this integration is a result of processes such as formalisation. He also argued institutionalising processes occur when an organisation that was once valued simply for its technical capacity becomes infused with value in its own right. This happens when individuals begin to self-identify with particular organisations. By contrast, the works of Meyer and Rowan (1977) , Zucker (1977), and DiMaggio and Powell (1983), are often held to epitomise the theoretical concerns and explanatory frameworks of new institutionalism in sociology. Zucker argued that "social knowledge once institutionalized exists as fact, as part of objective reality, and can be transmitted directly on that basis" (1977: 726). Thus, the new institutionalists reject the mechanisms of institutionalisation posited by the old institutionalists, as well as their attention to values, norms, and attitudes. For these theorists, coercion and incentives, rather than being viewed as mechanisms of institutional influences are instead viewed as indicators of a *lack* of institutionalisation. This is because institutionalisation is held to be a cultural and cognitive process by

which social scripts, schema, and assumptions become taken-for-granted ways of interpreting the world (Zucker 1987).

Scott (2001) attempted to reconcile these conflicting views by synthesising the wide ranging literature on institutions into an analytical framework consisting of three 'pillars' or constellations of institutional perspectives which he termed 'regulative', 'normative', and 'cultural-cognitive'. The regulative pillar consists of the coercive and sanction-based institutions. More relevant to this study are the other two pillars which are the types most utilised in institutionalism in sociology. These reflect the old and new variants of institutionalism. While Scott acknowledged that these three facets of institutions may operate in tandem, he argued that because they each operate with distinct mechanisms, it is analytically more useful to keep them separate. Others, such as Hirsch (1997), Hirsch and Lounsbury (1997), Abbott (1992b), and Stinchcombe (1997) vehemently disagree. They argued that while new institutionalism offers useful insights, it is empty without the grounding in values provided by old institutionalism.

No matter how the perspective is divided, or united, what gives institutionalism its common 'flavour' is the attention paid to the way social 'rules' of various forms condition the activities of organisations and organisational actors. Ingram and Clay usefully distinguish different types of institutions based on "who makes the rules" and "how they are made and enforced" (2000: 530). With these dimensions, three types of institutions are identified: public (centralised), such as those established by government, private-centralised, such as those established to govern common pool resources, and private-decentralised, such as norms and, we might add, taken-for-granted interpretive schemes. The first and the last are particularly important for appreciating the context in which entrepreneurs are embedded. However, institutionalism has been criticised for its "lack of due attention to agency and interest" (Mutch 2007: 1123), and the "lack of attention paid to the role of actors in creating and promulgating innovations" (Lounsbury and Crumley 2007: 993). Hirsch and Lounsbury (1997) argued that this disregard for agency is largely a feature of new institutionalism, and because "old institutionalism connects much more clearly with action", this deficiency can be overcome by reconciling the new and the old institutionalisms.

3.3.2 *Key Institutional Concepts and Themes*

Legitimacy

The concept of legitimacy is one of the key explanatory concepts of the institutional perspective. Scott and colleagues defined legitimacy as "social acceptability and credibility" (Scott et al. 2000, cited in Scott 2001). Suchman (1995) distinguished between two types of legitimacy, 'strategic' legitimacy and 'institutional' legitimacy. The former, he suggested, refers to the way organisational actors can "instrumentally manipulate and deploy evocative symbols in order to garner societal support", while the latter refers to "cultural pressures that transcend any organization's purposive control" (1995: 572). Institutional legitimacy usually stresses conformity to societal expectations (DiMaggio and Powell 1983), whether these be in the form of legal requirements, social norms, or cultural-cognitive frames of reference (Scott 2001). Obtaining legitimacy has been shown to be an important issue for entrepreneurs engaged in new organisation formation (Delmar and Shane 2004; Tornikoski and Newbert 2007). From the new institutional perspective, obtaining legitimacy is often viewed as necessary for organisational survival and performance, but also as a detraction from technical requirements and efficient operations (e.g. Zucker 1987).

Efficiency and Power

In addition to the ideational influences of legitimacy, institutionalism also recognises, to varying degrees, the material influences of efficiency and power. Hirsch and Lunsbury (1997) argued that new institutionalism in sociology emphasises ideational realities to the neglect of material realities, and similarly, Fligstein (2001) argued that new institutionalism lacks attention to power. The new institutionalism in economics does attend to matters of organisational efficiency, especially the transaction cost perspective. Williamson defined first-order economising as "effective adaptation and the elimination of waste" (1991: 77), and pairs efficiency with power as the two primary concerns to be confronted by business strategy. Lukes posited a three-dimensional view of power, where the most subtle form of power consists of "securing the consent to domination of willing subjects" (2005: 109). While this resonates with the new institutional focus on taken-for-granted cultural schemes, for

the purposes of this study Weber's (1947) single dimensional view of power, as the probability that someone is able to achieve their will despite resistance from others, will suffice. Organisation literature in general (e.g. March 1962; Pfeffer 1981), especially the resource dependence perspective (Pfeffer and Salancik 1978), emphasises the importance of power over needed resources, as does the entrepreneurship literature (e.g. Starr and MacMillan 1990). While efficiency and power are two real and therefore central and unavoidable influences on organisations, the institutional perspective reminds us that there are legitimate and illegitimate means of dealing with them. The legitimate exercise of power is termed 'authority' by Weber (1947: 155). The role of entrepreneur itself represents a position with socially legitimated power to exercise wide-ranging control over the enterprises they create (Whittington 1988).

Culture and Character

The role of culture in conditioning organisational activities is the particular forte of new institutionalism in sociology. This view holds culture and cognition to be linked as "internal interpretive processes are shaped by external cultural frameworks" (Scott 2001: 57, see also DiMaggio 1997). Organisational culture has been defined as "the pattern of basic assumptions that a given group has invented, discovered, or developed...and that have worked well enough to be considered valid, and, therefore to be taught to new members as the correct way to perceive, think, and feel" (Schein 1984). While the current emphasise is on shared knowledge and beliefs, earlier concepts of culture emphasised shared norms and values (Scott 2001). This is similar in some ways to Selznick's concept of organisational 'character', in which he used the metaphor of human personality applied to the organisation (Selznick 1957). Organisational character has been superseded by the concepts of identity and culture (Ravasi and Schultz 2006), although recently Birnholtz and colleagues have revived the concept by reinterpreting it as a "coherent bundle of action dispositions" which accounts for organisational "continuity despite flux" (2007: 317, 329). Entrepreneurs have been identified as important sources of persistent organisational culture (Schein 1983), although the consequences of this legacy to the enterprise has been found to not always be favourable (Haveman and Khaire 2004).

Trust

Use of the concept of 'trust' is a more recent addition to organisation research (Kramer 2006; Kramer and Tyler 1996; Lane and Bachmann 1998). Researchers have identified a number of different types of trust that are relevant for understanding the activities of organisations. One of the most common forms of trust identified is 'calculative' trust, in which trust is viewed as a question of the expected costs and benefits of meeting the expectation of a relationship over time (e.g. Lewicki and Bunker 1996). However, Williamson (1993a) argued against this concept of trust by suggesting calculative trust is a "contradiction in terms" and interchangeable with 'risk'. Trust is clearly highly context specific. With this in mind, Baier (1986) provided a useful conceptualisation of trust that can accommodate this context-dependence. Basing her ideas on Locke's notion of 'entrustment', she suggested we can "distinguish between different forms of trust by the different valued goods we confidently allow another to have some control over" (1986: 236). Therefore, there will "be an answer not just to the question, Whom do you trust? But to the question, *What* do you trust to them?" (1986: 236). Other notions of trust are rooted in the basis on which trust can be established, such as 'normative' trust, 'goodwill' trust, and 'competence' trust (Humphrey 1998; Lane 1998; Mishra 1996; Sako 2006). One useful distinction for the institutional perspective is between personal trust and institutional-based trust (Zucker 1986). Personal trust is what is usually considered to be trust between individuals based on characteristics of their relationship, while institutional-based trust describes a situation in which trust becomes 'externalised' beyond individuals and socially legitimated (Lane 1998). Aldrich and Fiol (1994) framed this distinction as a strategic issue for entrepreneurs. They argued that entrepreneurs launching ventures "without the advantages of a taken-for-granted activity and without widespread socio-political approval, must first call upon whatever personal and interpersonal resources they posses" (1994: 650).

Rationality

Finally, there remains a difference of opinion within institutionalism about the extent to which organisational actors can be considered to act rationally, as in means-

ends instrumentality. New institutional economists tend to adopt Simon's (1957) model of bounded rationality, while new institutional sociologists tend to forgo any claims to rational behaviour (Scott 2001). New institutionalism in economic sociology tends to stake out a middle ground by positioning organisational actors as intentionally rational but context-bound by shared norms and beliefs (Nee 2005). Weber (1947) made an analytical distinction between two types of rationality: formal rationality, in the sense of means-ends instrumentality, and substantive rationality, based on an alternative value system that cannot be measured by formal calculations alone. Empirical research by Barley and Kunda (1992) indicated that, despite some fluctuations, in management the dominant ideology continues to be based on a rhetoric of rationality. This suggests that an appropriate assumption about actors in economic organisations is that they tend to act with intended rationality, in the sense of making decisions based on espoused instrumentally rational beliefs, even though they may in fact be bounded both cognitively and contextually. Much of the recent cognition based entrepreneurship research is about explaining why the apparently irrational behaviour of entrepreneurs is actually a rational response to the situations they face (e.g. Sarasvathy 2001b).

3.4 Conclusion and Summary of Framework and Perspective

Because this is intended to be an exploratory, theory generating study, as described in the following chapter, the use of concepts and theories from the extant literature was intentionally loose. The sensitising framework was developed to provide some initial guidance for data collection, but it could be elaborated or discarded without concern depending on the emergent study results. The theoretical perspective was also utilised as a general framework to assist with interpreting the results. The following chapter describes more thoroughly how concepts and theories were incorporated into the study's overall research design.

CHAPTER 4

RESEARCH DESIGN: STRATEGY, DATA, AND ANALYSIS

Everything said in this chapter has returned to a concern with understanding.

Lee Cronbach (1971)

4.1 Approach to Inquiry

A research design is the logical structure of a study (De Vaus 2001: 8-9). This structure is held together by the purpose for which the study has been designed. As explained in Chapter 1, the purpose of this study is to develop a *theoretical understanding* of sustainability entrepreneurship. "Theoretical understanding refers to an account's function as an *explanation*, as well as a description and interpretation, of the phenomenon" (Maxwell 1992: 291). Guided by this purpose, the study was designed to facilitate access to a deeper understanding of the phenomenon that provided both an accurate account of the concrete cases studied, and a more general explanation.

In practice, the design can be broken down into a set of elements and choices (see Blaikie 2000: 42-4). This chapter describes these elements and justifies the choices made for this study. It begins by making explicit the philosophical perspective that was used as a basis for evaluating and selecting these choices. Then the research strategy used for generating causal explanations of the phenomena is described, followed by a discussion of the selection and use of concrete cases that provided the empirical basis for the study. The methods of data collection and analysis are then detailed. Finally, the validity and generalisability of the study's finding are considered in light of the strengths and limitations of the design. A summary of the

research design elements and choices is provided in Figure 4.11, and the chapter concludes by noting that the appropriateness of a research design is ultimately determined by its ability to facilitate improved understanding of a phenomenon of interest.

4.2 A Critical Realist Methodology

Methodology is the study and critical evaluation of the methods and logics of inquiry used for generating and justifying new claims to knowledge (see Blaikie 1993: 8-9). The criteria used for this evaluation are based on philosophical beliefs about knowledge, reality, and the relationship between the two. In the social sciences two broad philosophical traditions can be discerned (Williams and May 1996). The first is an orthodox philosophy, represented by Humean arguments and often called *empirical realism*, which grew out of an emulation of the physical sciences of the 17th century English 'Enlightenment'. The historical evolution of this tradition is traced by Crotty (2003), Williams and May (1996), and Outhwaite (1987), among others. A product of multiple incarnations, the orthodox tradition of social science is generally ontologically realist and epistemologically objectivist. Its core position is that science can produce objective knowledge to explain and predict real events in the world. The second philosophical tradition, represented by Kantian arguments, often called *transcendental idealism*, grew out of periodic dissent against orthodox social science and is really a menagerie of alternative views related mostly by their critiques of positivism.[12] With differing emphases the historical development of this tradition is traced by Crotty (2003), Vidich and Lyman (2000), Williams and May (1996), and Hammersly (1992), among others. A common theme of these alternative views is that reality exists only in the mind, and can therefore only be subjectively known through interpretive understanding.

Most contemporary social scientists no longer embrace the extreme views of either side of the spectrum (Crook and Garratt 2005; Crotty 2003; Robson 2002;

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[12] Schwandt (2000) explicates the subtleties between several of these, including interpretivism, hermeneutics, phenomenology, and social constructivism, but notes that all share a common concern with understanding the meaning of things and events.

Shadish 1995; Steinmetz 1998). While those positions may live on conceptually as 'straw men' for philosophical discussions, in practice both have been modified to account for valid critiques. Today, the choice for practicing researchers who seek explanation is a philosophical spectrum that runs from a modified version of the positivist orthodoxy, closely associated with *critical rationalism*, to a modified version of interpretivist alternatives, commonly associated with some variety of *constructivism*.[13]

A third stance on the philosophy of science is represented by Roy Bhaskar's works on critical naturalism (1979) and transcendental realism (1978), which established what came to be known collectively as *critical realism*. According to this perspective, neither critical rationalism nor constructivism appears satisfactory. Critical rationalists admit that falsification, the lynchpin of their conception of science, ultimately rests on a consensus among scientists as to whether evidence of falsification is accepted or rejected. This, ultimately, is a conventionalist position as extolled by constructivists. Yet, critical realists argue, if one holds the constructivist view that scientific knowledge is inter-subjective and therefore no better or worse than other, equally valid ways of knowing, then how can we account for the apparent widespread successes of social scientific inquiry in creating new knowledge? As Dean and colleagues note, in response to this question, Bhaskar sought "to heal and transcend the dichotomy...between explanation and understanding (*verstehen*)" (2005: 8). The result is a philosophy

> "which attends to both the distinctiveness of humans as meaning-producing animals (what hermeneutics stresses) and humans' necessary and specific physicality and their necessary interaction with non-human nature (what positivism stresses)." (Dean et al. 2005: 8)

Critical realism has a long historical tradition (Manicas 1987), but Bhaskar specifically notes two more recent critiques which informed his own work (1978: 9; 1989: 180). The first is the recognition by Kuhn and Feyerabend, among others, that

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[13] The accounts of constructivist philosophy vary in their details (cf. Guba and Lincoln 1989; Hacking 1999; Patton 2002). Crotty (2003) offers a thoughtful reconciliation of the philosophy's ontological stance. He suggests that in practice constructivism breaks with historical interpretivism by conceding a realist ontology, but maintains that both physical and social reality is socially constructed by people meaningfully interpreting the things and events they encounter. Crotty explains: "To say that meaningful reality is socially constructed is not to say that it is not real" (2003: 63).

science is inherently a social process; the second, represented chiefly by Harré, is the stratification of reality and the importance this places on the role of models in scientific thinking. It is this notion of 'stratification' which allowed Bhaskar to reconcile, and ultimately transcend, the orthodox and alternative views of social science. This should be acceptable to the field, as Easterby-Smith and colleagues observe that, "Increasingly, there is a move amongst management researchers to develop methods and approaches which provide a middle ground, and some bridging between the two extreme viewpoints" (1991: 26). In fact, management and organisation researchers are making increasingly explicit reference to the critical realist basis of their research (e.g. Baum and Rowley 2002; Fleetwood and Ackroyd 2004; Mutch et al. 2006; Van de Ven and Poole 2005). For these reasons, the present study is designed based on a critical realist understanding of knowledge, social reality, and social science. The views of critical realism are discussed below, but to summarise, I compare key features of critical rationalism, constructivism, and critical realism in Figure 4.1.

	Critical Rationalism	Constructivism	Critical Realism*
Ontology	Shallow realism	Shallow realism	Depth realism
Epistemology	Fallibly objective	Subjective	Transitive
"Truth"	Correspondence	Conventionalist	Plausible adequacy
Objects of knowledge	Atomistic events	Artificial constructs	Generative structures
"Causation"	Constant conjunctions	Meanings	Mechanisms & contexts
Logic of inquiry	Hypothetico-deductive	Hermeneutic	Retroductive

* Critical realism is the philosophical perspective adopted for this study

Figure 4.1 Comparison of Social Science Philosophies

4.2.1 *Critical Realist Ontology*

As with the other philosophies discussed, critical realism is ontologically realist.[14] But its point of departure is the stratification of reality into three domains, which Bhaskar (1978) refers to as 'depth realism' (see Figure 4.2). The 'empirical' domain is the level at which people experience reality. This is the level of reality at which critical rationalists and constructivists remain, as neither consider reality beyond people's direct experiences of it. But critical realists maintain that, in addition to the empirical domain, there is an 'actual' domain. It is here that events occur, regardless of whether and in what ways people experience those events. At another level still is the domain of the 'real'. This is where structural mechanisms generate events, which people may ultimately experience.

	Domain of Real	*Domain of Actual*	*Domain of Empirical*
Mechanisms	✓		
Events	✓	✓	
Experiences	✓	✓	✓

Figure 4.2 Critical Realist Ontology (after Bhaskar 1978: 56)

Generative mechanisms link actions to outcomes, but are independent of the events they generate. This independence means that attention to context is essential. "Such mechanisms endure even when not acting; and act in their normal way even when the consequents of the law-like statements they ground are, owing to the operation of intervening mechanisms or countervailing causes, unrealised" (Bhaskar 1978: 46). In other words, contextual contingencies may interfere with the operation of mechanisms, so the absence of observed events does not imply the absence of a

[14] The realism of critical rationalism and constructivism is termed 'actualism' by Bhaskar (1978) and 'shallow realism' by Collier, in which the reality of things and events is accepted, but the reality of underlying structures that determine "how the things come to have their events" is denied (Collier 1994: 7).

mechanism.[15] Such generative mechanisms, or 'causal powers', emerge from stratified physical and social structures that are irreducible to their constituent parts (Tsoukas 1989). The world is recognized as an open system, where the constant conjunction of events is likely to be rare, and reductionism is disallowed by the emergent properties of reality at different scales.

This general ontological understanding underpins both physical and social reality, but Bhaskar does identify three important characteristics unique to the social realm, summarised by Williams and May as:

> "First, social structures, unlike natural structures, do not exist independently of the activities that they govern.
>
> "Secondly, social structures, unlike natural structures, do not exist independently of the agents' conception of what they are doing in their activities.
>
> "Thirdly, social structures, unlike natural structures, may be only relatively enduring." (Williams and May 1996: 84)

Bhaskar argues that, while this does mean that social reality must be studied differently than natural reality, it does not mean it must be studied any less 'scientifically' (1979: 26). To understand what he means by this, we must turn our attention to epistemology.

4.2.2 Critical Realist Epistemology

In the words of Bhaskar, "Science, then, is the systematic attempt to express in thought the structures and ways of acting of things that exist and act independently of thought" (1978: 250). This definition points to a second distinctive feature of critical realism: its epistemology, which distinguishes between the transitive products of science, knowledge, and the intransitive objects of science, generative mechanism and structures. Structures and mechanisms are intransitive because they are real, that is, they exist independently of people's awareness of them. But because our knowledge of them comes by way of our empirical experiences of the events they have caused, and because, as explained above, these experiences do not directly cor-

---

[15] 'Context' is understood here as the conditions and countervailing mechanisms in which the focal process under study is situated.

respond to the mechanisms which caused them, our knowledge is necessarily fallible. Thus, as we seek understanding of intransitive objects through the social process of science, our knowledge of those objects is transitive.

It is precisely because of stratification that science becomes useful. This is the property of science which allows the knowledge it produces to be 'counter-phenomenal'. As Collier explains, "knowledge of the deep structures of something may not just go beyond, and not just explain, but also *contradict* appearances" (Collier 1994: 7). The potential for scientific knowledge to be counter-phenomenal enables the social sciences to offer explanatory critiques. As Dean and colleagues explain, the concept of explanatory critique:

> "conveys the notion that the adoption of an explicit value position need not be incompatible with the production of objective explanatory science. Beyond this, it invokes the possibility that values may be discovered as part of such a science, or that there may be well-grounded arguments which reveal the conditions of human (and indeed of non-human natural) flourishing." (Dean et al. 2005: 10)

But the critical realist understanding of truth is different from both the critical rationalist and the constructivist notions. Theoretical explanations of generative mechanisms can only be judged by their theoretical plausibility, and their adequacy in describing how the generative mechanism can account for the empirical facts observed (Harré 1976). Neither 'plausibility' nor 'adequacy' is "capable of reductive analysis in terms of 'truth'" (1976: 21). The creativity of scientists must take the place of any fixed and predetermined criteria to judge how well an explanation meets the scientific standard of plausible adequacy (Bhaskar 1978: 166).

4.2.3 Implications for Research Design

If generative mechanisms cannot be inferred solely from the presence or absence of an observed pattern of events, then reliance on the conventional logics of deduction and induction will be insufficient and may well be misleading. This requires a different logic of inference "in which events are explained by postulating (and identifying) mechanisms which are capable of producing them" (Sayer 1992: 107). This approach, termed 'retroduction' by Bhaskar (1978), builds on the works of Hanson (1958; 1963; 1965), and is described by Danermark and colleagues (2002), Blaikie

(1993; 2000), and Harré (1976; with Secord 1972) as involving the construction of conceptual models of postulated causal mechanisms through a process of description, explanation, and re-description to determine what must be true for the observed phenomenon to have occurred as it did.

Although knowledge is necessarily transitive, it is still possible to evaluate the strength of one theory against another. Archer and colleagues explain that, "if the relation between the theories is one of conflict rather than merely difference, this presupposes that they are alternative accounts of the *same* world, and if one theory can explain more significant phenomena in terms of its descriptions than the other can in terms of *its*, then there is a rational criteria for theory choice" (1998: x-xi). Confirmation or disconfirmation of the plausible adequacy of a theoretical explanation must therefore rest on the extent to which corroboratory evidence confirms or disconfirms the theory, rather than the presence or absence of observed empirical replications (Sayer 1992).

In summary, "critical realism claims to be able to combine and reconcile *ontological realism, epistemological relativism* and *judgemental rationality*" (Archer et al. 1998: xi). The discussion that follows elaborates a critical realist methodology for this study, though, as Danermark and colleagues explain, "There is no such thing as the method of critical realism. On the other hand, critical realism offers guidelines for social science research and starting points for the evaluation of already established methods" (2002: 73).

4.3 Connecting Purpose to Strategy

Studies that are intended to generate theory are often distinguished from those that are intended to test theory (e.g. De Vaus 2001: 5-8). Theory *testing* is the attempt to validate, refute, elaborate, or refine an abstract explanation of concrete phenomena by assessing the scope of a theory's explanatory power or empirical generality. Theory *generation* is the attempt to develop an abstract model of the mechanisms and contexts that explain the production of a concrete phenomenon (see Pawson and Tilley 1997). Although in practice the two are not so distinct. Inherent in the process of generating theory is the need to continually test and rework the theory. As dis-

cussed in Chapter 2, there is a lack of theoretical understanding about the process of sustainability entrepreneurship. Therefore, this study is intended to develop a theoretical understanding of that process.

4.3.1 *Generating Process Theory*

A distinction has been made between two different families of theories: variance theories and process theories (Mohr 1982). In an input-process-output model of change, as depicted in Figure 4.3, both types of theories are used to furnish explanations (Van de Ven and Huber 1990). Studies that use a variance approach are intended to answer "What are the antecedents or consequences of changes in organizational forms or administrative practices?", while leaving the process that links the two as a 'black box' (Van de Ven and Huber 1990: 213). One example is Sandberg and Hofer's (1987) study that linked industry structure, strategy, and the entrepreneur (inputs) to new venture performance (outputs). In contrast, Frank and Lueger's (1998) study of the evolving nature of a new enterprise during its early years of operation examined the 'black box' by focusing on the processes of change. Process studies such as this seek to answer "How does an organizational change emerge, develop, grow or terminate over time?" (Van de Ven and Huber 1990: 213). As discussed previously in section 2.2.1, process approaches are increasingly viewed as necessary to explain entrepreneurship because they are more capable of accommodating the dynamic realities of entrepreneurial action (Steyaert 1998; Van de Ven 1992).

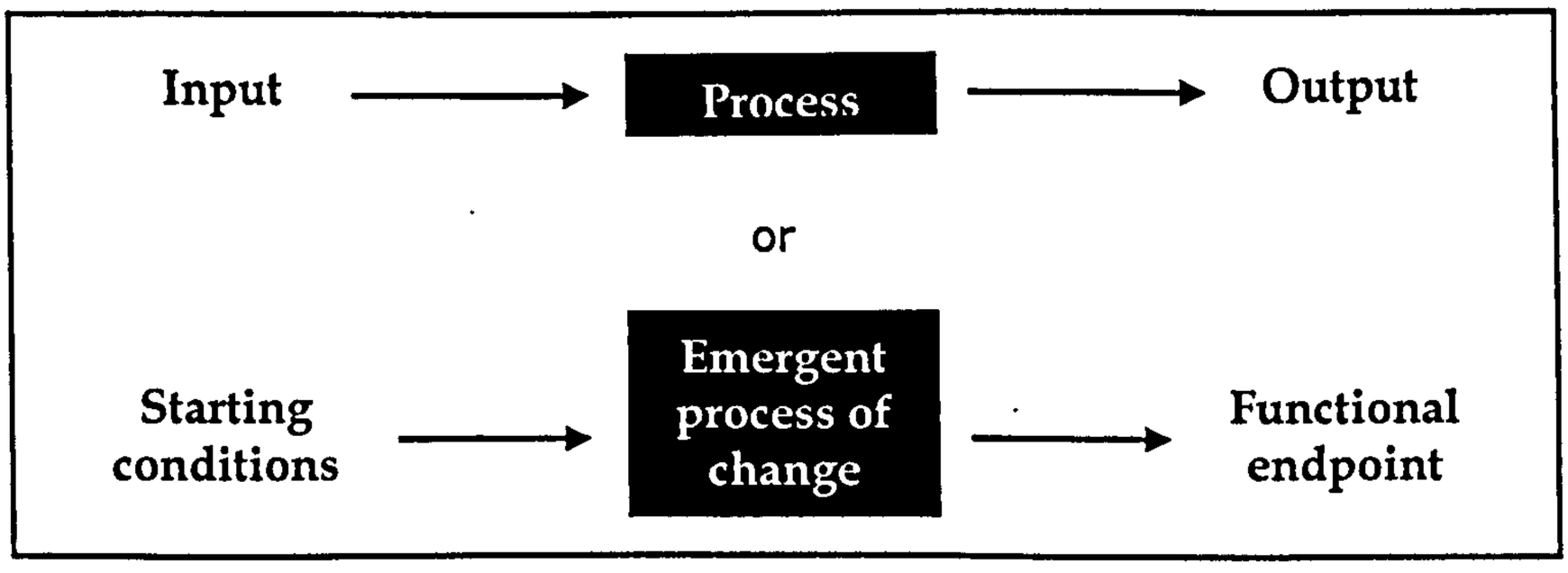

Figure 4.3 Process Model of Change

Harré distinguishes two ways in which the concept of 'process' is used. "An 'occurent process' is like a causal chain in which the later events arise because of earlier ones" (Harré et al. 1985: 62). Much process research conducted by researchers following the so-called 'narrative positivist' group of methodologies that attempt to correlate sequences of events with certain outcomes is concerned with such occurent processes (cf. Abbott 1992a). As Langley explains, "The analysis of process data, therefore, requires a means of conceptualizing events and of detecting patterns among them", and that "these patterns may take a variety of different forms, but the most common pattern found in the literature is the linear sequence of 'phases' that occur over time and produce a given result" (1999: 692). In contrast, an "'existent process' means something more like a mechanism – some device or arrangement (possibly abstract like a set of rules) which, by virtue of its constitution, is responsible for the chains of efficient causation that arise" (Harré et al. 1985: 62). Harré suggests that the latter process is preferable because identification of the relatively stable structures that guide the unfolding of events provide more explanatory power than do the "fleeting wisps of history that make up the set of occurent processes" (Harré et al. 1985: 62).

Some process research is based on 'process philosophies' (e.g. De Cock and Sharp *In press*) descended from the ideas of Whitehead (1933). These philosophies are accurate in describing the world as composed entirely of processes with no permanent structures; but by focusing on the flux of reality they can lose sight of the importance of processes of *continuity* as well as change. As Harré explains:

> "The explanatory task of social and psychological sciences, in other words, may not be to relate ephemeral phenomena to timeless fundamentals and unchanging quasi-physical laws, but to relate what is fast-moving to what is slow-moving, to locate the rapid fluctuations of the social world in the larger and slower progressions within which they occur... [T]he central explanatory progression we should consider is from the fast-running fine detail of behaviour and other events, back towards the slower and grosser patterns which, far from merely resulting from the accumulation of micro-events, are the sign of major organizing principles, *by virtue of which* the smaller and faster events occur as they do." (Harré et al. 1985: 60)

This study is therefore directed toward generating process theory by identifying the relatively stable structures that serve to guide the unfolding sequence of events that constitute sustainability entrepreneurship.[16]

4.3.2 *Theory from a Critical Realist Perspective*

"Theories are utilized in science to explain events and actions" (Daermark et al. 2002: 120). What is considered valid theoretical explanation varies widely from the grand covering laws associated with critical rationalism to the interpretive understandings of actors' perspectives and experiences associated with constructivism. From a critical realist perspective, description and interpretation are the component parts of explanation (see Sayer 1992: 114). Dey suggests, "description permeates scientific theory and without it theories could have neither meaning...nor application" (1993: 31). Interpretation takes on added importance in the social sciences because researchers must take account of actors' own accounts of their experiences in what has been referred to as the "double hermeneutic" (Bkaskar 1998: 154).

Description and interpretation are brought together systematically in the form of conceptual models. A model is an interpretation of an empirical phenomenon that provides intellectual or perceptual access (Bailer-Jones 2002: 108-9). In a sense, it is the model which renders the empirical phenomenon accessible. A theory is a model that possesses explanatory power. As Keat and Urry explain:

> "Thus, for the realist, a scientific theory is a description of structures and mechanisms which causally generate the observable phenomena, a description which enables us to explain them." (Keat and Urry 1975: 5)

In addition to describing causal structures and mechanisms, explanations must also specify necessary and contingent relations responsible for the production and continuity of that phenomenon (Sayer 1992: 111, see also Harré and Madden 1975: 8-26). Necessity is determined by means of retroductive inference, by asking what

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[16] In practice, other process research, as exemplified by Pettigrew's 'contextualism' (1985), Steyaert's constructivism (1998), and Dawson's hybrid 'processual approach' (1994), are largely consistent with this approach.

must have been necessary for an event or action to occur (see section 4.2.3 above).[17] Contingency, however, does not mean a sequence of events is unimportant, or that once the sequence unfolds there is nothing necessary about the outcome that results from this sequential configuration (see Sayer 2000, who makes the argument in terms of space). Sayer explains that, "merely noting these necessary conditions is not sufficient to explain how they are met, if they are. To do this we must refer back to the level of actions" (1992: 113).

So for process theory, we are not simply looking for regularities in the sequence of events. We need to know what about the sequence of events is necessary, and what is contingent. Or, more fundamentally, what types of structures and mechanisms must be necessary in order for the events to occur as they did. Seeking such an explanatory model of sustainability entrepreneurship requires a research strategy attuned to identifying the substantial relations between the structured actions of entrepreneurs and the sustainability enterprise outcomes that result.

4.3.3 Research Strategy

It has been observed that "Every new organisation has its origins locally" (Yamada 2004: 302). Examining the unique design histories of successful sustainability entrepreneurship therefore requires an intensive research strategy utilising qualitative methods in which a select number of cases are examined in their situated contextual complexities.[18] As explained by de Vaus (2001: 233), the explanatory account produced by intensive research "focuses on particular events, or cases, and seeks to develop a complete explanation of each case." By focusing on select cases of successful sustainability entrepreneurship, in which "rare conjunctures...may lay bare structures and mechanisms which are normally hidden", those structures and mechanisms can be identified and described (Sayer 1992: 249).

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[17] Retroduction should not be construed as post hoc rationalisation. While the latter assumes that what did occur necessarily occurred, the former seeks to identify the necessary conditions for an outcome, without suggesting that that outcome was the only one that could have occurred. The key difference is recognising that any actual outcome is a product of both necessary *and* contingent conditions.

[18] Intensive strategies are also commonly called 'idiographic' (e.g. Tsoukas 1989; de Vaus 2001). This terms tends to have the connotation of being "anti-theoretical, anti-scientific, merely intuitive and descriptive" (Sayer 1992: 296), although, as is made clear here, this does not have to be the case.

In Sayer's (1992: 243) elaboration of Harré's (1979) distinction between intensive and extensive research strategies, as displayed in Figure 4.4, intensive strategies are shown to be useful for examining change processes and the role of individual actors in those processes. Unlike extensive research strategies, intensive strategies can move beyond description of similarities and patterns to generate causal explanations of the production of events and actions. While these causal explanations are not empirically generalisable, they do have analytical generality (see section 4.7.1 for a more thorough discussion of this study's generalisability).

	INTENSIVE*	EXTENSIVE
Research question	How does a process work in a particular case or small number of cases? What produces a certain change? What did the agents do?	What are the regularities, common patterns, distinguishing features of a population? How widely are certain characteristics or processes distributed or represented?
Relations	Substantial relations of connections	Formal relations of similarity
Types of groups studied	Casual groups	Taxonomic groups
Types of account produced	Causal explanation of the production of certain objects or events, though not necessarily representative ones	Descriptive representative generalisations, lacking in explanatory penetration
Typical methods	Study of individual agents in their causal contexts, interactive interviews, ethnography. Qualitative analysis	Large-scale survey of population or representative sample, formal questionnaires, standardised interviews; Statistical analysis

* An intensive research design was adopted for this study

Figure 4.4 Comparison of Intensive and Extensive Research (after Sayer 1992: 243)

Following Guba (1978), Patton suggests research designs are "naturalistic to the extent that the research takes place in real-world settings and the researcher does not attempt to manipulate the phenomenon of interest" (2002: 39). Naturalistic

process research is necessarily "hands on" and conceptually messy (Dawson 1997), suggesting the need for qualitative data to adequately capture the inherent complexity. For these reasons, too, I felt the search for necessary and contingent mechanisms and contexts in qualitative data would be most effectively accomplished by means of content analysis, described by Patton as "any qualitative data reduction and sense-making effort that takes a volume of qualitative material and attempts to identify core consistencies and meanings" (Patton 2002: 453).[19] Thus, according to Patton's typology of research strategies, as displayed in Figure 4.5, for this study I adopted a "pure naturalistic-qualitative strategy" (Patton 2002: 252).

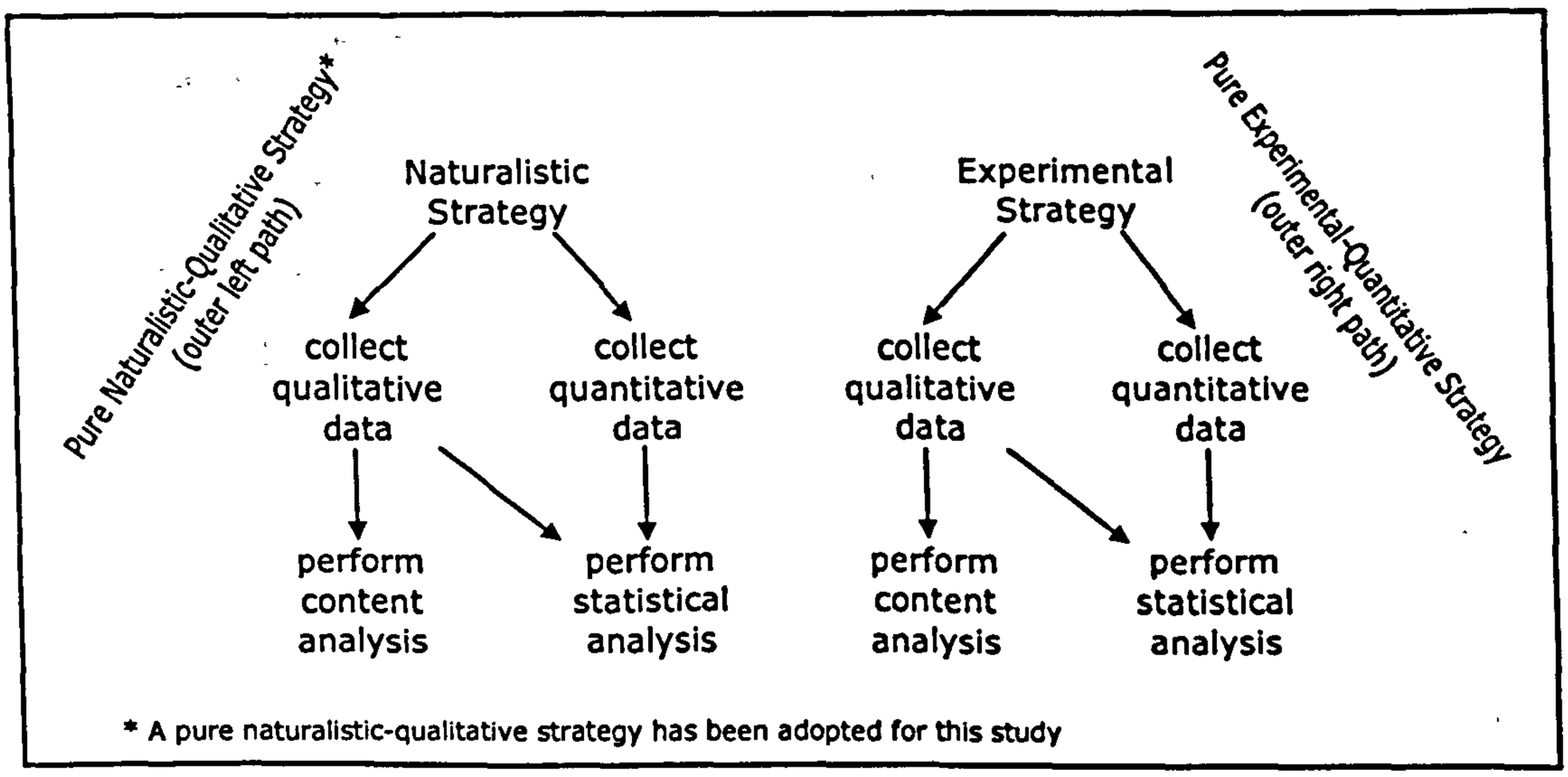

Figure 4.5 A Typology of Research Strategies (after Patton 2002: 252)

4.4 Case Study Research

There are conflicting views on the role of case studies as a tool for social science research. For this study, I have used the views of a range of authors to synthesise my

[19] The term 'content analysis' is also often used to describe the numerical analysis of qualitative data (e.g. Easterby-Smith and colleagues 1991: 105-8). However, in this study the term is intended to be consistent with Patton's definition.

own perspective on how case study research can be usefully employed to address the study's research questions. Since all scientific research involves the study of cases, in a way, all studies are case studies. However, a major distinction in research design depends on how many cases are being studied. In large 'N' studies, an extensive research approach is used in combination with some form of statistical analysis. Small 'N' studies utilise an intensive research approach and, when naturalistic-qualitative strategies are used, tend to be given the moniker of the 'case study method'. Although a single case studied is technically a small 'N', it is useful to maintain a distinction between the two because the logic of inquiry is fundamentally different. In the service of theory generation, single case studies are conducted with the logic of optimising "understanding of the case rather than generalization beyond" (Stake 2000: 436), whereas small, but multiple, 'N' studies are conducted according to a logic of comparison for the purpose of analytical generalisation (Ragin 1987). As the purposes of this study are reflected in the latter, I selected a small 'N', comparative case study approach.[20]

Case studies are thought to be well suited to understanding complex social phenomena in a real-life context, and when seeking to answer 'how' and 'why' questions (Scholz et al. 2005; Yin 2003), as in this study. Case studies enable a deep understanding of phenomena because they allow for researchers and participants to "check their understanding and keep on asking questions until they obtain sufficient answers and understandings"; they are capable of incorporating a longitudinal dimension and they permit "the investigation of a phenomenon from a variety of viewpoints, covering a period of time, and crossing the boundaries between different factors" (Ghauri 2004: 111-2). For these reasons some argue that case studies are especially useful for doing the work of theory generation (Eisenhardt 1989: 548-9).

4.4.1 *Defining and Bounding the Cases*

The specific definition and boundaries placed on an object of study are highly consequential (Miles and Huberman 1994; Perren and Ram 2004), with important implications especially for the range of data collected (Stake 1995: 51). To define a case it

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[20] For simplicity, the term 'case study' will be used here to mean a small 'N', comparative case approach using a naturalistic-qualitative strategy.

is helpful to ask "What is this a case of?" (Ragin 1992: 6). For this research the objects of study were cases of successful sustainability entrepreneurship. The cases were bounded spatially by the scope of the enterprises' activities, and temporally by the enterprises' 'lifespans'.

These cases were therefore multilevel phenomena stretching between an individual entrepreneur and a collective organisation. Temporally and spatially they began with the intention (Katz and Gartner 1988) or conception (Reynolds and Miller 1992) of the enterprise in the mind of the entrepreneur, and ended with the condition of the present day enterprise and its mix of stakeholders. The cases, then, were not static objects but dynamic processes of continuity and change. To capture these processes that constitute the cases, the research took the form of a ' longitudinal retrospective' study (De Vaus 2001; Pettigrew 1990; Van de Ven and Huber 1990). These studies "take the present as a base and seek information about recent history" (Blaikie 2000: 230). Hite (2005), Ropo and Hunt (1995), Larson (1992), and Burgelman (1983) for example, demonstrate the usefulness of this approach for generating process theories of organisations and entrepreneurship.

In defining and bounding the cases as objects of study it is important to distinguish between observational and explanatory units of analysis (Ragin 1987: 7-9). In some studies these units are the same, while in others they are different, often operating at different levels. This difference corresponds to Yin's (2003) distinction between 'holistic' and 'embedded' case studies, respectively. 'Observational units' are a data category, referring "to the unit used in data collection and data analyzing" (Ragin 1987: 9). In this study, those are the activities of the entrepreneur and other stakeholders throughout the history of an enterprise. 'Explanatory units' are a theoretical category, referring "to the unit that is used to account for the pattern of results obtained" (Ragin 1987: 9). In this study, those are the processes linking entrepreneurial intention to enterprise outcomes. This study is therefore designed as an embedded case study in Yin's terminology.

4.4.2 *Sampling Strategy*

A distinction is often made between two broad categories of sampling strategies: probabilistic and non-probabilistic (e.g. Blaikie 2000; Daermark et al. 2002; Remenyi

et al. 1998). Probabilistic sampling is used in extensive research designs when descriptions of the cases studied are intended to represent the population of all such cases. Non-probabilistic sampling strategies could be further divided into convenience and purposeful sampling. Although convenience sampling is often derided as bad practice and "unsatisfactory" (e.g. Blaikie 2000: 204; Patton 2002), it can be useful in situations when the opportunity to study cases is rare (Weiss 1994). Most commonly, small 'N' and qualitative studies tend to use a purposeful sampling strategy, in which cases are deliberately chosen for their ability to reveal important information about the phenomenon of interest (Eisenhardt 1989; Ghauri 2004; Gummesson 2000; Pauwels and Matthyssens 2004). Accordingly, this was the strategy that was selected for this study's research design.

Assorted techniques for purposeful sampling are varyingly appropriate depending on the research strategy (see e.g. Remenyi et al. 1998: 193-5). Pettigrew suggests that when a study uses a limited number of cases, extreme exemplars that make the process "transparently observable" should be chosen (1990: 275). In a complementary argument, Homer-Dixon argues for a technique called 'process tracing', where

> "The aim is to determine if the independent and dependent variables are causally linked, and, if they are, to induce from a close study of many such cases the common patterns of causality and the key intermediate variables that characterize these links." (Homer-Dixon 1995: 8-9)

Although presented in terms of variables, this account has much in common with Tsoukas' (1989) conception of case study research in the realist epistemology as mechanisms and their contexts studied in detail. This is also congruent with Pettigrew's (1997) call for process research to explicitly link process to outcomes. The outcome of interest for this study is the creation of a successful sustainability enterprise. This suggests that one criterion for selecting cases is that the chosen enterprises be extreme exemplars of successful sustainability enterprises, in which the processes leading to that condition can be traced over time.

With the aim of identifying critical processes responsible for the outcome of interest, cases were also chosen with an eye toward maximising the variation in the contextual conditions in which they operated (see Daermark et al. 2002: 170). As Patton explains:

> "For small samples, a great deal of heterogeneity can be a problem because individual cases are so different from each other. The maximum variation sampling strategy turns that apparent weakness into a strength by applying the following logic: Any common patterns that emerge from great variation are of particular interest and value in capturing the core experiences and central, shared dimensions of a setting or phenomenon." (Patton 2002: 235)

Finally, the sampling strategy involved the sequential selection of cases, what Miles and Huberman call "conceptually-driven sequential sampling" (1994: 27), that marries a degree of consistency with a degree of flexibility (Strauss and Corbin 1998: 203). The consistency is provided by fixed selection criteria that allows for systematic comparison across cases. The flexibility is important to allow case selection to be directed toward increasing understanding of the evolving theory (Strauss and Corbin 1998). Thus, in this study a mixture of criterion-based, maximum variation, and conceptually-driven sequential sampling was employed. The next section describes the specific selection criteria used, and following that is a discussion of the sequential case selection.

4.4.3 Selection Criteria

Cases were selected on the basis of three sets of criteria: a class of enterprises, a performance level, and differing operating contexts. The class of enterprise, based on Alter's typology of social enterprises, had to be 'mission-centric', meaning it was "created for the express purpose of advancing the mission using a self-financing model" (2004: 15). It also had to be 'embedded', meaning the "social programs and business activities are one and the same" (2004: 18). For this study, selected enterprises had to have both social *and* environmental activities embedded within the business activity.

> *Criterion 1: All cases must be classed as mission-centric, embedded enterprises with environmental and social purposes.*

The performance requirement for case selection was that the enterprise had to be a successful sustainability enterprise. To be considered 'successful' an enterprise had to be organisationally secure (that is, growing or stable, not in decline or at

risk of insolvency) and embody its sustainable purpose. Consequently, the enterprise had to be old enough to be proven successful but young enough that the original founders and some original stakeholders were available to participate in the study. In practice this meant the enterprises had to be between five and fifteen years old.

Criterion 2: All cases must be old enough to be proven successful, but young enough that key founders are still available to participate in the study.

In the study of formal organisations, operating domain (Selznick 1957), geographic location (Hofstede 1991), scale (Williamson 1967), and business model (Amit and Zott 2001) have all been shown to be important dimensions of divergence. In the interest of maximising differences in operating context, each case was expected to differ in as many of these dimensions as possible.

Criterion 3: Each case must operate in a different operating domain, in a different geographic region, at a different scale, and with a different business model.

4.4.4 *Sequential Case Selection*

The first case was used as a pilot study to help clarify lines of questioning, use of the analytical framework, and to refine the data collection process in terms of both content to be collected and techniques of collection (Remenyi et al. 1998; Yin 2003). The pilot case was a local-scale enterprise based in Lincolnshire, UK. It operated primarily in the training industry, with local government agencies as its primary customer base. This case proved successful in contributing to an in-depth understanding of the process of sustainability entrepreneurship, and, upon reflection, did not indicate any significant retooling of the research design or data collection methods were needed. It was therefore included in the final analysis along with subsequent cases.

The second case selected operated in the hospitality industry in Zanzibar, Tanzania. This case contributed to theory development because it operated in a completely different social-cultural and political-economic context. While this enterprise also operated locally, it had an international customer base drawn mostly

from higher-income countries. The third case selected was a marketing and finance enterprise operating in the renewable energy industry. It was located in Vermont, USA, and had both a national-scale customer base and operations. This case contributed to the evolving theory because it was launched by much more 'conventional' businessmen on a much larger scale than the previous cases studied.

The initial analyses and development of the explanatory framework was based on data from these first three cases. A fourth case was subsequently added for two reasons. First, it served as a general check on the initial findings (see Miles and Huberman 1994: 273). And second, because of the conflicting implications of this enterprise's funding strategy for the explanatory framework that had been developed (presented in Chapter 6), the case also provided a critical opportunity to test and elaborate the emerging theoretical understanding. This case was a multinational export-import-wholesaling enterprise, also headquartered in Vermont, USA, but with operations throughout the US, Europe, Indonesia, and Guatemala.

As Bradshaw and Stratford mused, "Sometimes we find a case, and sometimes a case finds us. In both instances, selection combines purpose and serendipity" (2000: 41). The twin challenges of identifying and negotiating access to successful instances of sustainability entrepreneurship greatly limited the pool of potential cases from which to choose. Fortunately, the four exemplary enterprises selected for this study provided a valuable opportunity to generate in-depth understanding of sustainability entrepreneurship. They all met the criteria for being classed as successful sustainability enterprises, and they differed on the key contextual dimensions of operating domain, geographic region, scale, and business model.[21] Taken together, these four cases allowed for the sort of meaningful, in-depth comparisons necessary for data-rich, exploratory, theory-generating research. While it is recognised that the quality of case study research is not determined by the number of cases involved (De Vaus 2001; Eisenhardt 1991), including more cases would have sacrificed depth of analysis for breadth of coverage (Pauwels and Matthyssens 2004). As explained in section 4.7.1, these cases were sufficient to generate analytically generalisable results.

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[21] While the cases included business activities in Africa, Asia, and Central America, it should be noted that all of the entrepreneurs were either European or North America in origin.

4.5 Data Collection Methods

Pettigrew presents data collection as an iterative process, in which "one observes, follows themes and trails, identifies patterns, have those patterns disconfirmed or verified by further data, and the process moves on" (1990: 277). Yin (2003) suggests there are six sources of evidence that are useful in case study research, although following Pettigrew (1990) and Patton (2002), these are condensed into three broad categories: documents, interviews, and observations.

While the quantity of data collected does not signify its quality, nonetheless, a summary of the quantity and type collected can give some idea of the depth of data which have been used for analysis of the cases. These data include: over 40 hours of interviews (totalling more than 900 transcribed pages), the majority of which were with entrepreneurs, senior managers, or directors; 60 primary documents totalling over 1600 pages; 15 secondary documents published by other researchers or journalists; and digital photographs documenting site visits to the enterprises' operations. A complete register of the interviews is provided in Figure 4.7, and complete registers of the primary and secondary documents are provided in Appendix I. A discussion follows of how and why each type of data was collected, and what it was used for.

4.5.1 Documents

Documents represent a particularly valuable data source in organisation research because they provide a glimpse of activities and moments in time not immediately accessible to the researcher (see Patton 2002: 293-4). However, Robson (2002) cautions that documents "are subject to the dangers of selective deposit and survival", while Yin (2003: 87) notes the importance of remembering that the authors of documents have their own agendas and interests, and these may be inaccessible to the document reader. The advantages of this type of data are that they are stable, unobtrusive, exact, and can include broad coverage of many events, many settings, and a long time span (Yin 2003: 86).

Collecting secondary documents, consisting mostly of short case studies and case summaries written by other researchers and journalists, was the first step in data collection. A variety of primary documents were also then collected from the enterprises, including business plans, press releases, financial records, internal memoranda, letters, internal and external reports, educational pamphlets, promotional materials, and so on. These primary and secondary documents were useful for piecing together the descriptive, chronological picture of the enterprises' unique design histories from their inceptions to the present. They also provided essential context for subsequent interviews with entrepreneurs and stakeholders, served as an important means of corroborating the information obtained through those interviews, and were useful in mitigating possible interview recall biases.

4.5.2 *Interviews*

Interviewing is a technique for eliciting information from individuals that, when examined collectively, can yield new knowledge that transcends the experience of any one individual. Interviews can provide a level of depth and subtly not available from other data sources (Pettigrew 1990). Any one individual can only partially experience the activities and processes that constitute an organisation. Multiple-stakeholder interviews are a means of integrating multiple perspectives, especially useful for describing processes of change and, crucially, for learning how events are interpreted by participants (Weiss 1994: 9). They allow for targeted data that focus directly on the study questions and can provide insights into perceived causal inferences (Yin 2003). For these reasons, interviews with founding entrepreneurs and other organisational stakeholders comprised the most important form of data for this research.

INTERVIEW DATA SUMMARY		
Case	**Time (hh.mm)**	**Pages**
Hill Holt Wood	11.45	268
Native Energy	10.37	200
Chumbe Island	8.44	214
ForesTrade	9.13	228
Total Study	40.19	910

Figure 4.6 Summary of Interview Data by Case

Interview data carries the risks of recall error, personal bias, and self-serving responses (Patton 2002: 306). To guard against these, multiple stakeholder interviews, documents, and observations were all used to corroborate information among participants. Documents were also used to help facilitate recall accuracy during interviews. The total amount of interview data collected for each case ranged between eight and twelve hours. As presented in Figure 4.6, the amount of interview data collected was greatest in earlier cases and decreased with subsequent cases. Consistent with exploratory research, interviews became more focused and economical as the study progressed and the relevant objects of investigation became more exact (Yin 2003).

Interview Structure

Semi-structured, in-depth interviews were used. Robson suggests this style of interview is appropriate when "individual historical accounts are required of how a particular phenomenon developed" (2002: 271). To facilitate the interviews, a 'topic guide' was developed that listed important areas to be covered, but which allowed significant latitude "to follow interesting lines of inquiry and to facilitate an unbroken discussion" (Easterby-Smith et al. 1991: 79). Weiss suggests "The best guides list topics or lines for inquiry so they can be grasped at a glance, with just enough detail to make evident what is wanted" (1994: 48). The guide used in this study, presented in Appendix II, was based on the study's sensitising framework (see section 3.2) and consisted of seven key areas, or themes, and several associated issues related to each.

The topic guide was used mostly as a check to make sure that by the end of the interview all the important areas had been covered. Generally, the first portion of the interviews focused on what participants knew ('facts') and what they did (behaviour), while the latter portion focused on what participants thought (beliefs) or felt (attitudes) (Robson 2002: 272). In addition, as data collection progressed, before each interview a list of specific, open-ended questions for participants was drawn up based on what had already been learned about the case. These questions, along with the topic guide, were used to guide fluid conversations with participants, rather than as the basis of a rigid interview schedule (Rubin and Rubin 1995). In this

way participants were able to discuss what they felt was important, as well as covering topics on the agenda (Patton 2002: 344).

Selection of Participants

Not all organisational stakeholders could be interviewed, which meant that thought had to be given to the selection of interview participants. In addition to the founding entrepreneurs, key stakeholders who were instrumental in the start-up phase of the enterprise needed to be interviewed. Beyond those key informants, specific selection of individuals was more discretionary. Bradshaw and Stratford (2000) list a number of possible techniques and criteria to use in selecting key informants, but Stake (1995: 56-7) recommends using the simple criterion of choosing the people who provide the best opportunity to learn about the case. With this in mind, individuals who had extended periods of involvement with the enterprises, such as long-serving employees, were sought out as they were well placed to appreciate significant organisational changes over time and to identify critical incidents that helped to shape the enterprises. Also targeted were individuals with significant influence over the enterprises, such as senior managers and directors of the board. A complete list of interviews and the role of each participant is presented in Figure 4.7.

Interview Settings

Every effort was made to conduct interviews in person. But due to the severe time limitations of the participating entrepreneurs and senior employees, and the great geographic distances involved, some interviews had to be conducted over the telephone. Research has shown that in-person interviewing utilising natural conversation and narrative discourse yields more accurate information and slightly higher quality data than does telephone interviewing, which tends to be more formal by nature (Shuy 2001). However, the differences should not be overstated. As Weiss suggests, "it's better to be there, but telephone interviews are the next best thing" (1994: 59). Except for the last case study, initial in-person interviews were conducted with the entrepreneurs before telephone interviews were used, allowing for a more familiar and non-threatening rapport to be established first. In total, nine out of the 38 interviews were conducted over the telephone, with the rest conducted in person.

Due to the improvisational nature of fieldwork, in-person interviews took place in a variety of settings: from closed-door offices to guided tours, restaurants, and even a fishing hut. The number of individuals participating in the interviews also varied according to the situation at hand, ranging from single participants (28 interviews) to groups of between two and six (10 interviews). Fontana and Frey (2000) suggest group interviews can be useful for aiding participant recall and generating more robust descriptions of events, although they also suggest group interviews run the risk of being dominated by a few participants. To mitigate this, the more reticent participants were actively encouraged to share their perspectives. Participants communicated in English in all but one interview. In that exception, one participant translated for the others participants. His translations were later checked for accuracy off of the interview record by an independent translator.

Interview Records

As Patton explains, "The raw data of interviews are the actual data spoken by the interviewees" (2002: 380). Accordingly, both in-person and phone interviews were recorded, with the participants' consent, using a digital audio recorder. The advantages of audio recordings as compared to relying only on notes taken during the interview are that a permanent record is established and a transcript of the full interview can be made (Robson 2002: 289-90).[22] Because this was an exploratory study the interviews were transcribed in their entirety (excluding interruptions and off-topic conversations), so that the resulting transcripts could be "mined" for themes that were not always immediately obvious (Weiss 1994: 55).

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[22] In one interview the audio recorder failed several minutes into the conversation. In this case the notes from the interview were subsequently summarised and coded with the other transcripts.

INTERVIEW DATA REGISTER					
Case	**Transcript**	**Minutes**	**Role**	**Date**	**Pages**
Hill Holt Wood	T01	29	Entrepreneur	06.12.05	11
Hill Holt Wood	T02	75	Entrepreneur	06.12.05	29
Hill Holt Wood	T03	49	Entrepreneur	06.12.05	10
Hill Holt Wood	T04	62	Board Chair	06.12.05	26
Hill Holt Wood	T05	35	Senior Manager	06.12.05	18
Hill Holt Wood	T06	155	Entrepreneur	07.12.05	67
Hill Holt Wood	T07	39	Employee	07.12.05	
Hill Holt Wood	T08	29	Senior Manager	07.12.05	17
Hill Holt Wood	T09	19	Entrepreneur Senior Manager	08.12.05	11
Hill Holt Wood	T10	56	Entrepreneur	08.12.05	25
Hill Holt Wood	T11	53	Employee	08.12.05	
Hill Holt Wood	T12	62	Senior Manager Employee	09.12.05	40
Hill Holt Wood	T13	15	Employee	09.12.05	
Hill Holt Wood	T14	27	Entrepreneur	09.12.05	14
Native Energy	T15	110	Entrepreneur Entrepreneur	03.03.06	7
Native Energy	T16	31	Board/Supplier Supplier Supplier	07.03.06	12
Native Energy	T17	120	Supplier Supplier	09.03.06	41
Native Energy	T18	79	Entrepreneur	18.05.06	29
Native Energy	T19	97	Entrepreneur	19.05.06	33
Native Energy	T20	75	Entrepreneur	22.05.06	33
Native Energy	T21	64	Advisor	15.11.06	21
Native Energy	T22	61	Employee	16.11.06	24
Chumbe Island	T23	8	Employee	06.06.06	2
Chumbe Island	T24	42	Employee	06.06.06	18
Chumbe Island	T25	38	Employee	07.06.06	14
Chumbe Island	T26	51	Employee	07.06.06	28
Chumbe Island	T27	35	Employee	07.06.06	15
Chumbe Island	T28	23	Employee	08.06.06	13
Chumbe Island	T29	72	Senior Manager	08.06.06	27
Chumbe Island	T30	119	Entrepreneur	21.06.06	49
Chumbe Island	T31	136	Entrepreneur	01.08.06	48
ForesTrade	T32	29	Employee	15.12.06	14
ForesTrade	T33	69	Senior Manager Employee	15.12.06	35
ForesTrade	T34	44	Senior Manager	15.12.06	19
ForesTrade	T35	80	Manager Employee Employee Employee Employee Employee Employee	18.12.06	30
ForesTrade	T36	116	Entrepreneur Entreprenuer	27.02.07	43
ForesTrade	T37	102	Entrepreneur Entreprenuer	28.02.07	41
ForesTrade	T38	113	Entrepreneur Entreprenuer	02.03.07	46

Figure 4.7 Index of Stakeholder Interviews

4.5.3 *Observations*

Observations were informal and served primarily to supplement the main data sources of documents and interviews. As a visitor to the enterprise and its operations my role was that of a 'pure' observer (Robson 2002: 313). Advantages of observations include that they are contextual, cover reality in real time, and may provide insights into interpersonal behaviours and motives (Yin 2003). In addition, direct observations "can confront the researcher with discrepancies between what people have said in interview and casual conversations, and what they actually do" (Pettigrew 1990: 277).

Drawbacks to observational data include selective attention of the observer, selective memory, and interpersonal factors such as being drawn to more comfortable, welcoming settings and individuals and avoiding unpleasant situations (Robson 2002). These biases were mitigated by being aware and consciously trying to counteract them, such as deliberately seeking data that reside in difficult or uncomfortable settings (Chambers 1997). When appropriate, photographs were taken as a record of the site visits.

4.5.4 *Ethical Considerations*

Pettigrew notes that ethical considerations for research are "linked to key issues such as free choice of participation for all respondents, respect for all persons and points of view, clear contracting at the front end of research assignments, and an open and reciprocal relationship between the researchers and their host organisations" (1990: 286). Three such issues are discussed here: access and reciprocity, anonymity of participants, and control and use of data.

Access and Reciprocity

According to Pettigrew, "Social scientists have no insuperable right to be granted access to any institution or anyone in it" (1990: 286). As recommended by Stake (1995: 57), a brief written description of the study and the participants' role in the study was presented in the form of an introductory letter and informational pam-

phlet to participants to negotiate access. To reciprocate, results were provided to the participating enterprises upon completion of the study.

Anonymity

Concealing the identity of participating enterprises is thought to both protect participants and facilitate more open and honest responses. However, as Robson (2002: 67) asks, "Is confidentiality...always appropriate? If people have done something good and worthwhile...why shouldn't they get credit for it?" A key goal of the entrepreneurs was to spread their messages and serve as models to others of what is possible. Public exposure was a key motivation for entrepreneurs to participate in this study. For these reasons, the decision was made, with the consent of the entrepreneurs, to openly identify the enterprises so that they may serve as models and reference points for the emerging field of sustainability entrepreneurship.

Control and Use of Data

A verbal commitment was made that the data collected will be retained and used to fulfil the objectives of this study as specified to participants before their participation. Easterby-Smith and colleagues maintain that researchers who maintain control and ownership of data "must exercise due ethical responsibility by not publicising or circulating any information that is likely to harm the interests of individual informants, particularly the less powerful ones" (1991: 65-6). Data was kept confidential in a central location and access was restricted (Dowling 2000; Pettigrew 1990). In addition, participating enterprises were provided with draft reports upon which they were invited to comment prior to publication (Easterby-Smith et al. 1991: 68; Pettigrew 1990: 286).

4.6 Data Analysis Methods

In his discussion of "transforming" qualitative data into meaningful accounts, Wolcott suggests "that the real mystique of qualitative inquiry lies in the process of *using* data rather than in the process of *gathering* data" (1994: 1). Yet, there is little agreement among researchers on what the process of *using* data, commonly known as *data analysis*, entails, other than the general consensus that is it somehow about "making sense" of the data (Tesch 1990: 4). However, a review of the expositive accounts of experienced researchers reflecting on their own approaches to working with qualitative data does reveal three common stages of analysis. While the researchers each use their own terminology, as presented in Figure 4.8, the stages generally consist of:

- an initial process of reducing and describing the data in light of the purposes of the study,
- a subsequent process of re-organising the data to facilitate conceptual understandings, and
- a final process of abstracting a conceptual framework that accounts for the data but also goes beyond the data to inform theory.

	Stages of Data Analysis →		
Miles & Huberman (1994)	Data reduction	Data display	Conclusion drawing and verification
Strauss & Corbin (1998)	Description	Conceptual ordering	Theorising
Tsoukas (1989)	Resolving and redescribing actions	Rules of action	Abstracting mechanisms
Wolcott (1994)	Description	Analysis	Interpretation

Figure 4.8 Qualitative Data Analysis

4.6.1 Reducing and Describing Data

Description of the cases using the available data is the necessary first step in data analysis (Dey 1993: 31). These descriptions form "the basis for more abstract interpretations" that follow, although it is important to note that description itself "already embodies concepts, at least implicitly" (Strauss and Corbin 1998: 18). Description therefore cannot be separated from data reduction, which "refers to the process of selecting, focusing, simplifying, abstracting, and transforming the data" (Miles and Huberman 1994 :10). This involves rearranging and reorganising the data to facilitate understandings relevant to the research questions being investigated (Tesch 1990: 138). Although reducing and describing data are important first steps in analysis, these activities continue throughout the entirety of the analysis process (Miles and Huberman 1994: 10).

For this research, initial data reduction and description was carried out using two parallel methods, reflecting the importance of both connecting and categorising types of analyses (see Maxwell 2005; Maxwell and Miller *undated*). Case narratives were used to emphasise *connections* between the flow of events and the contexts in which those events were situated. Thematic coding was used to group case elements into conceptually relevant *categories* to facilitate comparisons within and between cases. The intermediate results yielded both a holistic redescription of activities in terms of continuity and change over time, and a reduction to the "constitutive components" of these activities (Tsoukas 1989: 558).

Case Narratives

According to Rhodes and Brown, "narrative provides a means of engaging with the experience of organizing" by emphasizing local knowledge and practice-driven theory (2005: 180). This is possible because rather than isolating events, as in categorising analysis, narratives afford a prominent role to context and contingency by tracking the "ingredients of *courses of events*" (Carroll 1990: 144; see also Gotham and Staples 1996: 492). As Dey explains, formulating case narratives involves filtering out unnecessary detail and exposing the most salient qualities (ingredients) of the data (1993: 31).

This provides a basis for subsequent interpretation and explanation of data because the meaning of any particular element is discernable only with reference to the progression of the case as a whole (Polkinghorne 1988: 13). Dey suggests comprehensive descriptions of cases should be oriented toward three types of information: the *intentions* of actors from their own perspectives, the *contexts* in which action is situated, and the *processes* by which activities sustain or change social situations (1993: 31-9). Narratives of this study's cases were constructed with these three orientations in mind. These case narratives are presented in Chapter 5.

Thematic Coding

As Miles and Huberman explain, "*Codes* are tags or labels for assigning units of meaning to the descriptive or inferential information compiled during a study" (1994: 56). Coding is a method of reorganising the data by making explicit distinctions between different categories of data (Dey 1993). Segmenting and re-grouping data into conceptually relevant categories facilitates comparisons within and between cases. Tesch (1990) describes this as a process of 'decontextualisation' and 're-contextualisation' because the data are taken out of their original context and assembled into a new conceptual context based on a common topic or theme.

In this study, codes were generated using an preliminary "start list" of themes derived from the analytical framework, as recommend by Miles and Huberman (1994: 58). These themes were expected to be useful because of their grounding in the extant literature. To these were added other themes that became evident during the fieldwork: from interviews with entrepreneurs and other stakeholders, from site visits, and from an initial readings of primary documents. In a process Strauss and Corbin (1998) term 'open coding', additional codes were created as new themes emerged during close reading of the interview transcripts. The initial catalogue of 45 codes were therefore generated through an interactive process of moving "backwards and forwards" between conceptual categories and data (Dey 1993: 98-9).[23]

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[23] Coding was performed using the qualitative data analysis software package NVivo. Because only the 'code' and 'sort' functions of the programme were utilised, many of the critiques of computer assisted qualitative data analysis, as reviewed by

4.6.2 *Conceptual Ordering*

The initial process of coding helped to identify relevant bits of data and associate them with conceptual categories. It was then necessary to re-organise these categories, together with their associated data segments, to facilitate a deeper conceptual understanding (Miles and Huberman 1994: 62; Strauss and Corbin 1998: 19-21; Tesch 1990: 141-5). This was accomplished by first clustering the themes into five meta-categories.[24] Within each meta-category the coded data was reassessed and recoded into a more comprehensive and systematic coding scheme that fused duplicate categories, dissected overly broad categories, and related categories to one another in a nested hierarchy. The result was a three-tiered coding scheme.[25] The first and second tier codes referenced the *topic* of associated data segments with lesser and greater specificity, while the third tier codes referenced the *content* of data segments within each topic (see Tesch 1990: 125).

The within-case and cross-case comparative analysis that accompanied this re-organisation involved resolving activities into 'generative rules' by examining the accounts of activities and associated reasoning (as revealed by the categorical analysis) in relation to the contextual flow of events (as revealed by the case narratives). As these rules were "immanent in the practice" of organisational participants (Harré 2002: 116), the source of these rules was the participants' own accounts of their activities. Accounts are verbal and written statements that provide "social explanations of events" (Orbuch 1997: 456). As Tsoukas explains, the reasons provided in actors' accounts "invoke various rules in terms of which the given reasons can be made intelligible" (1989: 558). In this sense, the concept of a 'rule' is used as an analytical analogue of the literal behaviour of following rules (Harré et al. 1985: 47) to identify and describe the underlying logics that guide behaviour. Harré explains the validity of using actors' accounts of activities to identify the rules that guide those activities:

Bryman and Bell (2003: 446-7), were not pertinent. NVivo was used to improve the efficiency of data management due to the large amount of data in this study.

[24] The outcome of this is displayed in Appendix III, Figure I.1.

[25] The three tiers are displayed in Appendix III, Figures III.2 through III.5.

> "These accounts of actions are not introspective descriptions of cognitive processes. A human being might be lying about his or her plans or intentions. He or she may not even know what cognitive processes are appropriate for understanding the action. This is quite irrelevant for the analytical use of accounts. In producing their accounts, actors are displaying knowledge of ideal ways of acting and ideal reasons for doing what they have done or omitted to do." (Harré et al. 1985: 88)

4.6.3 *Abstracting an Explanatory Framework*

Once the 'rules of practice' were identified, their significance for sustainability entrepreneurship was established by interpreting the findings in light of an existing theoretical perspective. As Coffey and Atkinson explain,

> "Our task as qualitative researchers is to use ideas in order to develop interpretations that go beyond the limits of our own data and that go beyond how previous scholars have used those ideas. It is in that synthesis that new interpretations and new ideas emerge. The point is not to follow previous scholarship slavishly but to adapt and transform it in the interpretation of one's own data." (Coffey & Atkinson 1996: 158)

To that end, an explanatory framework was developed by combining my understanding of the cases, resulting from the analysis, with insights from institutional theory (as described in section 3.3).[26] It was at this point in the analysis that Pauwels and Matthyssens' (2004) concept of 'juxtaposition' was especially useful, whereby empirical data, analytical findings, and extant theory acted as reference points for the explanatory framework that emerged. Through a process of "iterative grounding", the emerging framework was repeatedly refined to ground it in both "accurate data" and "general theory" (Orton 1997: 422). The resultant explanatory framework is a model of sustainability entrepreneurship that both "tell[s] the story of the set of cases" (De Vaus 2001: 245) and "transcends this information because of the sociological perspective prevailing over the... study" (Hamel et al. 1993: 48). By grounding the model in the available data it should be a *valid* account of sustainability entrepreneurship in practice, and by grounding it in abstract theory it should provide a *general* explanation of the phenomenon. The extent to which it meets these criteria of validity and generalisability will now be considered.

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[26] This process is explained in further detail in Appendix IV.

4.7 Generalisability and Validity

The applicability of generalisability and validity as criteria for small 'N' studies utilising a naturalistic-qualitative research strategy is contentious. Qualitative case study researchers who adopt the view of orthodox (critical rationalist) science attempt to apply the concepts as employed in experimental and quantitative research. With their correspondence theory of truth, they see validity as the extent to which the results mirror reality and generalisability as the extent to which the results represent the 'typical case' of a defined population. Drawing an analogy between cases and experiments, these researchers advocate replication as the main tool for ensuring generalisability and validity of findings (e.g. Eisenhardt 1989; Yin 2003). Other qualitative case study researchers who adopt an alternative view of science, such as constructivism, often dismiss these criteria as inappropriate. With their conventionalist theory of truth, they see validity in multiple interpretations and each case as inherently unique. These researchers have suggested several alternative criteria, such as 'authenticity' (Guba and Lincoln 1989) and 'naturalistic generalisation' (Stake 2000), although no consensus appears to exist. From a critical realist perspective, the differences between intensive (typically qualitative) studies and extensive quantitative studies (see Figure 4.9) beget differences in the meaning of validity and generalisability for each type of research. To understand these differences, each criterion is discussed in turn.

	INTENSIVE*	EXTENSIVE
Limitations	Actual concrete patterns and contingent relations are unlikely to be 'representative', 'average', or generalisable. Necessary relations discovered will exist wherever their relata are present, e.g. causal powers of objects are generalisable to other contexts as they are necessary features of those objects.	Although representative of a whole population, they are unlikely to be generalisable to other populations at different times and places. Problem of ecological fallacy in making inferences about individuals. Limited explanatory power.
Appropriate tests	Corroboration	Replication

* An intensive research design was adopted for this study

Figure 4.9 Generalising and Validating Research (after Sayer 1992: 243)

4.7.1 *Generality of the Results*

An important distinction is made between *empirical* and *analytical* (or *theoretical*) generalisations. Empirical generalisation is when "Knowledge of a limited amount of events is extrapolated to, and is assumed to be valid for, a larger population" (Danermark et al. 2002: 76). Analytical generalisation is when abstractions from concrete phenomena are held to be true when certain substantial relata are present, regardless of how frequently these relata are represented in any particular population (see Sayer 1992: 239, and 88 on substantial relations). Based on this distinction, intensive and extensive research have fundamentally different, yet complementary, roles, as depicted diagrammatically by Sayer (1992) in Figure 4.10.

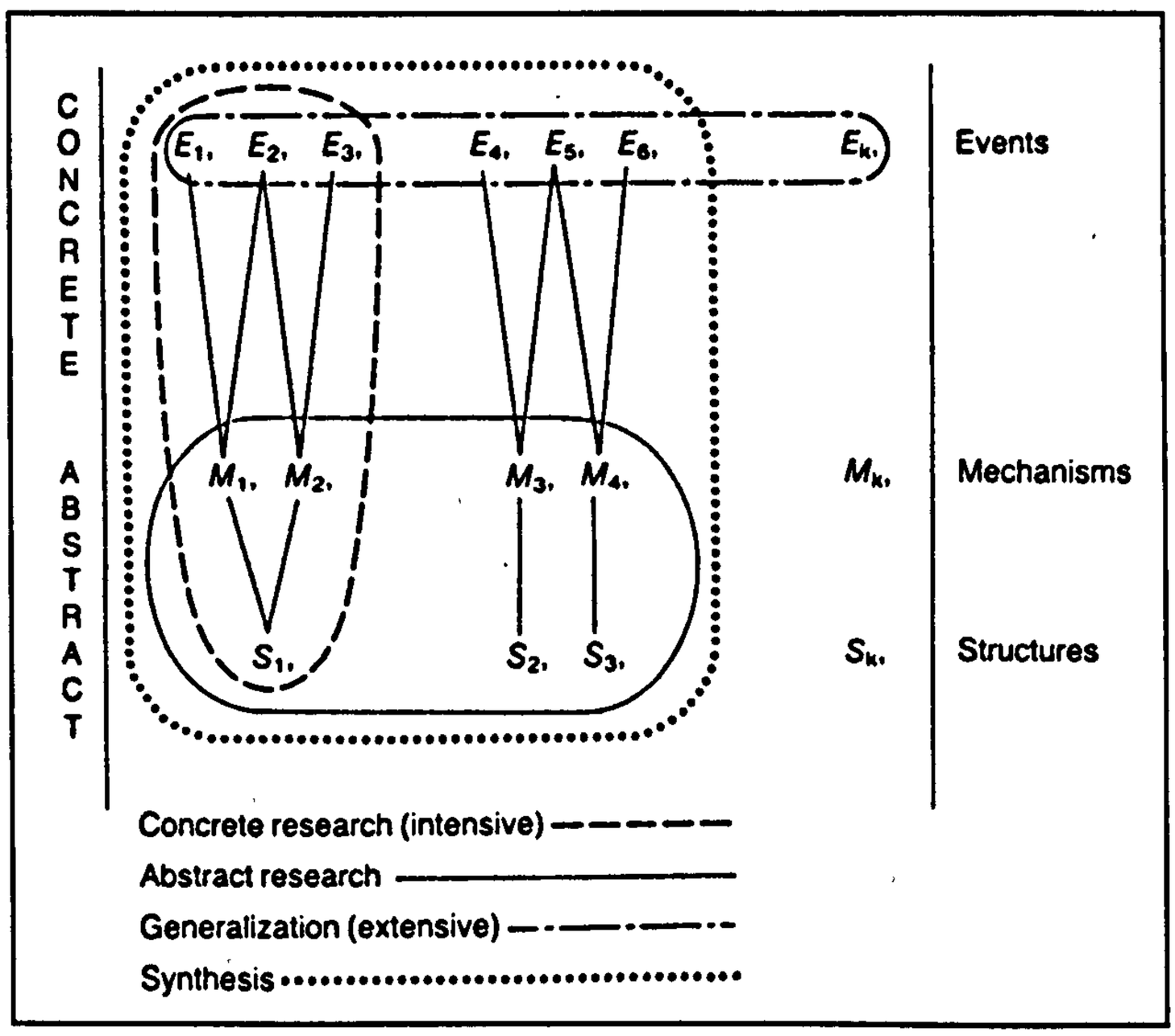

Figure 4.10 Types of Research (after Sayer 1992: 237)

Determining how general a finding is within a wider population is possible only with the scale of replication found in an extensive research design. These studies can speak to empirical generalisations by looking descriptively at similar and dissimilar formal relations among different taxonomic groups within a population.

But these empirical generalisations are unlikely to be meaningfully applied to individuals within the population, or to other populations in differing contexts, and lack "explanatory penetration" (Sayer 1992: 243). By contrast, intensive research is concerned with abstracting essential generative mechanisms and structures, and the necessary, substantial relations that they entail. While these features may not be representative of a larger population, they do specify a theoretically general relationship for instances when the identified relata are present.

In this study, an intensive research strategy was used to uncover the underlying mechanisms and contextual contingencies that have resulted in successful sustainability entrepreneurship. The resulting model specifies the potential embodied within enterprises to operate sustainably.[27] By grounding the model in established theory (see section 4.6.3 above), this model is intended to be analytically general. But further research on many different enterprises of varying outcomes would be required to assess the range of contingencies that may or may not allow the mechanisms to operate in any given instance.

4.7.2 Validity of the Results

Maxwell suggests that, "Validity, in a broad sense, pertains to this relationship between an account and something outside that account, whether this something is construed as objective reality, the constructions of actors, or a variety of other possible interpretations" (1992: 283). From a critical realist perspective, the validity of research findings depends on their plausible adequacy as an account of the phenomenon under study (see section 4.2.2 above). Thus, Sayer argues that the appropriate test for intensive research is that of *corroboration* of the findings rather than replication (1992: 246). Corroboration refers to determining whether the results do in actuality apply to the cases studied. In this sense, corroboration refers not to the data but to the inferences drawn from the data (see Hammersley and Atkinson 1983: 191). To that end, Maxwell identifies descriptive, interpretive, and theoretical validity as the three most directly pertinent types of validity in qualitative research (1992: 292).

Descriptive validity refers to the accuracy of the researcher's account of what actually happened. This includes the accuracy of observations as well as what

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[27] See Tsoukas (1989) who makes the argument in terms of management potential.

"could in principle be observed, but that were inferred from other data" (Maxwell 1992: 286). This second aspect is particularly important in this study because, due to its historical nature, the description of most events had to be inferred from other data sources. In this sense, the most important technique for obtaining corroboration was through 'triangulation' of data (Ghauri 2004; Miles and Huberman 1994; Pauwels and Matthyssens 2004; Stake 1995; Yin 2003). In this study, data was triangulated by both type and source. Different data types, including interviews, documents, and some observations were used to compensate for the strengths and weaknesses of each (see section 4.5 above). Also, data sources were triangulated by conducting interviews with multiple stakeholders from a variety of positions within the organisational hierarchy, and both primary documents (internal accounts) and secondary documents (external accounts) were collected.

Interpretive validity refers to accurately understanding the meanings of activities and events for the people experiencing them.[28] Maxwell explains that "these types of understanding are ultimately based on inferences from the descriptive evidence, but the validity of inferences to the actor's subjective states depends on the validity of the researcher's account of the meaning of the actor's words and actions" (Maxwell 1992: 289). Corroborating these types of inferences was accomplished mainly by checking my understanding with participants during the interviews (see Lofland and Lofland 1984). My interpretation of the meanings embodied in activities observed during site visits, of written documents, or of participants' own accounts were verified through interactive discussions with the multiple stakeholders. There was especially ample scope for this with the entrepreneurs because multiple, sequential interviews were conducted. In practice, this consisted of me summarising what I understood to be hearing or observing in my own words, and soliciting a response from the interview participant. In this way, my understanding of the participants' views and experiences were refined and deepened.

Theoretical validity "refers to an account's validity as a *theory* of some phenomenon" (Maxwell 1992: 291). With this type of validity, the focus shifts away from corroboration of the accuracy of the descriptive and interpretive elements of

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[28] Following Maxwell, in this sense 'meaning' "includes intention, cognition, affect, belief, evaluation, and anything else that could be encompassed by what is broadly termed the 'participants'' perspective, as well as communicative meaning in a narrower sense" (1992: 288).

the account toward the plausible adequacy of the account as an abstracted explanation of the phenomenon. The adequacy with which the model can account for the data was validated in part by seeking feedback on the findings from study participants (Miles and Huberman 1994: 275-7). This was accomplished by sending the entrepreneurs a short written summary of the main findings, and requesting their thoughts and reflections as to how well they felt their experience was reflected in the model. Miles and Huberman note that it is unlikely participants will agree completely with the findings, but this should be viewed not as discrediting the findings, but as "an occasion to learn more about the case" (Miles and Huberman 1994: 277).

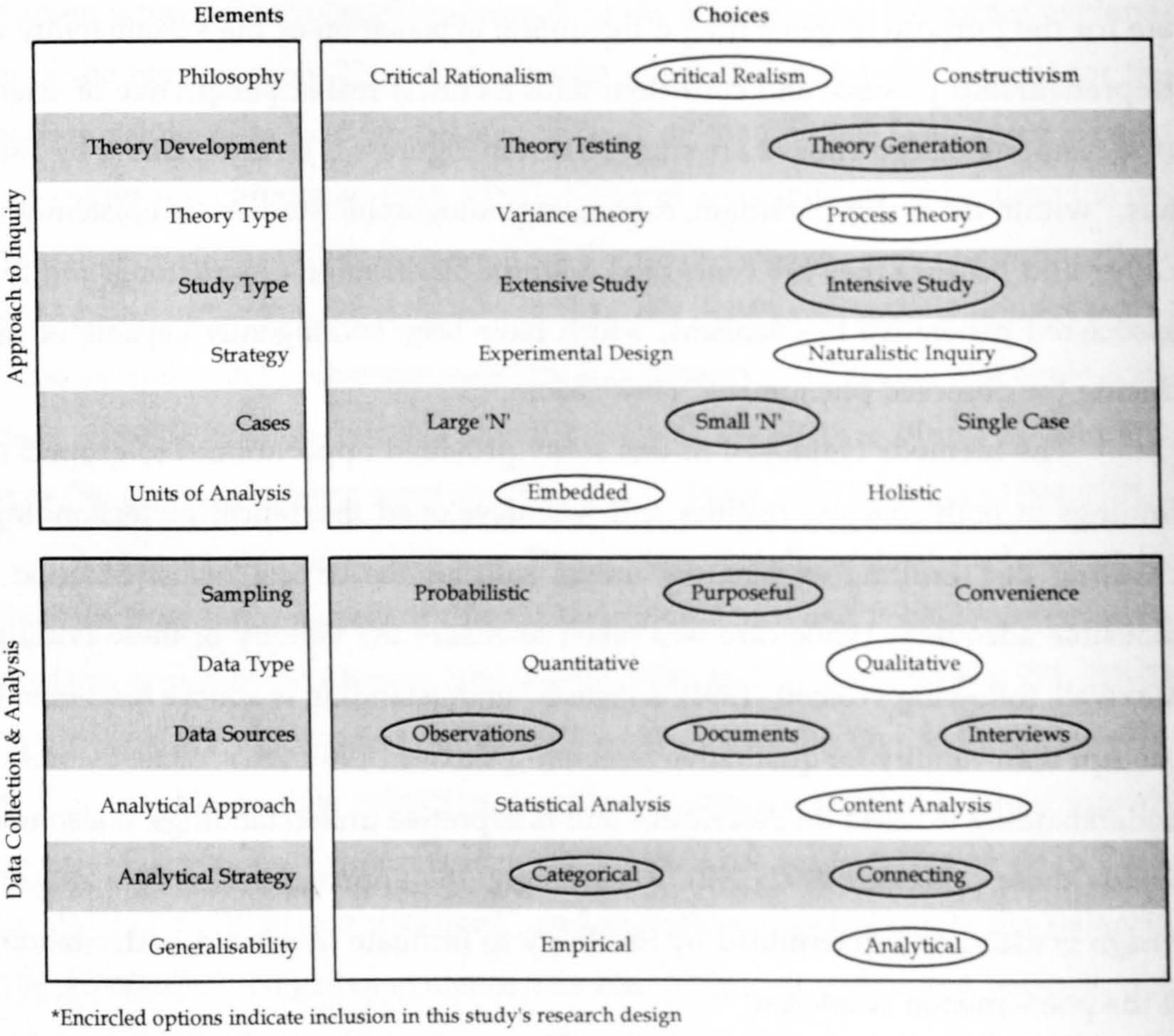
Validating the plausibility of the account as a theoretical explanation involved looking for negative, or disconfirming, evidence and considering rival explanations (Easterby-Smith et al. 1991: 39-40; Miles and Huberman 1994: 271, 274-5). These techniques were carried out throughout the data collection and analysis process. For example, in data collection, negative evidence was often brought into the interview discussions. Questions such as, "if you were really trying to do 'X', then why did you do 'Y' in that situation?", and so forth, allowed apparent discrepancies to by synthesised. Negative evidence was also evaluated within and between data categories during the analysis phase, and a similar synthesis was used to refine the evolving model. Considering rival explanations was also a continuous activity throughout the study. One example of when this was explicitly crucial was in determining which theoretical lens would be most useful for interpreting the results. In the end, institutional theory was chosen because the concepts in that perspective appeared to match closely the essence of the categories emerging from the data, and the account that emerged, as told through an institutional theory perspective, seemed to offer the strongest explanation of what was happening. In these ways the theoretical validity of the study was strengthened.

4.8 Conclusions and Summary of Research Design

The choices implicit in designing a study are guided foremost by the purpose of the research and the researcher's philosophical perspective of knowledge and knowledge creation. For this study, I strove for a research design that was both appropri-

ate for the purpose of generating a theoretical explanation of the sustainability entrepreneurship process, and consistent with a critical realist perspective of science (the resulting design choices are summarised in Figure 4.11). As explained by Tsoukas, "within the realist paradigm, explanatory idiographic studies are epistemologically valid because they are concerned with the clarification of structures and their associated generative mechanisms, which have been contingently capable of producing the observed phenomena" (1989: 556).

The methods employed in this study provided opportunities to ground the findings in both concrete realities and well-developed theoretical understandings, ensuring the resulting explanatory model satisfies the critical realist criterion of plausible adequacy. While care was taken to ensure the validity of these findings, Maxwell, following Wolcott (1994), suggests "understanding is a more fundamental concept than validity for qualitative research" (Maxwell 1992: 281). While theoretical understanding is based on descriptive and interpretive understandings, it also transcends these (Maxwell 1992: 292). Accordingly, the appropriateness of a research design is ultimately determined by its ability to facilitate improved understanding of the phenomenon of interest.



*Encircled options indicate inclusion in this study's research design

Figure 4.11 Research Design Elements and Choices

CHAPTER 5

SUSTAINABILITY ENTERPRISE DESIGN HISTORIES

I begin with an idea, and then that becomes something else.

Pablo Picasso

Huit entretiens (1934)

5.1 Introducing the Cases

The enterprises included in this study ranged from small, local, community-based operations to large, multinational operations spanning four continents. As discussed in Chapter 4, the enterprises each operated in different socio-cultural contexts and different industries, although all were located in the service sector to focus attention on innovations in organisation design. This chapter presents results of the narrative analysis in the form of composite narratives of each enterprise's unique design history, constructed from the multiple stakeholder interviews, primary documents, and external sources. This chapter also provides context so that the findings presented in Chapters 6, 7, and 8 can be more fully appreciated (see Figure 5.1). These narrative histories were reviewed by the entrepreneurs to validate their representation of the events described.[29] The chapter concludes by noting the key characteristics shared by these cases in their pursuits of sustainable development.

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[29] References after quotes from the data refer to a specific transcript or primary document. In a few cases the quotes in the chapters may not exactly match the quotes as they appear in the transcripts because during the review process the entrepreneurs requested to make some slight edits to clarify their intended meaning. In no cases were the alterations significant.

	Native Energy, LLC.	ForesTrade, Inc.
Scope		
Founded	2001	1996
Location	HQ and operations in Vermont, USA; customers & suppliers in USA	HQ in Vermont, USA; operations in USA, Europe, Indonesia, Guatemala; customers in USA, Europe; suppliers from Indonesia, Guatemala
Size	15 staff	80+ staff
Operating domain		
Service	Marketing and finance	Importing/exporting and wholesaling
Niche	Marketing carbon offsets and financing new renewable energy projects owned by Native American tribes, family farmers, and local communities	Exporting, importing, and wholesaling organic and fair trade specialty food commodities from biodiversity-rich developing countries to the US and Europe
Business Model		
Customers	Revenues from sales to corporate and individual customers to offset carbon emissions	Revenues from corporate clients buying commodities in bulk
Suppliers	Supplied primarily by western Native American tribes, but also some family farms and local cooperatives	Farmers in developing countries located near vulnerable ecosystems
Contribution		
Environmental goods	New renewable energy production	Reduces encroachment and chemical use in watersheds and national park buffer zones
Social goods	Income, increased capacity, and market access to disadvantaged tribal communities	Income, infrastructure, increased capacity, and market access to rural producers
Legal status	Private limited liability corporation	Private incorporated company
Ownership structure	Majority ownership by Native American tribes, with remaining shares split between the founders	Privately owned shares split between founders and socially responsible investors
Governance structure	3-member governing board with equal votes – one each for the two founders, and one for the tribal representative	7-member governing board composed of investor representatives, the newly hired CEO, and both of the original founders

Figure 5.1 Profile of Cases

Hill Holt Wood, Ltd.	Chumbe Island Coral Park, Ltd.	
		Scope
1995	1993	*Founded*
HQ, operations, and customers in Lincolnshire, UK	HQ and operations in Zanzibar, Tanzania; customers from across the world	*Location*
19 staff	41 staff	*Size*
		Operating domain
Training	Hospitality	*Service*
Job skills training for at-risk, socially excluded, and unemployed young adults through restoration of an ancient woodland	Low-impact nature resort for international tourists and environmental education programmes for local children and fishing communities	*Niche*
		Business Model
Revenues from government contracts to train socially excluded individuals residing in the county	Revenues from international tourists	*Customers*
Local youth who have been excluded from school and chronically unemployed adults	Facilities in the nature reserve owned by the company and staffed locally	*Suppliers*
		Contribution
Restoration of ancient woodland	Conservation of a fringing coral reef of high biodiversity and terrestrial coral rag forest	*Environmental goods*
Develops social skills and job skills of at-risk individuals; community access to ancient woodland	Local employment & professional development; environmental education for children and fishing communities; increased fish stocks for local fishers	*Social goods*
Community owned social enterprise	Private limited liability company	**Legal status**
Owned by a membership organization open exclusively to local community members	Privately owned by the founder	**Ownership structure**
A two-tiered, 15-member governance board representing the community owners	Oversight by the sole founder	**Governance structure**

Figure 5.1 Profile of Cases (cont.)

5.2 *Native*Energy, LLC.

*Native*Energy, LLC. is a private, for-profit enterprise that retails carbon offsets and renewable energy credits to consumers and businesses, and finances the development of new renewable energy projects that are owned by Native Americans, family farmers, and local communities.[30] The company pioneered a new business model that supports the construction of new renewable energy projects and the economic development of socially and economically marginalised communities. Founded in 2000, *Native*Energy now has fifteen employees based in the company's Vermont headquarters, although its operations span the entire United States including projects with Alaskan Native villages. The company is now recognised as a leader in the industry.[31] A recent study of carbon offset retailers from around the world ranked *Native*Energy among the top of the industry for quality of offsets, and second in total number of offsets sold (Clean Air-Cool Planet 2006). The company's reputation has led to partnerships with leading 'ethical' brands, such as Ben and Jerry's, Clif Bar, and Stonyfield Farm, and to the company being selected as the sole offsets provider for the production and promotion of Al Gore's film on climate change, "An Inconvenient Truth". As of August 2005, *Native*Energy became majority owned by some of its Native American tribal partners. At that time, the company's governing board was changed to include a Native American representative in addition to two of the original founders, who remained as company CEO and Vice President.

5.2.1 Native*Energy's Design History*

The Making of Opportunity

The U.S. renewable energy market has historically been driven by regulation. This began to change during the 1990s as deregulation reforms in the energy industry

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[30] 'Carbon offsets' are a reduction of CO_2 emissions from one activity equivalent to the emissions generated by another activity. These activities are said to be 'carbon neutral' because there is no net increase in the carbon content of the atmosphere.

[31] As evidence of this, the company's co-founder and CEO was recently called to give expert testimony before the U.S. Congress's select subcommittee on global warming and energy independence.

and rising public awareness of air pollution and climate change issues led to the emergence of consumer demand as a second significant market driver. New, private electric service providers (ESPs), such as Green Mountain Energy Company, entered the market to sell electricity branded as 'green'. As the market began to mature toward the end of the decade, however, the business model of Green Mountain Energy and other ESPs came under public attack by several national environmental groups who charged that consumers were paying a premium for repackaged 'green' energy that already existed. In other words, consumers who were paying price premiums to support the growth of renewable energy alternatives were not actually contributing to new renewable energy production. Tom Boucher, one of the original founders of Green Mountain Energy, and some other long-time employees of the company were of a similar mind that the market had evolved to a point where much more could be done than simply marketing existing renewable energy.

At the same time, decoupling the environmental attribute of renewable energy from the actual electricity produced was beginning to be considered by industry insiders as a real possibility (Holt and Bird 2005). Boucher was aware that electricity generation is responsible for only about one-third of the U.S.'s total carbon dioxide emissions and saw potential in the idea of decoupling environmental attributes from physical units of electricity as a way to address the range of other activities that result in carbon emissions, such as driving automobiles or heating buildings. When, in May of 2000, BP Amoco acquired a significant stake in Green Mountain Energy and the corporate offices moved from Vermont to Texas, this provided the impetus for Boucher and a number of colleagues to leave the company.

Forming the Enterprise

Shortly after leaving Green Mountain Energy, Boucher was asked to help develop renewable energy production on Native American tribal lands. This sparked a new and sustained interest for him that would have profound implications for the venture to come. By August of that year, Boucher had registered a new enterprise, *Native*Energy, as a private, for-profit company with the intention of building a business model around the idea of decoupling environmental attributes from electricity, and with a newfound interest in using these opportunities to support Native American

communities. Boucher was joined in this exploratory venture by Tom Stoddard and two other colleagues from Green Mountain Energy. The group was aware that they were attempting to enter an emerging market that was "immature, poorly-defined and of unknown size" (P09: 2). Yet despite these great uncertainties the group felt compelled to proceed, as Boucher explained:

> "The picture in my mind was so clear as to the opportunities with this evolving market I didn't really pause at stepping out of what I was doing and into this because I just felt the opportunity was there and someone had to get it going." (T18: 7)

Over the next several months the group worked to devise a new business model that would address the problems they saw with the existing industry and embrace the potential they felt existed to make more meaningful environmental and social contributions. The two biggest problems they saw hampering the existing renewable energy market were, first, environmental attributes coupled with physical electricity units were limited by electricity distribution infrastructure. This meant that environmental attributes were restricted to electricity consumption and only localised, regional markets could be established. Second, sales of 'green' energy seldom resulted in the creation of new renewable energy production. To help finance the construction of new renewable energy projects suppliers needed long-term contracts for the environmental attributes they produced (known generically as 'green tags'), while buyers would agree to only short-term contracts due to the uncertainty and expected long-term decline in the market price of green tags. The market value of a single year's green tags were usually worth only about 1.5% of the project's overall cost. At this level, the environmental attributes of renewable energy production were insufficient to support new production. Instead, *Native*Energy's founders were specifically looking for a model that would result in the construction of new renewable energy projects – the key to the emerging, consumer-driven, voluntary market – that could be sold to a national market, and in particular, would support smaller, local projects owned by Native American tribes, family farmers, or other economically depressed communities.

The result of this intense, collaborative effort at idea generation and practical problem solving was the formulation of a radically new 'forward streams' model unlike anything yet seen in the marketplace. This model was premised on a simple,

but significant, innovation: aggregating the annual stream of green tags that a new renewable energy project would produce over the next 15 to 25 years, and selling these upfront to consumers at their net present value. On the finance side, this gave developers what they needed: long-term contracts paid upfront. The present value of 15-25 year aggregated streams can account for 20% of project costs, making the green tags an important source of funding for new projects. And since these tags were sold before the projects were built, this upfront income stream significantly reduced the financing costs of construction, making the whole project less expensive overall. On the marketing side this gave consumers what they wanted: green tags that resulted in the creation of new renewable energy production and the associated environmental benefits (known in the industry as 'additionality'). By focusing on smaller-scale projects that would be uneconomic without this additional source of financing, *Native*Energy could make a real contribution to increasing the production of renewable energy. This also fit well with their interest in supporting Native American tribes, family farmers, and other community-owned projects that tended to be too small to be economically viable without an additional income stream. Stoddard explained the rationale behind this model:

> "We could be described simply as a retail seller of an intangible commodity. As it happens, that commodity can have greater or lesser environmental attributes associated with it. There are two or three dozen marketers who sort of stop there, and we, very deliberately from the beginning, wanted to go beyond that and leverage this intangible commodity as an opportunity to create other kinds of change besides environmental change. And to do that we sort of re-characterised it, if you will, created a new product out of it that does more than simply give more money to large corporate wind farms or the like, and actually enables customers to create real change by financing specific new projects. And then layering further on top of that, what do you do with this new financial tool to create new projects? It seemed to make sense to add on another layer of value, social value, and try to focus on projects in indigenous communities and family farmer-owned projects that create sustainable economic benefits for communities in need." (T15: 1)

Entering the Market

The group of entrepreneurs developed a business plan around this model and went searching for investors. By the summer of 2001, however, they had yet to obtain any

significant financial support for their venture. Stoddard described the challenges they faced in attempting to enter a new market with a new business model:

> "You know, we were talking to investors that had never heard of green tags. And we were talking to them about this different kind of green tags. We had no customers; we had no website; we had no supply; we had nothing other than a concept, and a strange one at that. You know, you're selling something that doesn't exist to people who, when they buy it, they don't actually see it or touch it, even when the project does exist or comes into being, they don't get a tangible product. That's not an easy sell to a venture capitalist." (T19: 18)

Before any investment was secured, or a first sale could be made, lack of income and conflicts of interest forced two of the four founders to step away from the venture. This left Boucher and Stoddard as the only remaining founders, along with an increasingly committed team of staff, to carry on. Thus the decision was made to proceed without any external funding. As Boucher explained:

> "So we finally said, 'Enough of this'. Decided just to do it... [But without funding] this has been a very painful five years based on having to basically create the earnings to pay for the operations when you're trying to start up and grow." (T18: 13)

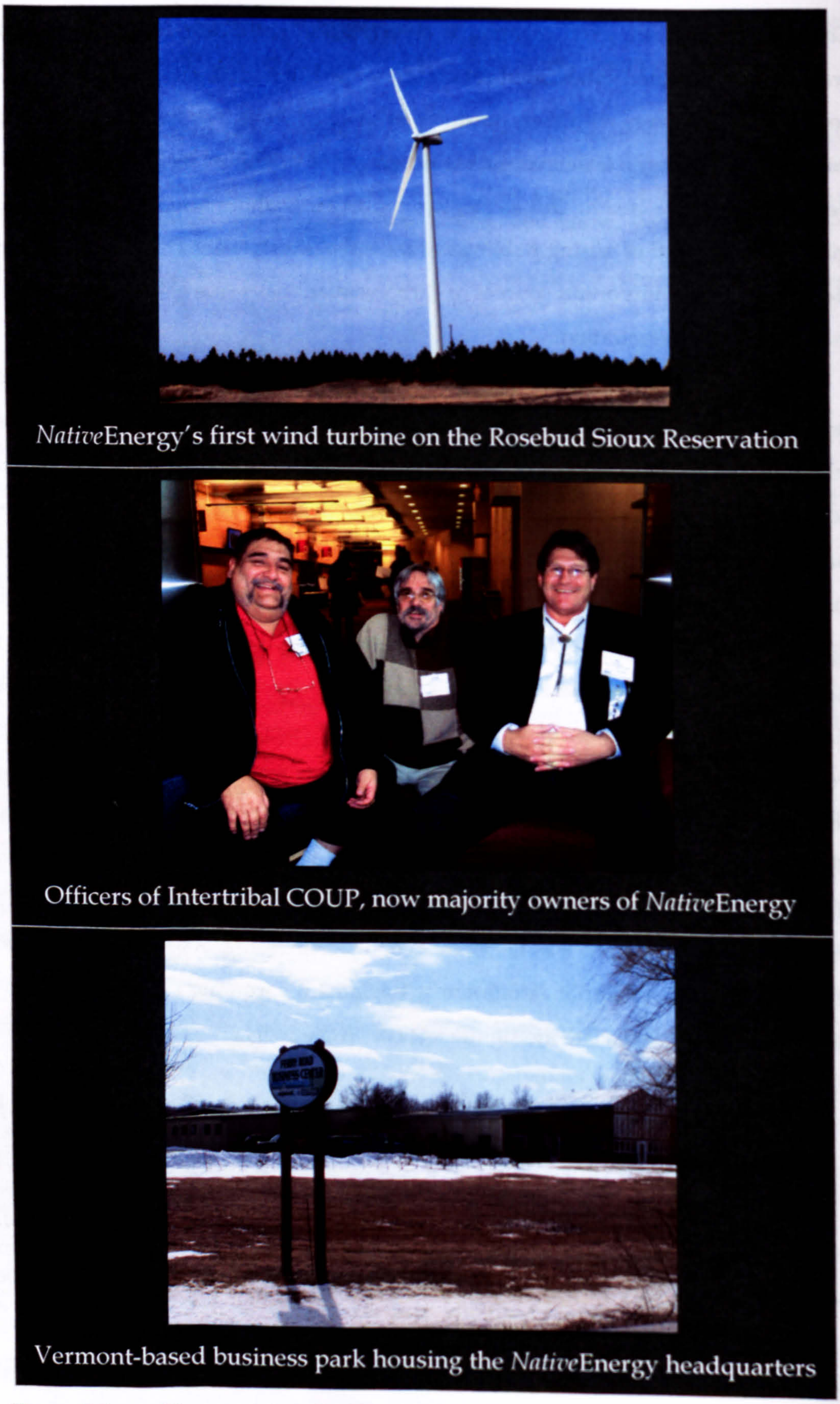
In early November of 2001, *Native*Energy entered the green tags market with '*Wind*Builders', a single product offered exclusively over the company's web site. Because they were specifically targeting the voluntary consumer market, *Wind*Builders was initially offered as a membership programme in which customers would sign up to offset 12 tons of carbon emissions by committing to purchase green tags over the course of a year. As Boucher and Stoddard gained experience in the marketplace, however, they discovered that customers were leery of committing to ongoing financial obligations. Over time they gradually reduced the unit sizes on offer, and shifted to a more sophisticated marketing approach that built on their unique business model.

In addition to decoupling environmental attributes from physical energy units, the *Native*Energy entrepreneurs further innovated in their marketing by recoupling these attributes to other products and associated activities that generate carbon emissions. They took one product, green tags, and created multiple brands to target specific market segments, such as *Cool*Home, *Cool*Driver, *Cool*Business,

*Cool*Tour and so on, even creating a *Cool*Wedding certificate for carbon neutral weddings. They then established relationships with well-known 'ethical' brands to couple the green tags with their products as small add-ons. For example, customers buying NativeEnergy offsets as gifts were given the option to include a free pint of Ben and Jerry's ice cream. This strategy in particular enabled Boucher and Stoddard to realise their goal of raising public awareness that lifestyle activities other than just electricity use are important sources of carbon emissions, while also helping them to increase market penetration.

Selling to, and partnering with, established companies with strong ethical reputations became a central component of Boucher and Stoddard's strategy to establish a presence in the market. In addition to creating brand awareness, the founders sought to build consumer trust by showing they had earned the trust of these well-respected leaders in ethical business. They had discovered early on that customers were sceptical of buying green tags from a for-profit business. They initially considered organising as a non-profit entity, however they felt that the level of financing the venture required could only reasonably be provided by private investment. Particularly because of this consumer scepticism, they take reputation and trust very seriously. One way of building this trust is by obtaining third-party verification of the quality of their green tags. However, the 'forward streams' model they developed was so unconventional for the industry that it could not be accommodated by most existing certification schemes. The need for strong partnerships with reputable companies was therefore even more pressing. As Andy Perkins, one of the early entrepreneurial collaborators explained, corporate customers are in a better position to appreciate the significance of *Native*Energy's unique products:

> "One of the strategies that's been very important for Tom [Boucher] is to deal with companies who actually understand the issues, and you have a much different conversation in a business sell. And they're willing to dig into the issues and want to do something for their own environmental reasons. So in building a base of partners or companies that *Native*Energy sells to, that gives them – when you put that list of companies in front of someone and say, 'Well, these are the people, this is the kind of company that does this', it builds some credibility and acceptance at the consumer level as well." (T21: 5)



*Native*Energy's first wind turbine on the Rosebud Sioux Reservation

Officers of Intertribal COUP, now majority owners of *Native*Energy

Vermont-based business park housing the *Native*Energy headquarters

Figure 5.2 Photographs of *Native*Energy Site Visits

Partnering with Tribes

Boucher and Stoddard initially had some trouble securing development partners who were willing to work on tribal-owned wind projects. The prospect of tribal politics, an additional layer of bureaucracy, and the cultural differences that come with working inside a sovereign tribal nation were enough to deter most private developers. Because of this, Boucher and Stoddard had to settle for a farmer-owned wind project in South Dakota for their first sale of green tags in 2001. However, that project was delayed after some of the green tags had already been sold. *Native*Energy had a legal obligation to replace those tags with a new wind project, and so in April of 2002 they took the opportunity to negotiate an agreement with the Rosebud Sioux Nation, located on the border between South Dakota and Nebraska. The project was for a single 750 kilowatt wind turbine to serve as a demonstration and capacity building project for a group of mid-western tribes. This project was partially financed by a U.S. Department of Energy grant, but needed additional revenue to make construction of the turbine economically viable.

This project brought the *Native*Energy entrepreneurs together with another entrepreneurial group of opportunity seekers – officers of the Intertribal Council on Utility Policy (COUP). This council was established as a collaborative effort by five mid-western tribes to explore opportunities in the energy industry. By the late 1990s, COUP had set its sites on the wind energy market, as they estimate wind on tribal reservations has the potential to produce enough energy to power 50 million homes every year. Yet despite this potential, the Native American communities were cautious about commercialising one of their resources. As Bob Gough, Secretary of COUP, explained:

> "In fact I remember talking to some reporter and – we needed to ask permission from the wind itself, to use the wind. It was done in ceremonies and prayer offerings and – and that just surprised them. They were sure none of the other wind developers went and asked the wind for permission. And I remember being amazed by that, and surprised that they were surprised. Now it's surprising, right. Now you have to ask EPA or FAA, or somebody." (T17: 6)

The project did go forward, and in 2003 the Rosebud turbine became *Native*Energy's first tangible success in their effort to use the voluntary consumer mar-

ket to drive the construction of new renewable energy production. Through this experience, Boucher and Stoddard established a relationship with the Rosebud Sioux Tribe and the officers of COUP that was characterised by mutual trust and deep respect; so much so, that discussions soon turned to the tribes taking an ownership stake in *Native*Energy. Boucher and Stoddard were keen on the idea, as it was a natural extension of their own vision for the company. However, practical realities again proved challenging. The tribes *Native*Energy was working with were some of the poorest in the nation, and diverting tribal funds from social programmes for an equity investment would be difficult.

Boucher and Stoddard again set to work to figure out how cash-poor tribes could purchase a stake in their rapidly growing and cash-hungry company. Together they devised another innovative financial mechanism to turn this seemingly intractable situation into a win-win outcome for both parties. The *Native*Energy entrepreneurs proposed a transfer of shares to COUP to hold in trust for the tribes. These shares would be non-transferable and subject to forfeiture if not purchased by the tribes within a set number of years. To claim the shares, tribes could make tag-for-equity swaps. The plan was that as new, tribal-owned wind projects were built, *Native*Energy would make partial cash payments and partial equity payments for the green tags produced. This would allow cash-poor tribes to buy into a vertically aligned company, while still receiving some cash income streams for their green tags. At the same time, it meant *Native*Energy could reduce its cash-flow burden by reducing its cost of goods. The goal of tribal ownership could be met, and both sides were better off for it. In August of 2005, using this purchasing mechanism, *Native*Energy became majority owned by Native Americans. Boucher reflected on what this meant for the business he had worked so hard to build:

> "I think it was a feeling that it was the right thing to do, but also, which is a good thing, is that we think it's good business. We think it's a good way to help differentiate ourselves from our competition. And this is something we discussed openly with the tribes as we talked with them that, you know, we're not simply at a social issue here, we're out to create a strong, strong company, strong business, but one that supports sustainable economic development for the tribes and others so that it's very much a part of our mission. But we don't lose site of the business aspects and it's because of that that it has a good future and it's why we continue to promote the evolution of the company to be a tribal-owned, eventually probably 100% tribal-owned operation." (T18: 8)

Moving Forward

*Native*Energy expanded to include green tags from sources other than wind, such as farm methane abatement projects, as their sales continued to grow rapidly within an increasingly sophisticated market. To cope with this rapid growth, the founders have streamlined their approach by consolidating the vast range of branded products into a smaller number of wide-ranging brands and increasing their focus on corporate customers as the main drivers of this growth. In their ever-present search for sources of cash to finance their growth, Boucher and Stoddard decided to both revisit their search for private equity investment and expand their income streams.

To attract private investment the company has put together a new bid for venture capital investment. They are specifically seeking investment from ethical investment funds and, in keeping with their company ethos, some of the wealthier Native American tribes that can afford to invest in private equity. To expand income streams they elected to add non-new-build green tags to their product line. While they resisted this move for a long time, they eventually reconsidered this position because they felt they were excluding themselves from too many revenue opportunities. They felt there was nothing inherently wrong with lower additionality green tags, they just were not as beneficial as new-build tags. For this reason they continue to push the higher quality, new-build green tags by educating customers about the difference between the two, while providing tags with lower additionality if requested by customers. Despite the usual assumption that growth must be bad for the environment, Boucher and Stoddard feel that, because of their innovative business model, growth at *Native*Energy is actually a good thing. As Boucher explained:

> "Our growth is causing the right natural resources and new resources to be utilised and built, so I think growth is not bad in any way that it's normally considered in terms of business in manufacturing." (T18: 17-8)

5.3 ForesTrade, Inc.

ForesTrade, Inc. is a private, for-profit enterprise that exports, imports, and wholesales organic spices, essential oils, and fair trade coffee from producers located in remote buffer zones of biodiversity-rich national parks in Indonesia and Guatemala to specialty food companies in North America and Europe. The company works directly with over 5,700 small-scale producers in regions of high social and ecological vulnerability to promote community development, sustainable agriculture, and biodiversity conservation. Founded in 1996, ForesTrade has headquarters in Vermont, USA, a wholly owned subsidiary in The Netherlands, and employs over 80 local employees at subsidiaries in Indonesia and Guatemala. In 2002 ForesTrade was the only US company to win a Sustainable Development Partnerships Award at the World Summit on Sustainable Development in Johannesburg, and the company was recognised five years in a row as one of Vermont's '5x5x5' companies (five fastest growing companies in five categories over five years). In 2006 the founders handed over day-to-day operations to a newly hired CEO, and the governing board was restructured to include this CEO along with the two founders and four members representing investors.

5.3.1 *ForesTrade's Design History*

The Making of Opportunity

Husband and wife, Thomas Fricke and Sylvia Blanchet, have decades of experience in grassroots agriculture, conservation, and development. In the 1980s, Fricke was working throughout Asia as a development consultant focusing on appropriate technology and micro-enterprise development. He worked for a number of conservation and development organisations, including World Wildlife Fund and Conservation International. However, Fricke felt most of these initiatives were unsuccessful because they failed to provide long-term financing or tap market opportunities that would provide incentives for local communities to support conservation. He became increasingly interested in private-sector initiatives and in 1991 was contracted by Cultural Survival, a Vermont-based organisation, to develop a new con-

cept that was intended to attract the support of consumers, investors, and large companies to finance conservation. The idea was to create a brand of essences, spices, and other products called 'Forest Flavors', the sale of which would finance the conservation of habitats or specific plant species and provide a source of income for communities located near biodiversity-rich tropical forests. To fund this work, Fricke secured funding from CitiBank and Merck Foundation. But after two years of development, as Fricke explained, he felt the idea was ahead of its time and therefore not viable:

> "I did a lot of market research and a lot of networking with big companies, with companies like Sara Lee and McCormick and Pepsi, actually, and discovered that they weren't ready for that. In fact, it was probably contrary to their interests to create a small niche product that might actually end up discrediting the rest of their products." (T36: 7)

So, in 1993 Fricke left to pursue a very different opportunity. Together with five partners, Fricke launched his first for-profit venture in an effort to harness the spending power of global markets to support conservation and community development. The partners began purchasing coconut husk waste from 20,000 farmers in the Philippines and built a factory to manufacture 'EcoPeat', an environmentally friendly alternative to peat moss. The venture lasted little more than two years before failing. In retrospect, Fricke believes the enterprise was doomed from the start because he hadn't really understood the market well enough. During this time Fricke was unable to draw a salary from the venture, and so had to divide his time with a number of consulting jobs. At this time the idea of organic and fair trade certification was just emerging. One of these was for the World Wildlife Federation which had asked Fricke to help them develop incentives that would convince farmers to stop encroaching on the Kerinci Seblat National Park in central Sumatra, Indonesia. Located in one of the world's biodiversity hotspots (Myers et al. 2000), Kerinci is home to numerous rare and endangered species, including the endemic Sumatran tiger (*Panthera tigris sumatrae*) and Sumatran rhinoceros (*Dicerorhinus sumatrensis*), among others. Both the park and local communities were suffering from the effects of encroachment by small-scale cinnamon farmers practicing shifting cultivation. The park's ecosystem was threatened by the rapid loss of natural habitat, and local communities were threatened by serious soil erosion and landslides caused by

deforestation on the park's steep slopes. While Fricke was developing ideas for conservation incentives for the park a company approached him to assist them in sourcing organic cinnamon. Fricke realised he could provide the incentives needed by local farmers while sourcing the organic cinnamon needed by the company. But, as Fricke explained, he became dissatisfied with working for this company:

> "All they wanted was to make sure it had a label and a certain certificate. But they really weren't aware of the dynamics...Beyond that, definitely all my efforts were not appreciated and undervalued as they would resist paying me. At the same time they were making a ton of money on my work. At one point they tried to go around me to source the cinnamon but it was a dismal failure. They were not competent and lacked integrity at really managing supply chains because what it came down to is that really you have to create a credible and viable supply chain for these products and they just wanted the cheapest product. It kind of drove me because I knew that the market was likely to be bigger than these people." (T36: 8)

Together, these experiences led to the idea for a venture that would ultimately become ForesTrade. With some trepidation, but motivated by a longstanding desire to develop a new model for conservation and development, a pressing financial need to recover from heavy debt that was the legacy of the failed EcoPeat venture, and the prospect of an emerging opportunity in the organic spice market, Fricke and Blanchet were inspired to make another attempt. As Fricke explained:

> "I actually could see that there was a growing interest in organic and that there was a big supply gap. In fact, people were coming after me to do that – develop the supply. So we basically decided to create ForesTrade. At the time I came up with the idea I was hearing Chinese firecrackers and Muslim drums going off in West Kalimantan from the confluence of Ramadhan and Chinese New Year happening at the same time. It was just noisy as all hell but it kind of helped create the inspiration." (T26: 11)

Forming the Enterprise

In January of 1996, Fricke, Blanchet, and two of the former EcoPeat business partners incorporated ForesTrade as a private, for-profit enterprise. Having learned from his past experiences, Fricke investigated the market potential thoroughly and found the spice industry as a whole to be underserved by organic sources and the chai sector in particular, with 40% annual growth, to be the fastest growing segment

within the tea industry. In selecting operating sites they looked for locations that could produce the main ingredients in chai, such as cardamom, cloves, cinnamon, black pepper, and ginger. But they also wanted to operate in vulnerable communities and ecosystems where they felt they could make the most difference. They selected the cinnamon growers near Kerinci, who were threatening the national park's critical ecosystems and their own villages with their farming practices, as ForesTrade's first producer partners. With a market opportunity identified and an operating site selected, the ForesTrade entrepreneurs set to work designing a business model unlike anything they knew to exist at the time. Blanchet explained the outcomes they hoped to achieve with their new enterprise:

> "I wanted a business that was profitable so that instead of always raising funds we had something that sustained the work that we cared a lot about... We wanted to improve the livelihoods of people in the communities where we sourced the products so we were looking for ways to keep as much income as possible in the rural communities. One thing we did was to facilitate the creation of mico-enterprises in the villages. We sought to design the projects and the payment systems in ways that would make the most difference to the most people." (T36: 21, 27)

Their plan was for ForesTrade to link customers in the US and Europe to their producer partners in Indonesia. Operationally, ForesTrade would only be responsible for shipping containers of organic product, while their main function, and challenge, was to simultaneously create both the niche marketing outlets and the organic sourcing. To build demand they encouraged smaller distributors in the US and Europe to make collective purchases so ForesTrade could ship full containers. To teach farmers how to farm organically and obtain organic certification they hired a number of local NGOs to serve as sustainable agriculture extension agents. The hope was that increased income from the organic price premium and bulk purchases would serve as an incentive for farmers to sell to ForesTrade, and as a condition of sale, ForesTrade would require farmers to sign an agreement to abide by certain environmental principles, such a refraining from the use of chemical inputs, refraining from encroachment into the national park, and so forth. Whether this would work – using markets to fund development and provide incentives for conservation – depended on whether Fricke and Blanchet could "make the wave and then ride it at the same time" (T36: 12).

Environmental principles posted near farms in Sumatra, Indonesia

Producer partner cinnamon collection near Sungai Penuh, Sumatra

ForesTrade warehouse in Padang, Sumatra

Figure 5.3 Photographs of ForesTrade Site Visits

Entering the market

ForesTrade, as a new company in a new market with a new business model, had to work hard to establish credibility with its early customers and demonstrate the integrity of their supply chain. They did this by making a deliberate effort to work with the most reputable organic certifiers, establishing close relationship with customers, and being transparent even to the point of inviting customers to visit farmers in the field. With their biggest customer distributing to both the US and Europe, ForesTrade established an early presence in both markets. However, it soon became clear that the markets were developing at very different speeds. Europe already had established organic legislation to facilitate growth of the industry, while the US's organic standards were still in development. As a result the company struggled to achieve the economies of scale they needed to finance their extensive farmer extension programmes. This created conflicts between the business partners. Fricke and Blanchet came to realise that they and their partner did not share the same values for the company they were trying to build. As Blanchet explained:

> "We ended up discovering that we were incompatible with out business partners because they had much less patience. They wanted to make a quick buck and really get a large ROI... So, we got a person to help us with the negotiations and we bought the people out. We then had control of the company and a bigger debt." (T36: 12, 22)

A friend suggested the company could increase turnover by expanding into the stimulants market, meaning caffeine-based commodities like coffee, cocoa, or tea. They took the advice, and in 1997 ForesTade shipped its first five containers of coffee and began establishing partnerships with coffee growers in northern Indonesia's war-torn Aceh province. This segment quickly took off and soon coffee sales accounted for nearly 60% of the company's turnover. But Fricke and Blanchet's original business model was not without flaws. In addition to building customer trust, they had to build trust with their producer partners. Their choice to use local NGOs to provide the farmer extension services, while well-intentioned, made this task more difficult due to the negative reputation of NGOs in Indonesia. Lucia Li, an administer in ForesTrade's Indonesia office at that time, explained how this coloured her first impression:

> "First I didn't think it is great because at the time they still worked with, ForesTrade worked with NGOs and you know that local NGOs has negative image in Indonesia. So I thought at that time ForesTrade had similar behaviours – similar ethics – like the local NGOs." (T33: 5)

While Li's confidence in ForesTrade quickly grew, unfortunately her suspicions of the local NGOs proved accurate. Reports of corruption by the NGO contractors soon reached Fricke and Blanchet. This crisis in trust forced a major reorganisation for the enterprise, in which the entire farmer extension programme was moved in-house so it could be closely controlled by ForesTrade. Sensing a common purpose and shared values with Li, she was appointed as Indonesia country director and put in charge of safeguarding the integrity of the supply chain. Li hired a team of extension agents and opened field offices near the farmer communities with whom they traded. These extension agents were charged with capacity building in farmer communities, ensuring the quality of the commodities bought by the company, and maintaining accountability in the payments sent to farmers. With the integrity of their supply chain re-established, Fricke and Blanchet began replicating their model throughout Indonesia and expanded into a number of additional spice commodities used as chai ingredients. In 1998, at the request of Conservation International and customers seeking organic cardamom for their chai, ForesTrade expanded operations even further to Guatemala. And the following year, in 1999, seeking to diversify into markets beyond just organic, the company helped their coffee producer partners in Aceh to obtain fair trade certification. As Blanchet explained:

> "The reason we could replicate the business model in so many cultural situations [was]... all our staff was from these cultural groups and they knew how to adapt it to the unique locations in Indonesia and Guatemala. So I was very aware of creating a model – a different kind of model for a business. I realized that basically what we were doing was cultivating leaders and leadership. We were going out into the community where diversity could be respected and people's opinion could be respected." (T36: 30)

That same year the company was faced with another operational crisis, this time on the marketing end of the business. The main distribution customer on whom ForesTrade had relied since their launch three years earlier collapsed without warning. ForesTrade was suddenly faced with a large inventory and limited distribution channels in both Europe and the US. They were forced to rapidly expand

their customer base and assemble their own distribution arrangements. In a short time Fricke and Blanchet had increased their customer base tenfold and were managing their own complex distribution system with bases in Rotterdam and the west coast of the US.

So the business model they had begun with three years earlier, in which their own operations were limited to shipping containers and building demand and sourcing capacity for organic spices, had quickly become vastly more complex. In response to a series of unforeseen events, ForesTrade had found it necessary to take full control of their supply chain from farm extension services to warehousing, shipping, and distribution throughout Europe and the US, and to expand their product line to include organic spices from Guatemala and fair trade coffee from Aceh. To consolidate their expanded operations, in 2000 and 2001 the founders converted their operations in The Netherlands, Indonesia, and Guatemala into wholly owned subsidiaries. By 2003, the company's rapid growth had become demand-led. With the US National Organic Program finally in place, demand for organics began to spike in the US market. As one of the only suppliers of organic spices, ForesTrade took advantage of the opportunity to spread their costly organisational infrastructure over a higher sales volume.

This rapid growth was not so much strategically planned as a "dire necessity" (T37: 27). But the growth was welcomed by Fricke and Blanchet partly because it allowed them to increase their margins per volume of sales, but also because it allowed the goals of the enterprise to be realised with much greater effect. Blanchet explained how, despite significant social and environmental challenges, including the political upheaval that accompanied the end of the Soeharto dictatorship, mass riots, and devastating forest fires, the farmer extension services and the increased income from the organic and fair trade bonuses were still able to stimulate tangible community benefits:

> "Some of the bonus would go to individual farmers and some of it would go to farmer associations and then they could decide how to spend it and we would work with them in finding ways that would help the entire infrastructure of the communities strengthen... So they created nurseries and then they created roads and then they bought trucks so they had more control of transport because before they were completely dependent on middlemen and had no negotiation on price. And sometimes they bought communal land. Sometimes they created credit unions, and they built roads, they built

> water systems, they built schools, and they built homes for refugees. I mean it goes on and on and on – all the creative things that they did with the money." (T36: 27-8)

Coping with Growth

Although this rapid growth brought benefits to the enterprise and its stakeholders, it also created severe strain on the organisation. ForesTrade was continually under-capitalised, which placed constant pressure on the founders to find new sources of financing. In the early days of the venture all of Fricke and Blanchet's possessions were used as collateral for business loans, and they relied heavily on credit cards for short-term financing. When the needs of the enterprise outgrew the level of investment that could be provided by family and friends, Blanchet led the company's efforts to find like-minded angel investors who supported the company's purpose and values. Using their professional networks and tapping into new social business networks, over the years they were able to secure funding from a number of alternative individual and institutional investors. But Fricke explained that "as the business grew and matured, to raise the volumes of capital required not everyone was as aligned with the mission as the early investors" (T37: 4).

By 2003 the company had nearly 15 different loans outstanding and was becoming overwhelmed by managing its debt. In 2004 they found some relief in a new investment bank that was offering loan guarantees from the US Overseas Private Investment Corporation (OPIC). ForesTrade was OPIC's first account with a small company, so there was an inordinate amount of paper work and over half a million dollars in legal fees before they were able to negotiate a loan consolidation. At the same time, Fricke and Blanchet were also able to take advantage of some of the grant financing that was becoming available for sustainable development through enterprise generation. They raised almost one million dollars in grants for new product development. However, to achieve the bank's desired debt-to-equity ratio, they insisted ForesTrade raise an additional two million dollars in new equity. So with the founders spending much of their time trying to attract more equity investment, and with market demand still stimulating growth, the company began recruiting more personnel and decided to look at restructuring the company's management structure.

In December of 2004, in the midst of this restructuring, Blanchet flew to Indonesia to oversee the implementation of a grant-funded infrastructure project. Two days later the earthquake and tsunami struck, devastating the northern Sumatra province of Aceh. Due to the long-running civil war between separatists and government forces in Aceh, farmers in that region had always required special attention. It was not uncommon for whole communities to spend entire nights inside ForesTrade warehouses, using them as sanctuaries to avoid night time killings. ForesTrade was one of only two US companies still doing business in the region, and when the earthquake and tsunami struck they became not only trading partners but relief workers as well. ForesTrade's customers responded with an outpouring of donations for the affected communities, and ForesTrade's local staff and producer partners organised over 90 reconstruction projects in social and productive infrastructure throughout the region.

While this was happening, ForesTrade was facing a crisis of its own brought on by wild price fluctuations in some of the commodity markets. In 2004, the world market price of vanilla collapsed, forcing many leading industry traders out of business. ForesTrade lost all of its margins on vanilla sales for the year. Then the following year the market price of coffee unexpectedly jumped. Many farmers sold to speculative buyers offering top prices, and companies like ForesTrade, who had advanced, long-term purchasing contracts, were unable to fill their orders. Fricke explained that "ironically, when prices go up, quality goes down. So it tends really to a spiral that is really unhealthy" (T38: 6). As a result of these near-catastrophes, in which approximately one million dollars was lost in two consecutive years, ForesTrade altered its buying and pricing model. The company stopped making advanced purchases and moved to a 'seller's options' model in which prices are fixed much closer to the time of purchase and shipment. They therefore set their prices only after they know their costs and required margins.

Moving Forward

Fricke and Blanchet hoped to reduce organisational strain by slowing ForesTrade's growth. But they also wanted to broaden the company's impacts on producer communities. To accomplish this they planned to transition the company from niche to

mainstream markets. But in so doing, they understood that in addition to increased price volatility ForesTrade would also face the general long-term trends in the food industry for large processing companies to force lower prices and more risk onto those further down the supply chain. In response to these threats, Fricke and Blanchet have modified ForesTrade's strategy to increase product diversity and increase margins by pursuing more value-added opportunities. They reasoned that increasing product diversity will reduce the risk to ForesTrade and its producer partners of price swings in any one commodity, and at the same time will spread the cost of the extension programme to a number of products without having to increase the size of the extension staff. They also felt that if ForesTrade or its producer partners could do more of the value-added processing the company and its stakeholders would capture more of the margin and distance themselves from global commodity prices.

In the midst of this transition, Fricke decided he wanted to return his focus to the field operations and the development of new products and away from running the organisation as a whole. It was his hope that a CEO could be found that could collaborate with him and be able to provide their lender with greater confidence. After experimenting with various arrangements for the management team, in the autumn of 2006 a new CEO was hired who the founders hoped possessed the right mix of executive experience, personal life experiences, and values to match the company's mission. Though both retained their seats on the board, Fricke assumed the post of Chief Sustainability Officer while Blanchet resigned her management role to give the new CEO space to make his own mark on the company. With their controlling stake down to 30% following the latest equity drives, and with the prospect of further dilution ahead, Fricke and Blanchet began considering how best to keep the values and mission of ForesTrade alive. Blanchet described their efforts:

> "I think that's the biggest challenge in how to keep those alive... But that's why I'm still involved with the company and I head the Social Responsibility Committee where we're working to embed a whole process in the company that makes it really clear what those standards and goals are that we adhere to and then we have a process of assessment and evaluation and reporting that will keep things on track. And the Board can keep it on track. And that's where we are right now. We have staff that are very committed to the mission and the goal and we have a Board that's very committed to it and so we're working to do our best to make sure that the processes keep reinforcing it." (T36: 33-4)

5.4 Hill Holt Wood, Ltd.

Hill Holt Wood, Ltd. is a community-owned enterprise engaged in job skills training for at-risk, socially excluded, and unemployed young adults through the ecological restoration of a degraded ancient woodland. The enterprise is pioneering a new model of countryside management that creates income generating opportunities to support the maintenance of healthy ecosystems, provide rural employment, and address the needs of some of society's most disadvantaged members. Founded as a private enterprise in 1995, Hill Holt Wood now employs 19 people at their 14-hectare site in Lincolnshire, UK. The enterprise has been held up as a model for rural sustainable development by the UK Environment Secretary, the Forestry Commission, and the Department for Agriculture, Food, and Rural Affairs (DEFRA), and has won numerous social business awards. An audit evidencing the beneficial social and environmental impacts of the enterprise was certified by professors of biology and sociology from the University of Lincoln, and Lincoln law enforcement officials have credited the enterprise for a noticeable reduction in area youth crime. In 2002 the founders conferred ownership of the enterprise to a community-controlled governing board, converting their own status from owners to employed managers. The governing board was restructured to include representation by local individuals, companies, faith organisations, and funders, as well as a staff representative and the executive director.

5.4.1 *Hill Holt Wood's Design History*

The Making of Opportunity

Trained as a biologist, Nigel Lowthrop spent his early career working as a research assistant for ecological survey projects in the Antarctic and South Georgia, and as a warden at a number of nature reserves and recreation areas throughout England. Having grown frustrated with the bureaucracy and petty politics of local government, he eventually quit this line of work in favour of self-employment. In 1980 he was scouting for opportunities at the Royal Show when he discovered three new fencing products just coming to market. With these products he launched his own

fencing company specialising in ecologically sensitive sites. This venture allowed Lowthrop the opportunity to accumulate a wealth of local knowledge and firsthand experience throughout Britain, as he described:

> "One of the great pleasures of the job was going around meeting the land managers – whether it be Lord Somebody-or-Other owning a big traditional estate, or a local forester or a gamekeeper – but I met these people all over Britain, even in France and Ireland, and listened to their views on the way the countryside was managed." (T01: 5)

For over a decade he developed and grew this business. From the firsthand experience and inside access it provided, Lowthrop became increasingly dissatisfied with the state of Britain's countryside and the way it was being managed by farmers, foresters, and government authorities. As he explained:

> "I saw the countryside around me deteriorating... So while [conservation authorities] fussed about the size of somebody's extension to their house, or the porch they were building, or the windows they were putting in a barn conversion, and they worried about the dry-stone walls...the grass between the walls went from wonderful flower-rich hay meadows to silage. And all the wildlife died. So the insects, the butterflies, the ground-nesting birds, the flowers, all went. And they created a biological desert. And I thought, well if that's the best that the conservation organisation can do then we ain't got a hope. So I became determined to find a way that the countryside could be managed in a way that would work, that would work environmentally." (T01: 5-7)

With this newfound purpose and persistent entrepreneurial spirit, Lowthrop began searching for a better approach to countryside management. To satisfy his curiosity he paid his way to attend a number of regional and international conferences on the management of national parks. In 1991 he attended the Second World Game Ranching Symposium in Canada under the guise of selling fencing but with a real interest in land management practices. At this symposium Lowthrop listened to two presentations that would have a profound and lasting impact on him. One described an African elephant conservation initiative in Malawi, which impressed him with the way market-driven incomes were generated and used as incentives for communities to support environmental conservation. The other described a game management-based business in the US, which impressed him with the way a number of revenues streams where generated and stacked together to make the envi-

ronmentally sound management of landscapes economically viable. Put together, these ideas gave Lowthrop the inspiration he was looking for. He described his enthusiasm for these ideas: "So it's creating these virtuous circles. I thought this is fantastic. And that's what brought me back to look for something to happen here [in England]" (T01: 11).

On his return to England, Lowthrop began formulating a model he thought could work in an English context, which he called ECONS for 'economic conservation'. Based on this idea he compiled a list of activities for generating income streams in a small woodland, drafted them into a proposal, and sent it out to various conservation organisations to try to enlist their support. In return, he received lists of reasons why the idea would not work. He felt these organisations missed the bigger picture of what this list of income streams was all about:

> "I wasn't suggesting that in any wood you'd do all of them. But it was a case of mixed incomes. That was the key element. It was about not relying on monoculture, which had been the driver for forestry and agriculture for years. It was about getting mixed incomes to actually find a way to make things viable and make things hang together. With the key element of involving the community from the start." (T03: 3)

After two years of soliciting organisations for support, the only backer he found was his new wife, Karen. Together, they decided it was an idea worth pursuing and so in 1993 Lowthrop sold his fencing business to raise funds for the purchase of a small woodland. For two more years they searched England for a woodland they could afford, and in the end, settled for an unimpressive, 14-hectare site located two hours from their home, on the county line between Lincolnshire and Nottinghamshire. This small patch of woodland, known as Hill Holt Wood, was to serve not only as the grounds of their new venture, but also as their resource base and home. Lowthrop described their choice:

> "We thought, good grief, this one's got *so* many problems – bad access onto a trunk road, not many trees you could fell because they'd felled 300 oak trees in here, coppice that hadn't been managed, invasive rhododendron... flooded areas of the wood, you know, just generally pretty dire...and thought, well to hell with it. If it works here it will work anywhere." (T02: 2)

Forming the Enterprise

In 1995 Nigel and Karen Lowthrop purchased Hill Holt Wood. At the time Karen had a fulltime job, while Nigel used his old business contacts to continue earning income from consulting and fencing installations. Their free time was spent removing invasive rhododendron, digging out ditches, and otherwise cleaning up their newly acquired wood. By the year's end they had grown tired of leading this double life and decided to commit fully to the project. On a cold day in early January, the couple sold their house and moved with their year-old son into a caravan in the wood. Their intention was to apply for planning permission to build a small family house in the wood while they established income streams to support the family. Because of a procedural fluke, their planning application ended up in a state of bureaucratic limbo, without being either accepted or rejected. This allowed Nigel and Karen to carry on living and working in the wood indefinitely. So Karen continued her job and Nigel became a fulltime Hill Holt woodsman and stay-at-home dad.

At this point they did not have a specific idea for how to generate income in the wood, but Nigel was convinced such opportunities would arise only by establishing close links with the surrounding communities. Almost as soon as they moved in they opened the gates and put up signs welcoming the public into the wood. While Nigel began clearing public walking trails and laying a public car park, Karen set herself the task of introducing the family and their vision to the community. She knocked on doors, wrote letters to the editor of the local parish magazine, and in many other ways tried to start the process of integrating with the community. Karen explained the importance of these community links to their eventual success:

> "So along side working in the wood on a daily basis and working outside the wood in an office we were slowly creating a bank of like-minded people as a support network... I think that was really pivotal. Getting some really key people, who are still here now eight or nine years later, who bought into this vision and this dream and didn't see that it was wacky. Or bought into it because they believed in it." (T05: 6)

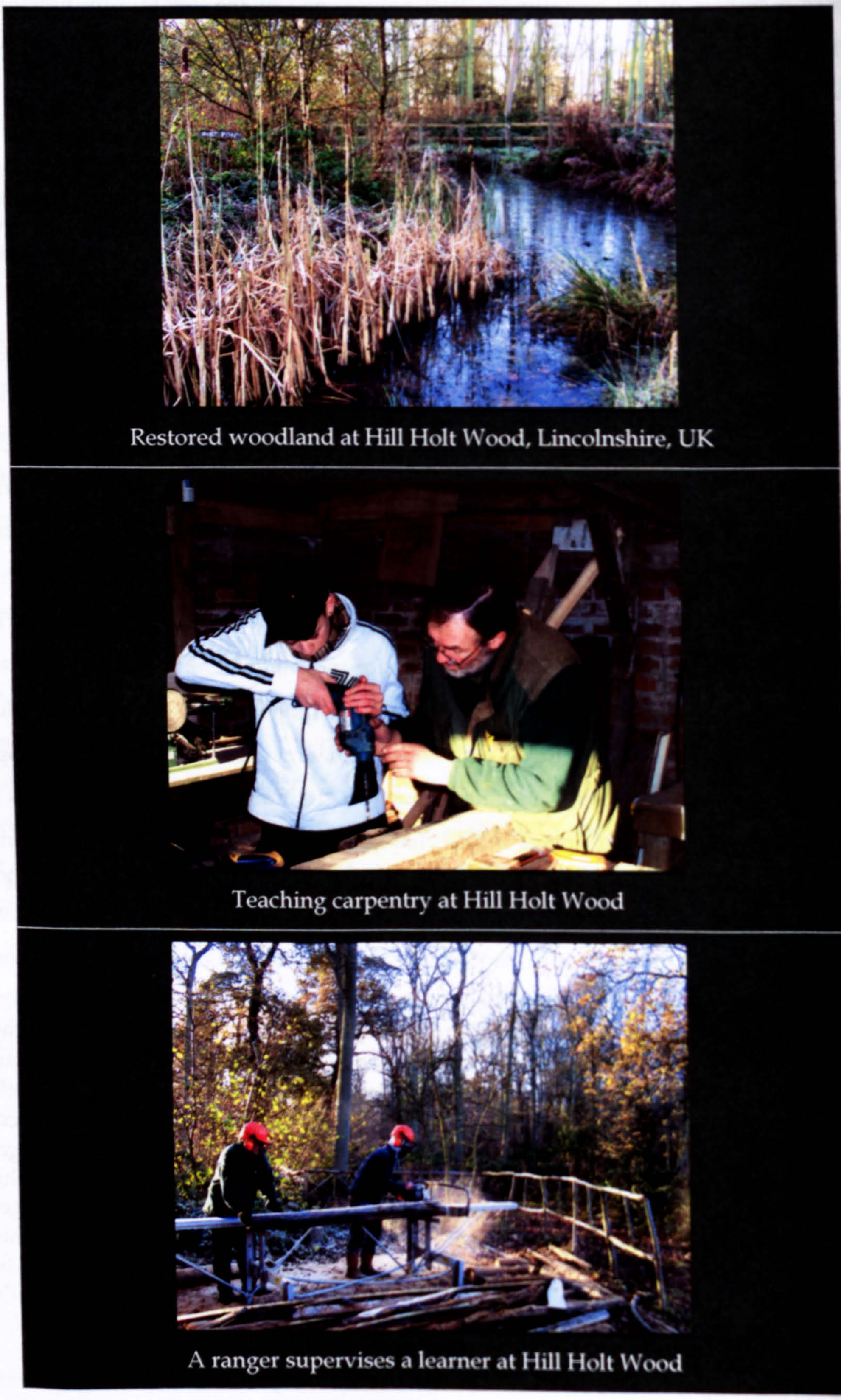
But obtaining this community acceptance was a slow, and sometimes frustrating, process. Karen especially, as an Irishwoman living with her family in a caravan in the wood, had to confront a number of biases and stereotypes held by

some members of the community. Tom Solven, one of the community members who did, early on, buy into the Lowthrops' vision and was eventually to become chairman of the Hill Holt Board, explained the early scepticism they received:

> "The skepticism came from the people who didn't actually visit Hill Holt and who didn't actually meet Nigel and Karen. That's where the skepticism came from. Not from the people who...came to the wood, saw its mission, and met Karen and Nigel - once you meet Karen and Nigel then you know that it's all for real." (T04: 14)

To forge even closer links, and to demonstrate their commitment to the interests of the community, the Lowthrops invited interested community members to meet as a group to discuss the wood. The group began informally with five or six participants, but in a short time grew to include ten active community members and was formalised in 1997 as the Hill Holt Wood Management Committee. The committee met monthly in the Lowthrop's caravan, and was intended to be a forum for community representatives to provide their views on the activities taking place in the wood. At the time the Lowthrops' ideas for income generation involved small scale activities, like arts and crafts classes, team-building workshops, and so on. But all of these ideas were still nascent with no immediate prospects. Lack of a solid opportunity to bring in enough income to support the family and the wood was a growing concern. But their plans would change significantly and unexpectedly one day when Karen read about a failing initiative that was part of the government's 'New Deal' programme to help unemployed young adults. As Karen explained:

> "Government...[had] launched a scheme called Environmental Task Force. And I'm in my office in Lincoln and I'm reading this. They're bemoaning the fact that they haven't got any places to bring people because the scheme had fallen down under its present guise. And I thought, well we've got a woodland that needs man-power. They've got man-power that need experience. So why don't we marry the two up? So I phone and I said, 'We won't *charge*, but if they come out, we'll give them work to do. Because you know the bramble is growing as quick as we can clear it'... At the time it was Nigel working with an ex-chap from the Army. And it just worked. Nigel and this man got this group of four or five people and lo and behold they wanted to come back. And lo and behold they wanted to come back again. And that's how it started." (T05: 7-8)



Restored woodland at Hill Holt Wood, Lincolnshire, UK

Teaching carpentry at Hill Holt Wood

A ranger supervises a learner at Hill Holt Wood

Figure 5.4 Photographs of Hill Holt Wood Site Visits

Entering the Market

With all parties in agreement that the arrangement was a good one, the Lowthrop's enterprise was subcontracted to take responsibility for some of the learners. Finally, the wood had secured an income stream and a workforce to help with the ecological restoration work. By the close of 1997 there were 12 learners working in the wood as part of the programme. After the first year the outcomes that were achieved with the learners were so positive that their contract was increased to 20 the following year. Nigel explained how they were able to achieve such positive outcomes where others had failed:

> "The countryside is a great healer. It's what we've found in our young people. That's the edge that allows us to really work with these young people. Bring them from these urban estates into this woodland environment and they actually *change*." (T02: 28)

By working together clearing rhododendron, chopping wood, building benches, straw-bale offices, and composting toilets, the learners were acquiring basic work and social skills. Two staff were hired to help Nigel with the learners in the wood, while Karen would come home in the afternoons to help with 'softer' skills, such as literacy, maths, and CV writing. By 2000 this had become such an important part of the programme that Karen resigned from her job to do this work fulltime. Over the years Hill Holt Wood's reputation for the quality of their work with disengaged young people spread such that in 2001, when the organisation through whom they had been subcontracted lost their contract for the programme, Hill Holt Wood did not have to actively seek out new income streams. They were approached by Lincolnshire County Council to take a contract for a programme called 'Solution 4' targeting 14 to 16 year olds who had been excluded from school.

Then, a year later they were approached by Job Centre Plus to resume their work with 19 to 25 year olds through a new programme called 'Intermediate Labour Market'. Although this brought both learner and staff numbers to an all-time high, Nigel and Karen decided to seek out one more contract that would allow them to fill the missing age range of 17 and 18 year olds so that learners who were just starting with the programme would not be excluded if they happened to have their 18th birthday before they had developed the skills and confidence to move on. To do this

they sought and won a contract with the 'Entry to Employment' programme that covered the missing age range. So by late August of 2003, Hill Holt Wood had expanded to include 36 learners and 14 fulltime staff. Enrolment in these programmes continued to grow so that by 2005 there were 51 learners and 19 fulltime staff working on the grounds of Hill Holt Wood. As Nigel explained, their achievements at the wood had greatly surpassed their original vision:

> "And in fact it's been a lot more successful than we'd ever intended. I thought if we could manage to make a living for the *family* here, and maybe employ one or two people to cover for when we're not here, then that would be successful. Now we employ 19 people!" (T02: 3)

Providing secure, satisfying employment opportunities has also become an important goal of the enterprise. More than providing jobs, Nigel and Karen were determined to provide a working environment where staff as well as learners could grow and develop, and where, if employees so chose, they could be guaranteed a job for life. In a county where the average business has five employees, 19 permanent, fulltime jobs at a rural, forest-based enterprise is an achievement – but one that has not always been easy to maintain. In 2004, after recruiting several new employees based on a promised increase in their contracts, Hill Holt Wood was informed at the last minute that budgets had been cut and only half of the expected learners would be able to enrol in one of the programmes. This meant the enterprise was greatly overstaffed, and a serious two-month cash flow shortage resulted. But the Lowthrops were determined not to make any layoffs or cut any salaries. By reducing expenses to the bare minimum and generating alternative income streams they were able to bridge the two month gap. Although over 70% of the enterprise's income is generated through training contracts, Nigel has always encouraged a range of other income opportunities that complement their goals for the wood or their work with the learners. This has included the sale of firewood and woodcrafts, grounds work at local parish churches, community festivals, and much more. As John Wood, one of the rangers at Hill Holt Wood explained, the staff are always encouraged to find entrepreneurial ways of enhancing the enterprises' goals:

> "Well, there's such a diversity of things to do up there for the kids. And the idea is that the original scheme sort of developed and they're always asking, 'Well, how can we develop something else...that benefits the kids or benefits Hill Holt.' It might bring more income for us." (T11: 18)

But the decision to pursue income opportunities is always made based on whether the activity would reinforce the core purposes of the wood, which are sound environmental management, quality of experiences for learners and staff, and opportunities for public participation in the wood. The enterprise could have dramatically increased profit margins by reducing the number of staff per learner to the minimum allowable limit. But the founders chose not to do this because their real purpose is served by keeping a high staff to learner ratio, not by making a larger profit. In fact, the demand for Hill Holt Wood's services are such that they could drastically increase turnover by increasing the number of learners enrolled. But they chose to cap enrolment numbers to ensure the impact of human activity on the wood is kept in check. Yet, as Chairman of the Board, Tom Solven, explained, none of these limits are viewed as operational constraints:

> "[The environment would be] a constraint financially if the finance objective were the sole objective. But it's not the sole objective. The environment is a benefit because I don't think we would have achieved the outcomes with our children, with our learners, that we have obtained without the environment... I'm not sure whether you can divorce any part of this. Because if you're going to run a business from a woodland I think it's *got* to be financially viable, it's got to involve the community, and it's got to be environmentally sustainable. And we tick all those boxes." (T04: 10)

Transitioning to Community Ownership

When Nigel and Karen finally obtained permission to build a house on the grounds of Hill Holt Wood, their dream of building a thriving, 'living' wood was coming to fruition. As they reflected on their achievements, and the close, trusting relationship they had developed with the community, they began to consider something that had never been in the plan for Hill Holt Wood – handing ownership and control over to the community. Karen explained why they began to consider this as a real possibility:

> "People started to listen to us. We were getting applauded. People were saying, 'This works, you are a true social enterprise, you are a sustainable project'. And we thought, yes, we are. And then we thought, in order for it to be truly sustainable it's got to work without Nigel and I. And giving the business away was the next logical step." (T05: 16)

With this conviction, in 2002 Nigel and Karen gave away the business they had worked so hard to build. Hill Holt Wood Limited was officially established as a community owned and community controlled enterprise. What was formerly the volunteer management committee became the enterprise's new executive governing board, and a new, membership-based organisation was established. Membership was open to anyone who lived in one of the surrounding villages and was willing to invest in a £1 indemnification fee. Members could then vote to elect a 15-member board of directors, who then selected six of its members to sit on an executive board responsible for handling the more routine business at monthly meetings. As Nigel explained, he felt broad community involvement was essential for the wood's long-term success:

> "The key to making the sustainability is that community link. If we can grow our community to be as inclusive as possible, then this project virtually cannot fail." (T06: 31)

At the same time, the Lowthrops themselves had to make the transition from owner-managers to employed managers who were ultimately answerable to the community. Although Nigel stayed on as project director to help with the organisational transition, he knew his real passion lay in entrepreneurship rather than management. Hill Holt Wood's success was only the first step in his quest to change countryside management in Britain. As Nigel explained, he felt Hill Holt Wood's success was not enough to validate his vision for countryside management:

> "Even though it's close to here I've got two projects lined up. Both within two or three miles of here, one East, one West. But they'll all be different because to prove it – The initial impression was it won't work. Then when it did start to work the impression was, well it's a one-off. He's cornered the market. Yes it's very nice. It's the only one in the East Midlands. Nobody else can do it. And what I want to do now is set up two more that are different and close by." (T02: 4)

As Nigel signalled his intention to step down from Hill Holt Wood's day-to-day management, the board began to consider who would be a suitable replacement. Karen was chosen without hesitation as the person best suited to carry on the mission of the enterprise, and was promoted by the board as Hill Holt Wood's new project director.

Moving Forward

Karen, Nigel, and the board still had ideas for the wood that were yet to be realised. For the staff they planned a number of innovative organisational arrangements to provide more opportunity for peer-supported personal development initiatives. For the wood they hoped to bolster the 'living wood' element by building five small eco-houses for staff throughout the wood, and were eyeing the purchase of an adjacent property that includes a Roman ruin to enhance the public appeal and education value of the site. But the predominant concern of the board was with consolidating and safeguarding the successes that had already been achieved.

With ownership of both the wood and enterprise vested entirely in the community, the board understood that they were now ultimately responsible for Hill Holt Wood's ability to maintain its unique brand of success into the future. They identified the enterprise's reliance on two main customers for over two-thirds of its revenue as a strategic vulnerability, and planned to continue to diversify the revenue streams. But more important than any particular revenue source was that the mission and values of the enterprise be sustained. Although for the foreseeable future Karen was expected to serve as project director and she and Nigel were both intent on remaining active board members, the board felt it was important to do what they could to ensure the values with which Nigel and Karen had built the enterprise became a permanent fixture of Hill Holt Wood. As Nigel explained:

> "The articles of memorandum were driven by the board. And they were very concerned that our aims and objectives were cast iron...That there was no way you'd get a group of people coming into the business and trying to dominate it and take a different direction." (T06: 26-7)

Whether the mission and values of the enterprise continue into the future, and for how long, Nigel and Karen cannot know. But they take comfort in knowing that the community and staff to whom they have entrusted their enterprise do understand those values, and do want to see them perpetuated. As Head Ranger, Alan Eley, observed:

> "I think you've got the kind of staff who stick around. Stick around, know exactly what the business is about, exactly how it operates, and things that are fundamentally important to that." (T07: 17)

5.5 Chumbe Island Coral Park, Ltd.

Chumbe Island Coral Park, Ltd. is a private enterprise that manages a coral reef sanctuary and coral rag forest reserve on an uninhabited island near Zanzibar, Tanzania, runs free environmental education programmes for local fishing communities and school children, and finances these activities through the operation of low-impact nature resort facilities catering to the international tourist market. The enterprise pursues a non-commercial mission of environmental conservation and education by means of the commercial operation of seven environmentally friendly bungalows located within the protected area. Founded in 1993, Chumbe Island Coral Park (CHICOP) now has 41 employees (all but two are local nationals) working on the island or at the nearby Zanzibar headquarters. The enterprise has been recognised internationally as a model for effective, economically viable, and locally beneficial marine conservation. Marine ecologists studying the East African coastline have found there to be around 3.5 times higher fish biomass in Chumbe's marine sanctuary than other reefs in the area, and in particular, higher abundance and species richness of three species important to the local fishing industry (Francis et al. 2002; McClanahan and Arthur 20000; McClanahan et al. 1999). Over the years CHICOP has been selected for a dozen major awards in recognition of its achievements, including the United Nations Environment Programme's Global 500 Award for Environmental Achievement, the Green Hotelier and Restaurateur Environment Award, and the British Airways Tourism for Tomorrow Global Award. Although less involved since handing over day-to-day management to a fulltime project manager in 1999, the founder still retains sole ownership of the enterprise and continues to provide general promotion and oversight.

5.5.1 *Chumbe Island's Design History*

The Making of Opportunity

From the early 1980s Sibylle Riedmiller lived and worked in Tanzania as an international development project manager and consultant working on education reform with the German development agency GTZ. An avid sailor and diver, Riedmiller

took an active interest in coral biodiversity and developed her knowledge of marine life swimming and diving in the coastal waters of Zanzibar and mainland Tanzania.[32] Over this time she became increasingly concerned with long-term trends in over fishing and the effects of dynamite fishing on the reefs (see Jiddawi and Öhman 2002). In 1990 these interests led Riedmiller to participate in a consultancy project focused on environmental education in Zanzibar's primary and secondary schools and the general public. Through this project she learned the extent of the lack of locally relevant environmental knowledge being taught in the school curricula. In particular, there was a dearth of knowledge and understanding of the unique coral habitats that ringed Zanzibar's islands and bordered much of Tanzania. Traditionally, the Swahili language made no distinction between rocks and stones and coral, using the same word, *mawe na miamba*, to refer to both. Thus, among government decision makers, the public in general, and even among traditional fishing communities there was little appreciation of coral as a form of marine life or as a unique endowment for the country.

As part of this consultancy project's recommendation, Riedmiller proposed to the government of Zanzibar that they establish a small marine protected area around a coral reef to be used by the island's schools and public for environmental education programmes. When the idea garnered no support from government authorities, Riedmiller began considering the possibility of launching such a project herself. As she explained:

> "It didn't get any interest. So I thought, okay, why not just try it myself as a small private project? So I thought actually of something quite small. But of course it had to be sustainable. It had to be done with a small eco-tourism company – people pay for it." (T30: 6)

This prospect was not as straightforward as it may seem today. In 1990 there was no established tourist industry in Zanzibar. The country had only just begun to emerge from nearly three decades of socialism and did not have a recent history of private enterprise or even a third sector outside of religious charities. Launching a private venture, whether for profit or not-for profit, was not a simple prospect. Nevertheless, Riedmiller saw opportunity in the changing times. Spurred by the col-

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[32] Zanzibar is a semi-autonomous region of the East African nation of Tanzania. It is an archipelago in the Indian Ocean located near the coast of mainland Tanzania.

lapse of the clove market in the mid-1980s and liberalisation reforms of 1987, the government began to actively promote the establishment of a tourist industry on the islands (Mlingoti and Koth 1999).

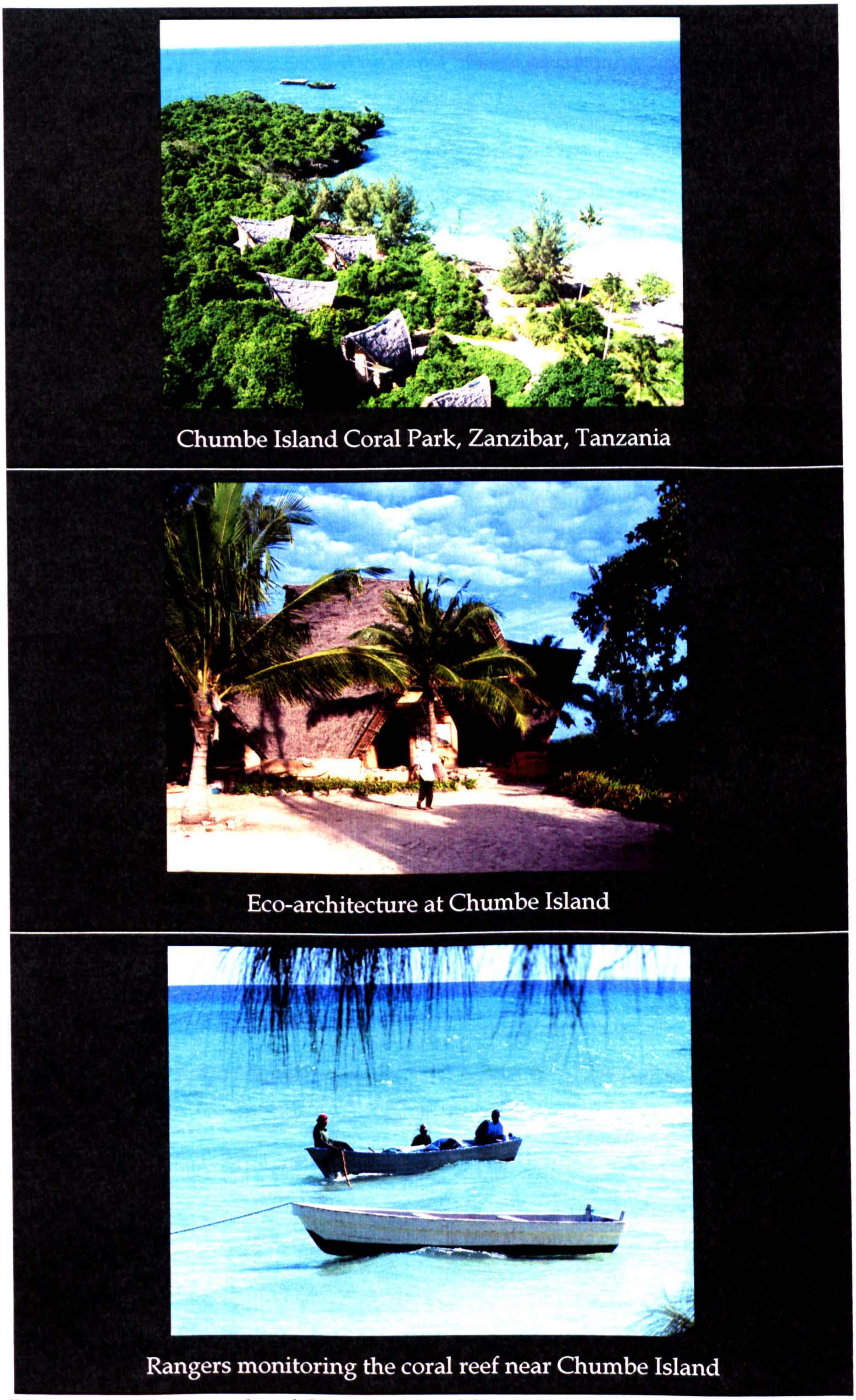
Forming the Enterprise

For several months in early 1991, Riedmiller began scouting for an appropriate location for a coral park by riding with fishermen in their boats and snorkelling to examine the state of the coral. She was looking for a relatively healthy coral reef in an area that local fishing communities did not depend on heavily as a source of livelihood, was shallow enough for snorkelling even by schoolchildren, and was accessible for the tourism industry. As Riedmiller explained, in the end, she decided Chumbe Island presented the best opportunity:

> "Chumbe Island looked promising, as it was uninhabited, the reef was already looking better than the others. The western side was actually off limits for fishermen because it's bordering the shipping channel between Dar es Salaam and Zanzibar. So the small unpowered vessels would have obstructed the shipping traffic. So local fishermen hadn't been allowed to go there for decades; probably since colonial times. Also the island was too distant from Zanzibar for fishermen to bring their catches to the town fish markets in the same day. There was some fishing going on, but not on a massive scale. So it looked like a good opportunity to protect the reef on the west coast of Chumbe. A window of opportunity really." (T30: 7)

Located 13 kilometres southwest of Zanzibar's Stone Town, Chumbe Island is roughly 20 hectares in size. A coral rag forest approximately 1.3 kilometres long and 100-200 metres wide covers 90% of the island. The island's western shore is spanned by a fringing coral reef that contains over 200 coral species, representing at least 90% of the recorded species in East Africa, and supports over 400 species of fish. Riedmiller decided to try to get this small but ecologically significant area gazetted as a marine park and forest reserve, and found the government drive for investment in the tourist industry as a means to achieve this:

> "At the same time the government encouraged investment in tourism. So I could get the government interested in a tourism project on the island. I mean they really wanted tourism there... So I said, okay I'm ready to make eco-tourism, but only if this area is declared a park. It took me four years to negotiate that." (T30: 7)



Chumbe Island Coral Park, Zanzibar, Tanzania

Eco-architecture at Chumbe Island

Rangers monitoring the coral reef near Chumbe Island

Figure 5.5 Photographs of Chumbe Island Site Visits

While negotiations for the official status of the island were underway, Riedmiller's vision began attracting the attention of a number of marine biologists and educators who volunteered their services for the project. When her proposal was approved by the government in 1993, Riedmiller registered Chumbe Island Coral Park, Ltd. as a private organisation to manage the reserves. To build the new enterprise she initiated three successive waves of recruitment from the fishing communities in Zanzibar that were in closest proximity to the park. In the first wave four former fishermen were hired to work as rangers on Chumbe. These rangers were trained by volunteers to understand what coral reefs are and why their conservation can benefit local fishers, to look after the park, and to educate nearby fishing communities about the park's purpose and ecology. At a later stage, they were also taught English language and guiding skills for international visitors.

The second recruitment effort was for the construction of the guest bungalows and visitor centre on the island, which commenced after the forest reserve and marine park were gazetted in December 1994. CHICOP's network of volunteers introduced Riedmiller to Germany's leading eco-architecture designers who agreed to design the facilities on Chumbe. The combination of local construction techniques provided by locally hired builders and advanced technology provided by the architectural designers resulted in buildings that exude Zanzibari style while operating with virtually zero environmental impact. The buildings' stylish, high-arched roofs function to catch and collect rainwater; wall panels can be opened and adjusted to make use of sea breezes for natural, cooling ventilation; solar panels produce electricity and hot water; grey water from the showers and kitchen is filtered through sand and plant beds for purification; and composting toilets avoid any sewage.

The third round of recruitment was for the hospitality operations. Again, local, unskilled workers were recruited from nearby fishing communities to fill positions as waiters, cooks, cleaners, and other service positions. Expatriate volunteers worked intensively with the new recruits to develop the language and service skills necessary to run a professional hospitality operation. This included training in the strict environmental management practices necessary to prevent disruption of the island's ecosystem. For example, all linens are sent off the island to be laundered to economise on water and prevent nutrient runoff from polluting the water and coral reef. Most food items are bought fresh from the local markets in Zanzibar and use

little artificial packaging, so nearly all food waste is composted, with the few non-biodegradable items removed from the island after use.

To finance these investments in conservation, staff development, and physical infrastructure, Riedmiller had hoped the project would attract some sponsorship from one of the large international conservation or development organisations. In the end, she was able to secure funding for small, piece-meal portions of the project which together covered about one-third of the investment costs. The remaining two-thirds were self-financed by Riedmiller until revenue streams could be generated. However, significant delays in project development both increased costs and delayed the start of income generation. After a four-year wait to obtain park status for the island and the numerous licenses, leases, management contracts, and permits, construction of the facilities stretched to another four years. The original plan was to build 14 eco-bungalows in one year. But after four years of construction only seven bungalows, the visitors' centre, and staff quarters were completed. At this point Riedmiller felt compelled to halt construction and retool her business plan, repositioning Chumbe as more 'upmarket' so that operating costs could be covered by half as many beds. By the time Chumbe Island opened for overnight guests in 1998, it had been eight years since the idea was first hatched, and in that time the project's total investment costs had tripled. As Riedmiller explained:

> "I didn't plan it to be so expensive. I wanted to invest much less. And the original price structure was much less than it is now. So that's a lesson we learned. That conservation – especially in a country like Tanzania – is high investment and relatively high maintenance and operation costs, although low in comparison to what donors spend on conservation through government agencies." (T30: 13)

Establishing a Presence

Once Riedmiller had obtained official permission to establish the venture, she then faced the challenge of establishing CHICOP's presence as a matter of fact, both locally and internationally. Locally, this involved enforcing the sanctity of the park's boundaries and establishing community outreach programmes. The organisation's rangers were on the front lines of both of these efforts. Their first responsibility was to patrol the park. Infringements of park boundaries were low when patrolling be-

gan in 1993, but the frequency of incidents jumped sharply in 1994 and 1995. While Zanzibar's burgeoning tourist industry was largely responsible for making the park a reality, it was also responsible for increasing threats to the park's borders. The establishment of a tourist industry on Zanzibar also meant the establishment of a significant local cash market for seafood. At the same time, urban youths with access to cash and little regard for traditional fishing practices began abandoning the usual wind-powered fishing boats in favour of boats fitted with outboard engines, bringing Chumbe within reach of the daily seafood market. Head Ranger Omari Nyange, one of CHICOP's original rangers, explained the approach rangers took when confronting fishermen inside the park:

> "If we see a boat come close, we go very fast before the fisherman can make any damage in the reef. So we go and we teach them: This is the marine park. No fishing here. This is for us and you and our grandchildren. And if we protect it we get something like a lot of fish we make here, fish breeding here, they're getting food here, making breeding place... So just we try to educate them about marine environment." (T24: 5-6)

Consistency of this approach proved effective, and from 1996 to the present park infringements became rare. This allowed rangers to give more attention to outreach activities for fishing communities and school children. As former fishermen, the rangers were well-placed to communicate effectively with local fishing communities. They would make regular visits to nearby villages to explain the purposes of the park, and the benefits of increased fish stocks in the vicinity of the park that could be expected. This proved a difficult case to make until several years on, when fishermen could begin to see tangible results. Nyange described how these conversations have changed over time:

> "Oh it was a big problem on the beginning. Because, I mean, sometimes when we got to talk with the fishermen, sometimes they want to fight with the ranger. I remember we took four years talking with the local fisherman communities. Sometimes if you go and talk with the fishermen, they said: "What's you doing here? Why you are here? You are our enemy. Because you stop us fishing and we know here there are a lot of fish. And if we fish I will have fish and we'll get money for our family." So we had difficult time in beginning. But now we see change. The fishermen, they say they get benefit from the conservation area. As I told you before, fishes, they're breeding here, and the fishermen who fishing around this island, they can harvest a lot of fish around there. And also we try to tag fish, just to put the tag or mark on their backbone, and we tell to the fishermen, if they find a fish with

> a tag they are free to take the fish if they want to sell or eat, and we told them we need our tag back. And we got our tag back from different areas. So now we know fish from Chumbe, they can travel down to these places. Because we got our tags six miles from here." (T24: 5)

Besides this outreach to fishing communities, one of the original motivations for launching the venture was to provide Zanzibar's school children with the opportunity to learn first-hand about coral reefs. In 1995 Riedmiller arranged for volunteers and rangers to begin running an education programme for primary and secondary students that has since developed and grown into a structured, two day programme that includes distribution of education booklets produced by CHICOP, classroom visits by rangers, and, the hallmark of the programme, site visits to Chumbe by students and teachers to see live coral in its natural environment. With Zanzibar's conservative culture, girls are not usually given the opportunity to learn how to swim. However, Riedmiller placed strong emphasis on involving girls in the education programme. To make this possible CHICOP provided the girls with life vests and their first-ever swimming lessons, before taking them on a guided swim to see live coral for the first time in their lives. To date, more than 2,000 students and 300 teachers have participated in CHICOP's free education programme.

In addition to building a local presence necessary to directly achieve the enterprise's conservation and education missions, Riedmiller also had to establish Chumbe Island's international presence to generate the revenues necessary to support those activities. She started with a conventional marketing approach: printing brochures, attending travel fairs, approaching travel agents, and so on. But she quickly determined this approach was too costly and ineffective, and instead turned to the internet as a more inexpensive means of reaching an international audience. In 1997 Riedmiller hired a web designer, paid him half in cash and half in free nights on the island (a frequent compensation arrangement), and soon launched a website to showcase the island. The site proved useful in raising Chumbe's profile, but perhaps most crucial to CHICOP's ability to gain market exposure was Riedmiller's success at applying for and winning a number of high-profile awards. Riedmiller explained the importance of these awards, not just for marketing the project internationally, but also as a means of validating the authenticity of the education and conservation work being done:

"That was actually more important. That was recognition of what we're doing. Because it was *very* hard in those days to be recognised. First by government. For them it was just another tourist project. And then the donor world, the conservation world. Being private we also were just not taken seriously. Chumbe was seen as another tourist project just being very smart in their marketing. So it was very hard to be recognised as an education and conservation project. As far as we know, this was the first private marine park in the world, and people just didn't believe it... So the awards were a way of getting the recognition." (T31: 30-1)

Overcoming Obstacles

By the time the island opened for overnight guests in 1998, Riedmiller was feeling worn out by the challenges of the preceding eight years. She decided to move back to her home in mainland Tanzania and hire one of the long-time expatriate volunteers as a fulltime manager to take charge of day-to-day operations, although she maintained full ownership of the enterprise and continued to provide marketing support and general oversight. This also provided Riedmiller with more time for promoting the initiative by writing articles, applying for awards, participating in international conservation and sustainable tourism forums, and otherwise raising Chumbe's profile to both travellers and the international conservation community.

But while CHICOP had successfully established a presence, significant obstacles remained. To achieve its conservation and education missions, and with only fourteen beds to earn revenue, CHICOP must operate with unusually high staff-to-bed ratios. A constant challenge was the below-40% occupancy rates for the eco-bungalows. From 2000 the initiative was entirely dependent on earned revenues for financing operations, and low occupancy rates placed significant constraints on the organisation. In addition to the challenges posed by the slow development of Zanzibar's tourism industry, the Zanzibari government itself also created persistent obstacles for the project. For example, in 2003 the government sought to retroactively charge CHICOP a hotel guest tax for all of the children and teachers who had visited the island with the free education programme since it began running in 1995. This amounted to over 80% of that year's annual turnover. After extensive negotiations the situation was eventually resolved with CHICOP forced to pay 'tax arrears' representing 20% of the annual turnover. This demonstrates the challenges posed by the local legal, cultural, and institutional environment.

Despite these serious impediments, after roughly eight years as a park and five years as a functioning nature resort, the initiative was accumulating some tangible results. CHICOP's education excursions had become widely known and highly popular in Zanzibar, and local fishers began acknowledging that fish stocks had improved near Chumbe. Ranger observations, occasional monitoring of the reef and forest, and a number of independent studies all indicated notable improvements in Chumbe's ecosystem since the first baseline ecological survey was conducted in 1994. Specific environmental interventions had also proven successful. For example, removal of an invasive species of rat (*Rattus rattus)* in 1997 has encouraged the return of numerous bird, invertebrate, and plant species, and the reintroduction of the Aders' duiker (*Cephalophus adersi*) to the island has provided this highly endangered antelope species with a much-needed sanctuary. The competence and professionalism of long-time, local employees had advanced to the point where they were able to assume management-level responsibilities and very few expatriate staff were required. For example, Ali Bashiru was one of the first porters and labourers hired to help with carrying loads and construction of the bungalows. At the time he lacked any formal education or skills. However, impressed with his work ethic and quick learning, after construction was complete Bashiru was asked to stay with CHICOP to help with ongoing maintenance work. Several years later he was promoted to maintenance manager, with responsibility for all of the facilities on the island. Bashiru described his own development while working at Chumbe:

> "Chumbe Island is teach me everything. It teach me about to learn English. Chumbe Island it teached me about to learn writing, because I was don't know writing, I don't know reading, I don't know everything. Because I don't never go to school. But Chumbe, they take care, they very... It think I can say they very a friend for me, because I the man, I think I the first man to take care of our buildings here, our house, or our bungalow here. I think the company is still happy for me." (T27: 9)

Moving Forward

Since 2003, Zanzibar's tourism market and the success of CHICOP's marketing efforts finally developed to a point where occupancy rates at Chumbe surpassed 40% and climbed yearly to near 80%. As CHICOP entered into a period of relative stability and financial security, Riedmiller's thoughts turned toward maintaining the ven-

ture's successes into the future. In practice this meant maintaining the quality of the natural environment and the quality of experience for staff, school children, and visitors to the island. To facilitate the long-term management of the island's ecosystems, she decided a more comprehensive approach to ecological monitoring was needed rather than relying on the ad hoc studies of visiting researchers. As a result, a systematic, science-based ecological monitoring plan that could regularly be carried out by rangers was developed and put into practice. To ensure the quality of experiences at Chumbe were maintained, the professionalism of the staff became increasingly important. This was especially the case when CHICOP's long-time manager moved on and a replacement had to be found. An intensive international search was made for a new manager who had the unique blend of skills and values to manage CHICOP's unconventional organisational model with its diverse array of organisational goals in a challenging social and institutional environment. Helen Peeks, who was finally selected for the position, explained how her own strengths and weaknesses as a job applicant reflected Riedmiller's priorities:

> "I've worked in Zanzibar. I speak Swahili... I've worked with environmental education programmes and we have environmental education programme. So I'm very familiar with that. Conservation issues – both of my degrees are environmental degrees... But the part where I really had no experience is business. No experience at all. But I think for the director [Riedmiller], what's more important for her is that the conservation and environmental education is taken incredibly seriously." (T29: 5)

To that end, Riedmiller continues to strive to keep the organisation producing the conservation and education outcomes that she has found to be so rewarding, and for which Chumbe has become world renowned. But Riedmiller is aware that CHICOP came into being during a very unique period of Tanzania's history, and that similarly, larger external factors beyond her control may ultimately determine how long the enterprise can maintain its success. As she explained:

> "At least in terms of tourism, in Zanzibar, it would have been very hard to survive fifteen years ago. But now we have enough tourism. There's enough tourism coming to Zanzibar, it's growing very fast. But the type of tourist investment the government is attracting is, again, a concern. They go for mass tourism. So Zanzibar might lose – after another ten, fifteen years down that road – its appeal as a special destination... We might suffer as well. I don't know..." (T30: 34)

5.6 Key Characteristics of the Cases Studied

These cases are not considered to be exemplars of sustainability entrepreneurship because they happen to operate in the carbon offsets market, near a national park, in a woodland, or on an uninhabited island. There are plenty of other businesses doing those things, too. Rather, these cases are exemplars of sustainability entrepreneurship because, in each instance, the entrepreneurs successfully created enterprises that thrive on producing beneficial social and environmental outcomes. In other words, they have designed their enterprises so that the activities that support the ability of the enterprise to survive and thrive in the marketplace are the very same activities that produce beneficial social and environmental outcomes.

Notable in each of these enterprise design histories is how the entrepreneurs used organisational innovations to effectively balance multiple and diverse organisational goals. Whether it was the way they structured their business model, marketing approach, succession strategy, or any number of other organisational processes, the potentially competing interests of multiple goals were balanced by structuring activities so that beneficial outcomes in one domain served to reinforce the beneficial outcomes of other domains. Balancing the interests of the 'self' and the 'other', where the 'other' includes both social and environmental interests, seems to be the hallmark of successful sustainability entrepreneurship. In fact, the synergies between these differing interests were often so strong that the entrepreneurs had difficulty identifying any one overriding rationale for their approach.

In each case technology did play an important role in contributing to the outcomes achieved: there would be no carbon offsets without renewable energy technology, no organic spices or regenerated woodlands without sustainable agriculture and forestry techniques, and no low-impact tourism without eco-architecture technology. But these technologies merely facilitated rather than determined the nature of the outcomes produced. It was the innovations in organisation that determined the nature, extent, and effectiveness of change for sustainable development, and just as importantly, who reaped the benefits. With these unique characteristics in mind, the following two chapters explore exactly how the entrepreneurs were able to achieve these outcomes, by looking first at the problem solving principles and then the social processes of sustainability enterprise design.

CHAPTER 6

PRINCIPLES OF SUSTAINABILITY ENTERPRISE DESIGN

The wheel's hub holds thirty spokes
Utility depends on the hole through the hub.
The potter's clay forms a vessel
It is the space within that serves.
A house is built with solid walls
The nothingness of window and door alone
render it usable.
That which exists may be transformed
What is non-existent has boundless uses.

Lao Zi

Dao De Jing (circa 6th century BCE)

6.1 The Role of Design Logics

The previous chapter described the unique design histories and key characteristics of four successful sustainability enterprises. Based on these cases, this chapter considers the first guiding research question: How can an entrepreneur create a sustainability enterprise? To answer this question, five themes from the data are identified and described. These themes demonstrate the unique approach sustainability entrepreneurs use to confront the problems associated with new enterprise design. Together, these themes constitute a holistic design logic used by the entrepreneurs to guide the process of sustainability enterprise design. The significance of these principles is explored using institutional theory of organisations to explain how they enabled these entrepreneurs to successfully create sustainability enterprises. The result is a cognitive model of sustainability enterprise design.

6.2 The Design Logic of Sustainability Entrepreneurship

The role of design logics for problem solving in entrepreneurship and organising more generally is well established in the literature, although different terminology is used by different authors, such as 'logics of action' (DiMaggio 1997), 'interpretive scheme' (Ranson et al. 1980), 'organisational frames of reference' (Shrivastava and Schneider 1984), 'implicit theories of organising' (Brief and Downey 1983), 'design gestalts' (Yoo et al. 2006), and so on. These terms are used to describe the way an organisational actor's cognitive models of the world influence their organising activities. As Schneider and Shrivastava (1988) explained, the perception of problems and approach to problem solving is strongly influenced by the basic assumptions and interpretive schemes employed by organisational actors. These interpretive schemes or 'design logics' consist of "logically integrated clusters of beliefs" (Starbuck 1983) that are used for organisational problem solving. Starbuck described problem solving as "repetitive cycles of activity" in which "perceived problems motivate searches for solutions" (1983: 91). He explained that decision making is defined by its ending, a decision, while problem solving is defined by its origin, perception of a problem (paraphrasing Starbuck 1983: 91).

The design logics used by successful entrepreneurs have been shown to help them to problem-solve in the face of uncertainty (Sarasvathy 2001). Enterprise design is a creative process that mixes novelty with heuristics (Sarasvathy 2004a). Novelty plays an important role in capitalising on unpredictable situational contingencies, and, by definition, cannot be prescribed. Heuristics, however, serve to guide the unfolding creative design process. As Niiniluoto explains, design "is rule-governed to the extent that the process is guided by general rules of action" (2001: 375). Design logics therefore consist of a number of heuristics, rules of action, or organising principles. As McEvily explained, "an organizing principle represents a heuristic for how actors interpret and represent information and how they select appropriate behaviors and routines for coordinating actions" (2003: 92). It is in these principles that design constants can be found which do not dictate the solution to a problem but rather guide an organisational actor's identification of, and response to problems. For consistency, I will use the term 'design principle' to refer to these problem solving heuristics, and the term 'design logic' to refer to the holistic web of

principles that form a 'logically integrated cluster of beliefs' (Starbuck 1983). Based on this understanding it is possible to identify the design logic and principles that were used by the sustainability entrepreneurs.

6.2.1 *Perpetual Reasoning Design Logic*

The design logic employed by these sustainability entrepreneurs functions in stark contrast to the design logic associated with conventional entrepreneurship. The origins of these discrepant logics stem from differing instrumental views of the enterprise being created. In conventional entrepreneurship, the enterprise is viewed instrumentally as a means of profiting from the *exploitation of resources* in that the form of reasoning underpinning conventional entrepreneurship is based on a logic of maximum return in the shortest time possible. In contrast, sustainability entrepreneurs view the enterprise instrumentally as a means of *perpetuating resources*. The form of reasoning associated with sustainability entrepreneurship, which I will refer to as *perpetual reasoning*, suggests a logic of enhancing and maintaining quality over the longest time possible. In these interpretations, the 'resources' that are being exploited or perpetuated are defined in a broad sense, and include both natural and human resources. For example, the link between the entrepreneur's instrumental purpose for their enterprise and this alternative form of reasoning is evident in statements made by the ForesTrade entrepreneurs:

> "We set up this business in order to do rainforest preservation and sustainable development." (T36: 5)

> "We ended up discovering that that business partner and we were incompatible because like so many others [he] had much less patience – wanted to make a quick buck and really get a large ROI..." (T36: 12)

Similarly, one of the founders of Hill Holt Wood described how the business model he devised was 'perpetual', in that it could continue environmentally and financially to meet a social need indefinitely. Of this business model, he concluded:

> "That strikes me as a viable business for 1500 years...You can start that cycle again. So it's perpetual...I've come up with this long-term model." (T06: 49-50)

Through perpetual reasoning, maintaining the quality of specific, identified natural resources becomes a legitimate outcome objective of the enterprise. The types of natural resources perpetuated by these enterprises included both private resources (rival and exclusive resources as with ForesTrade, Hill Holt Wood and Chumbe Island) and global commons (non-rival and non-exclusive resources as with *Native*Energy), but the logic employed was the same. Similarly, the experiential quality of stakeholders participating in the enterprise became a legitimate outcome objective. Thus, as described below, the contributions of stakeholders to the enterprise were meant to support, not tax, the individuals involved. A number of principles are incorporated in this perpetual reasoning design logic. Although these principles have been abstracted to aid description and analysis, they are in actuality different facets of a holistic interpretive scheme, as displayed diagrammatically in Figure 6.1. These principles are now described in turn, with two illustrative examples from the case data provided for each principle.

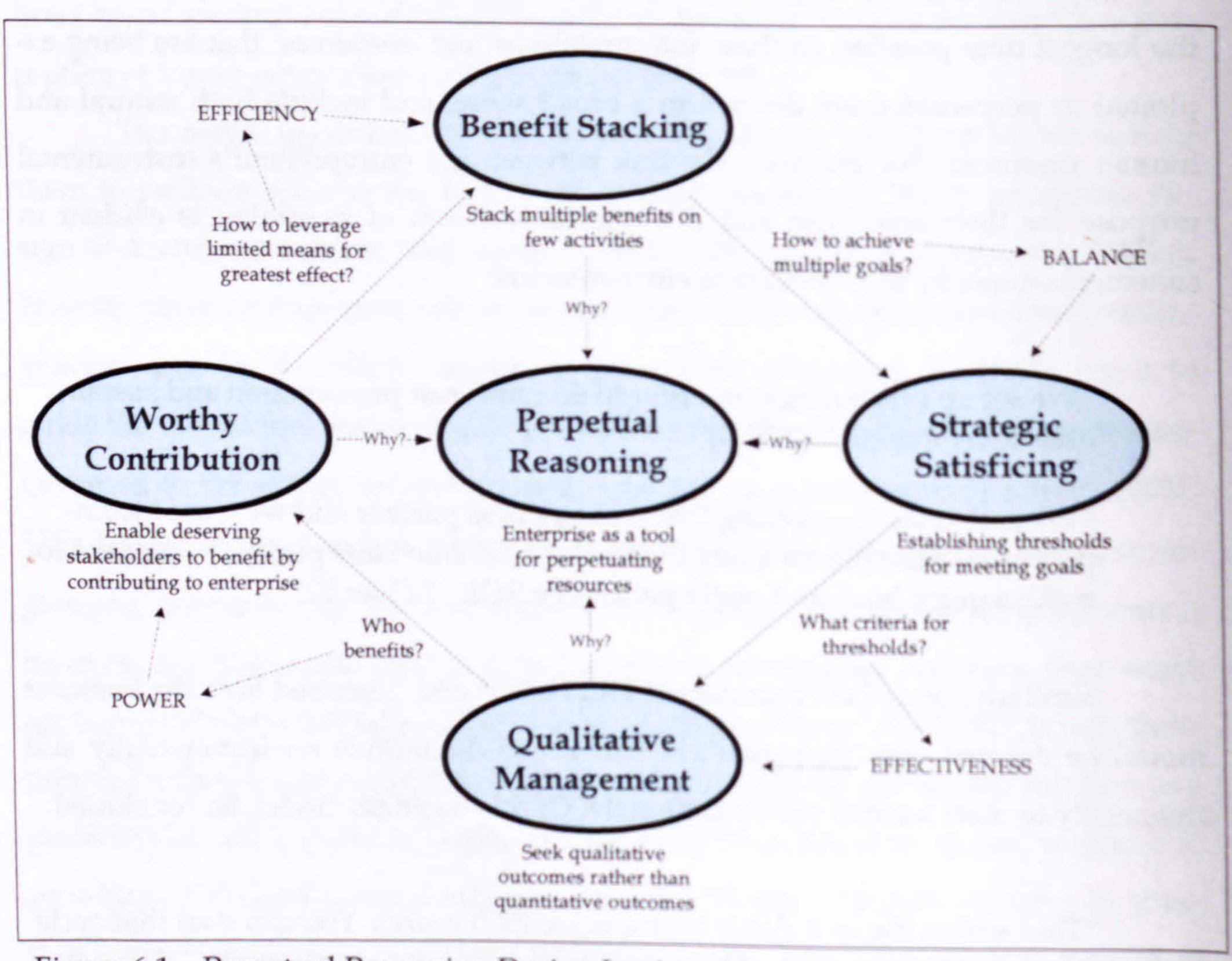


Figure 6.1 Perpetual Reasoning Design Logic

6.2.2 *Principle of Benefit Stacking*

Benefit stacking is a design principle for structuring the enterprise, from large scale problems, such as formulating a business model, down to more small scale problems, such as accomplishing day-to-day operational tasks. In practice, this means trying to stack as many benefits as possible onto an organisational activity. This principle operates on a logic of synergy, in that the same activity can have multiple and, ideally, reciprocal benefits. While synergy in conventional economising refers to a reduction in input without a parallel reduction in output, in benefit stacking synergy refers to the co-production of multiple benefit streams from a single activity.

- *Business model at Hill Holt Wood.* This enterprise is structured so that the activities of the learners result in improved environmental quality of the wood's ecosystem. In turn, these same activities are what allow the learners to develop skills, experience in a work environment, and to mature as individuals. In addition, Hill Holt Wood has a contract with the government to take on these learners and guide them through these tasks, thereby earning the enterprise income to fund its operations. In this example of benefit stacking, multiple, reciprocal benefits are stacked on one set of activities – work in the wood. The benefits are synergistic because they are mutually supportive. But in addition to the big problem of designing a business model, smaller daily activities, even those as simple as digging holes, are also structures with this principle. For example, one of the founders explained how he once answered a visiting businessman's question:

> "'Why have you got ten young people digging a ditch out when you could bring a JCB in and do it in an hour and they're going to take weeks?' I said, it's not about that, it's about the team building, it's about the learning, it's about all sorts of things. It's not about digging the ditch, but we get the ditch done as well." (T02: 6)

- *Investment buy-in and succession at* Native*Energy.* These entrepreneurs have arranged an innovative structure to obtain much-needed investment capital and an eventual exit strategy while also enabling the Native American tribes

who currently function as their suppliers to eventually assume full ownership of the enterprise. This innovative 'tag-for-equity' financing mechanism for tribal buy-in: (1) provides cash-poor tribes with the opportunity to acquire an ownership stake in a vertically aligned company, (2) provides the enterprise with investment for growth, (3) relieves cash-flow stress by lowering the cost of goods, (4) adds additional value to green tags and provides additional market differentiation, and (5) provides an eventual exit strategy for the founders. *Native*Energy has thereby stacked multiple benefits for multiple stakeholders onto this one investment arrangement. As one of the entrepreneurs explained of the arrangement:

> "It's like supporting tribal wind farms and supporting family farmer projects – it's a win-win in that it provides the company what it needs, but then also makes, at the same time, the company more attractive to our potential customers and at the same time potentially creates more economic benefits for the tribes. So, it was compelling to us for all three reasons." (T19: 19)

These examples demonstrate how benefit stacking serves as a guiding principle for major organising problems such as structuring business models, structuring investment, and structuring succession, but the principle also guides the structuring of more day-to-day activities such as the method used to dig holes. In each instance, when a particular outcome is deemed necessary, such as wood maintenance, or new investment financing, devising a means of achieving this outcome is guided by the number of different beneficial outcomes that can be stacked onto the activity.

6.2.3 Principle of Strategic Satisficing

Strategic satisficing is used to balance the multiple purposes of an enterprise. In practice it means strategically identifying levels of both quantitative and qualitative outcomes that are deemed satisfactory, and managing operations to ensure those targets are met on a continuous basis. This principle operates on a logic of satisfaction, in that satisfaction can be achieved by reaching a certain threshold, rather than the constant striving for maximisation of one single, prioritised outcome.

• *Supplier prices at* Native*Energy*. The entrepreneurs of *Native*Energy negotiated prices from their suppliers so that they were satisfied that both parties were receiving a fair deal. In this case, 'fairness' is their criteria for satisfaction. By contrast, if the same exchange were based on the principle of maximisation, the reasoning would be that *Native*Energy should negotiate to pay their suppliers the lowest price possible, thereby maximising the enterprise's revenues. As one of the entrepreneurs explained:

> "On balance, I think we sort of try to engage in fair trade, if you will, and make sure that the projects get a fair price from us that beats our competitors and we try to maintain a thin enough margin that our retail price is still attractive but offers, you know, cost coverage and, eventually profit, as well for us." (T19: 50)

• *Setting performance targets*. Hill Holt Wood is explicit about their targets and criteria for satisfaction. Rather than seeking to maximise profitability, they seek to achieve a level of revenue that makes the enterprise economically viable. The ratio of learners to rangers is set at a level that provides a satisfactory learning experience for the learners, and a satisfactory quality of work for the rangers. Likewise, rather than trying to minimise the negative environmental impacts on the wood, they seek to keep the total environmental footprint at a satisfactory level. As the chair of the Hill Holt Wood board explained of the entrepreneurs:

> "If we were just running it for profit...we would be doubling the numbers of kids here. And doubling our income, or turnover. We're not doing that because the footprint that it would leave on the wood would be unacceptable from an environmental point of view." (T04: 26-7)

While all entrepreneurs and managers are believed to satisfice, the emphasis here on *strategic* satisficing means that these sustainability entrepreneurs are explicit and deliberate in their satisficing, and use it as a tool for balancing tradeoffs. Strategic satisficing allows for a number of distinct outcomes to be targeted without having to elevate one goal above the others, which enables them to effectively manage for social and environmental outcomes. From the examples

provided, this is evident in the way alternative criteria are defined for determining satisfactory outcomes for each target, such as 'fairness' and 'viability'.

6.2.4 *Principle of Qualitative Management*

This is a design principle used to manage for the quality of outcomes. In practice, this means making decisions with an eye toward increasing the quality of effects produced, and therefore operates on a logic of outcome quality rather than quantity. Criteria for decision making are less often about 'more' and more often about 'better'. The quality of *processes* is also viewed as an outcome to be managed, either in terms of the developmental quality of ecosystem cycles and fluxes, or the experiential quality of stakeholders.

- *Resource allocation at Chumbe Island.* This principle is evident in the way Chumbe Island's management allocated resources internally. Conventional logic is to add resources to productive 'revenue centres' that are responsible for increasing earned income, such as sales and production departments, while trimming resources from 'cost centres' that are seen as a drain on the bottom line, such as human resource, accounting, or information technology departments. Internal resource allocation at Chumbe Island is driven instead by the quality of the effects produced. For example, the enterprise could increase profit by increasing the number of tourists served and reducing the number of non-hospitality related staff. However, this would result in decreased environmental quality both because the tourist footprint would increase, and because the number of conservation staff would be cut. It would also reduce the quality of the experience for the island's visitors. Also, internal resource allocation is driven very much by the quality of work experienced by the staff. Specifically, resources are increased to support those staff that are overwhelmed by their workload, regardless of whether they function as a 'cost centre' or a 'revenue centre'. Thus, the *process* of the work experience itself becomes an outcome quality to be managed. As the enterprises' project manager explained:

"It's done by need. So for example, with my accountant, before this accountant there was a woman. And I knew she was overworked. So therefore, what can I do to improve the working situation and get an assistant?... And then we can look at whether we can afford it or not." (T29: 10)

• *Growth at ForesTrade.* While two of the enterprises, Chumbe Island and Hill Holt Wood, have decided they can be most effective environmentally and socially if they stop growth at a certain level, the other two enterprises, *Na-*

*tive*Energy and ForesTrade have decided they can be most effective through growing the enterprise indefinitely. For example, in the case of ForesTrade, the entrepreneurs feel that the more producers who they can partner with as suppliers, the greater their positive social and environmental impacts will be. For this reason, they have sought a high growth strategy, as one of them explained:

"Why did we choose to grow so fast? Part of it was to create as much of an impact. I saw that if you work - some of the companies that are out there...that are involved in similar kind of products and similar kind of approach about helping tropical farmers, small producers, protecting vulnerable ecosystems. When you really get down to the essence of it their impact is on a very small scale. So, in a case like Kerinci, our idea was to not just shoot for a niche market, but to try to mainstream it..." (T37: 19)

The questions of resource allocation, optimal scale, and growth are important issues both for sustainable development and for entrepreneurs. These are traditionally thought of as decisions involving tradeoffs between quantitative outcomes. Rather than taking an ideological stance on, for example, whether growth is 'good' or 'bad', these sustainability entrepreneurs addressed the issues by seeking to manage for outcome quality. This demonstrates why sustainability entrepreneurs, though guided by the same principles, may respond to the same general design problems in radically different ways

6.2.5 *Principle of Worthy Contribution*

The principle of worthy contribution is used for structuring the flow of benefits to stakeholders. In practice this means that the distribution of benefits is structured so as to give preference to those stakeholders deemed most worthy. It operates on a

logic of worth, in that being deemed more worthy rather than more powerful entitles a stakeholder to a greater claim on the benefits bestowed by the enterprise. Benefits include monetary rewards as well as other types of benefits, such as personal development, access to resources, and opportunities.

• *Selecting suppliers.* *Native*Energy specifically targeted projects located on Native American tribal lands or on small family farms so that these groups could benefit from the revenues and development associated with renewable energy production. For personal and cultural reasons, these groups of people were deemed by the entrepreneurs as being particularly worthy of being beneficiaries. So given that *Native*Energy must direct benefit streams to suppliers in order to secure carbon credits, they specifically sought out opportunities to position members of these worthy groups into the role of supplier. Thus, *Native*Energy's selection of suppliers was guided by the quest to give people deemed more worthy the opportunity to receive benefit streams by contributing to the enterprise's operations. One of the entrepreneurs explained both why Native American tribes and family farmers are thought to be particularly worthy of receiving benefits, and how they contribute to the enterprise's success:

> "We saw both as having special challenges and, to some extent, disadvantages whether family farmer-owned versus, you know, the trend to commercial and large business-owned farms, so maintaining the family farm. On the tribal side, tribes had been terribly disadvantaged for several hundred years, basically, and are really struggling in many cases. And the ability to provide a very positive sustainable economic growth opportunity for the tribes seemed like just a very good thing to do. So when you can combine that with the environmental benefits of promoting renewable energy and direct greenhouse gas reductions, it just to us was a natural fit and a way to differentiate us from anyone else in our business basically." (T20: 6).

• *Avoiding 'capture'.* At Chumbe Island, the bulk of the revenues go toward paying for staff to manage the conservation of the reef and forest reserve, and to pay for the environmental education program aimed at school children. Unlike a non-profit organization, there is no mandate that benefits should be directed at these groups. And unlike a conventional business, the founding entrepreneur and senior managers have not organised the flow of

income distribution so that they themselves capture most of the benefits. As the most powerful members of the enterprise, they certainly have this ability. Instead they have structured the distribution of income so that it flows to those deemed most worthy – in this case, the conservation of the island and the school children participating in the environmental education programme. They also prioritise the hiring of staff from local communities. Also, corruption in government enables government officials to use their power to capture benefits. The enterprise has resisted this form of 'capture', often at great cost because they operate on the principle that benefits should flow to most worthy contributors rather than the merely powerful.

> "The normal thing would have been just to make a tourism project, and then you get the permits within maybe half a year, a year – if you bribe. If you bribe. Which I always refused to do. I think there are not many investors who could afford not to bribe. Since I thought, maybe naively, I'm not here for business but for creating a park which is used for kids for free education, and sustainable, et cetera, et cetera...I felt like this is the right way to go." (T30: 7-8)

This principle guides enterprise activity on many levels, not just on questions of compensation. To sustainability entrepreneurs, 'worthiness' is a function of both need and contribution to the enterprise. They insist their enterprises are not charities, and will not allocate benefits on need alone. Rather, attempts are made to give those in need the opportunity to earn benefits by making contributions to the enterprise.

6.2.6 *Perpetual Reasoning as a Holistic Design Logic*

Because of the purpose of the enterprise – perpetuating human and natural resources for as long as possible – these entrepreneurs and eventual managers become concerned with issues of generating multiple benefits toward multiple ends, balancing these multiple objectives, the effectiveness of the enterprise, but given limited means, also the efficiency of the enterprise and being highly selective about who garners the benefits produced. These concerns, which, again, stem directly from the purpose for which the enterprise exists, lead to a number of organising questions such as: Who should benefit from this enterprise and how to ensure intended bene-

ficiaries do receive benefits? How to balance the requirements of multiple objectives that come with having multiple intended beneficiaries? What criteria should be used for making management decisions to ensure the enterprise has the intended effects? How to leverage the limited available resources for greatest effect? And then again, given limits to the possible effects, who should receive the benefits from the enterprise? How to balance the requirements of these multiple objectives... The questions become circular because they each reflect different aspects of one unified interpretive scheme, or internally consistent logic of design (see Figure 6.1.)

6.3 The Significance of Perpetual Reasoning

To appreciate why these particular design principles are important for successfully surmounting the unique demands of sustainability-driven enterprises, it is important to understand: (1) what unique organising tensions are created by the instrumental purpose embodied by sustainability enterprises, and (2) why the principles of perpetual reasoning are able to effectively address these tensions while conventional design principles are not. Drawing on some well-established concepts from institutionalism, this section addresses both of these questions.

6.3.1 The Organising Tensions of Sustainability Enterprise

A necessary condition for organising is securing access to the resources required for an enterprise's activities. Also of concern is how well these resources are put to use to produce the desired outcomes. Thus, regardless of what the desired outcomes are, economising, "in the sense of effective accomplishment of objectives without undue cost" (Blau and Scott 1963: 49), is a central condition of successful enterprise. Thus, *power* over resources and *efficiency* of design are two fundamental poles that exert influence on an emerging organisation design.[33] In conventional businesses,

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[33] Efficiency has been stressed especially by the transaction cost economics perspective (Williamson 1975) and power by the political (March 1962) and resource dependence (Pfeffer and Salancik 1978) perspectives on organising. Weber, however, recognised the importance of both, as explained by Parsons: "For [Weber] a fundamental phenomenon is the development of profit-making enterprises rationally ori-

benefits flow along power gradients, with the ultimate intended beneficiaries being those with the most power - the owners of scarce resources. An economising organisation requires the identification of one intended primary beneficiary in order to implement a cost-benefit scheme to guide design decisions. Those benefits that flow to other parties in order to ultimately benefit owners (what we might call *instrumental* beneficiaries) are considered to be the costs of doing business. Thus, two parts of the interpretive scheme used in organising conventional enterprises consists of the legitimacy of power differentials to determine benefit flows and the categorisation of resources and activities as either 'cost' or 'benefit'.

Some of the variety observed in organisation forms can be understood as the result of using this interpretive scheme to guide organising for a variety of different purposes. For example, organising tensions are created when parties other than the most powerful organisational stakeholders (owners) are the intended primary beneficiaries. As a result, distinct organisational forms have developed to counter these organising tensions. In the case of a cooperative organisational form the enterprise workers are the intended primary beneficiaries. To achieve this, the roles of 'owner' and 'worker' have been merged so there is effectively only one group of ultimate beneficiaries (cf. Hansmann 1996). In this way, the conventional design logic remains a valid means of guiding organisational design. Similarly, charities are intended to benefit a client population other than the organisation's resource owners. In this case the legitimacy of benefit flows is based on need rather than power. Thus charities are designed to decouple power from benefit flows by the existence of a disinterested governing board to oversee the use of resources, and a legally binding non-distribution clause to prevent benefits from being diverted to powerful resource owners (Hansmann 1980). In this case the cost-benefit scheme remains valid, as resources that flow to parties other than the targeted beneficiaries, such as salaries for professional staff, are considered the costs of providing services to clients (the primary intended beneficiaries).

In each case, organisational forms have been designed so as to circumvent the tension that would result from having multiple primary beneficiaries instead of, or in addition to, the more powerful owners. The organising tension implicit in sus-

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ented to 'capital accounting' that is to the goal of increase of money resources at the command of the enterprise" (Parsons 1947: 51).

tainability entrepreneurship are evident as sustainability enterprises, by definition, are intended to benefit both owners *and* others. How does one economise when significant resources and activities can be classified as both cost and benefit, and neither cost nor benefit? In this situation the taken-for-granted cost-benefit logic of economising cannot be used to guide problem solving.

Similarly, taking responsibility for the environmental impacts that result from enterprise operations is usually framed as internalising costs that have been externalised, that is, caused but not borne by the enterprise. But what happens when responsibility for environmental conditions is not simply a cost of doing business, but the central purpose of doing business? In such a case, the internalised 'costs' are not really costs at all, but intended primary benefits. Once again, because the categorical distinction between what constitutes a cost and what constitutes a benefit is thwarted, the basic, taken-for-granted, interpretive scheme of organising is unable to provide guidance. The primary purpose embodied in sustainability enterprise is to benefit self (owners/founders), other people, and nonhuman nature. A purpose that includes at least three groups of intended primary beneficiaries creates a tripartite organising tension with which sustainability enterprise designers must contend (displayed diagrammatically in Figure 6.2).

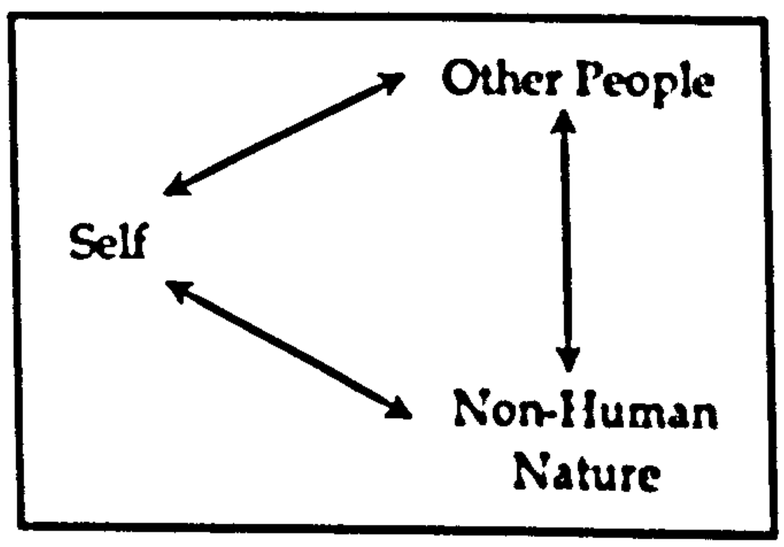

Figure 6.2 Tripartite Organising Tensions of Sustainability Enterprise

If one of the three categories is deemed the intended primary beneficiary, then resource flows to the other two could be treated as costs. But if more than one, or in the case of sustainability enterprises, all three, are deemed intended primary beneficiaries, then the taken-for-granted cost-benefit framework implicit in economising organisations is disrupted. For example, the chair of the governing board of Hill Holt Wood stated clearly: "It's not *one* that is of overriding importance or over-

arching importance, than the other" (T04: 15). He refused to frame the necessity of limiting enterprise activities to maintain environmental quality of the wood as a constraint for the enterprise. As he explained:

> "It's all part of the same package. I mean, you could argue it's a constraint. It's a constraint financially if the finance objective were the sole objective. But it's not the sole objective. The environment is a benefit because I don't think we would have achieved the outcomes with our learners that we have obtained without the environment." (T04: 10)

Mathematicians will tell us that it is impossible to simultaneously maximise more than one goal at a time. In formal terms, there are only two solutions to this trilemma: either the goals can be ranked or they can be weighted. Both will lead to an optimal solution. But the sustainability entrepreneurs will protest that none of these purposes are primarily more primary than the others. In fact, even framing the three as distinct purposes is a perversion of the way sustainability entrepreneurs interpret the situation. For example, when questioned about the many benefits of hiring local nationals at Chumbe Island – local employment opportunities, cost savings, furthering community environmental education – the founder expressed frustration with the question and was unable to identify one of these as the overriding rationale. As she emphatically responded: "No, it's part of it. It's part of it. It's also for, just, it's just a mix of things. It's a win-win situation" (T31: 21). Sustainability entrepreneurs see the *raison d'être* of their enterprises as being a means to the mutual co-production of benefits to multiple ultimate ends. Without one of these beneficiary categories, the enterprise loses its meaning.

6.3.2 *The Function of Perpetual Reasoning*

The sustainability entrepreneurs' solution to this trilemma, as embodied in the design logic of perpetual reasoning, is to transcend the bounds of 'formal' rationality. Drawing on the work of Weber, two types of rationality can be distinguished analytically: formal and substantive (Weber 1947: 185). Formal rationality refers to reasoning that "consider[s] only the purely formal fact that calculations are being made on grounds of expediency by the methods which are, among those available, technically the most nearly adequate". For Weber, formal rationality is "unambiguous", in

that it "is capable of being expressed in numerical, calculable terms, and is so expressed". Substantive rationality refers to reasoning based on "a given set of ultimate values no matter what they may be". In contrast to formal rationality, this form of reasoning "cannot be measured in terms of formal calculations alone, but also involves a relation to the absolute value or to the content of the particular given ends to which it is oriented. In principle, there is an indefinite number of possible standards of value which are 'rational' in this sense."

While all enterprises necessarily utilise a blend of the two, there is a trend in the theory and management of formal organisations, especially enterprises operating in the market economy, to emphasise the former at the expense of the latter (see e.g. Ramos 1981). While instances of substantive rationality in organisations are recognised, they tend to be interpreted as sub-optimal diversions from formally rational decision making (e.g. March 1981; Meyer and Rowan 1977). However, formal rationality, while by no means absent from sustainability enterprises, is, on its own, insufficient to cope with these organising tensions. Perpetual reasoning represents the integration of a substantively rational organising logic within the bounds of what is essentially a formally rational organisational form.

However, in contrast to the scenarios March (1981) and Meyer and Rowan (1977) described in which the basis for substantively rational behaviour is derived externally from society's norms and expectations, the basis of the ultimate values that underpin the substantive rationality of sustainability entrepreneurship is derived internally from the entrepreneurs' own value systems. The entrepreneurs utilised the authority that implicitly accompanies resource ownership and the entrepreneurial role to establish their organisations' value bases.[34] This authority is evident in Whittington's argument that "entrepreneurial ideologies and capitalist rights" allow entrepreneurs the latitude to be rash, conservative, or even eccentric in how they build their enterprises (1988: 533). Selznick (1957) also famously identifies value infusion as one of the defining roles of organisational leadership. For sustainability entrepreneurs, these values were based on the potential for an enterprise to serve as an effective means of enhancing and sustaining human and natural resources, as well as satisfying the entrepreneur's own aspirations. These values rec-

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[34] Following Weber, authority is considered to be the legitimate exercise of power (Weber 1947: 155).

ognise equanimity between 'self' and 'other', where 'other' includes other humans and nonhuman nature. This is different than both the conventional logic of business, which prioritised the self, and the conventional logic of charities, which prioritise the needs of the other. As ForesTrade's entrepreneurs explained about starting their commodity trading enterprise:

> "We weren't really necessarily thinking of spices and coffee; we were really thinking about rainforest preservation and community development."
>
> "I wanted a business that was profitable so that instead of always raising funds we had something that sustained the work that we cared a lot about."
>
> "There was part of me that was enlightened self-interest and survival instinct definitely played a role in that." (T36: 5, 21, 11)

The substantive use of this logic is perhaps most evident in the principle of effect management. This principle describes a prevalent form of decision making employed by the sustainability entrepreneurs, in which options were weighed based on foreseen qualitative effects. Even quantitative questions, such as growth and financial resource allocation, were translated into qualitative outcomes to enable options to be evaluated and effective decisions to be made. Through this organising principle a direct link is evident between ultimate values, the realities of day-to-day enterprise decisions, and the effects created. A more formally rational mode of decision making would encounter difficulties in effectively selecting choices that ensure the enterprise's multiple goals are realised. However, this is not to suggest that the importance of economising is totally disregarded. To the contrary, as with any enterprise, the need for efficient operations is of crucial importance to the structuring of sustainability enterprises. However, in many cases sustainability entrepreneurs take a uniquely qualitative approach to efficiency. This can be explained with reference to the standard efficiency equation where efficiency (E) equals a quantity output (O) over a quantity input (I).

$$E = \frac{O}{I}$$

Williamson (1991) defines 'first-order economising' as effective adaptation, in which enterprises adapt to market conditions so as to maximise profit, and waste elimination, in which enterprises are adapted to reduce the cost of operations. In the conventional approach to economising a target outcome is specified (such as a target quantity of output at a given quality) and then a particular means of producing that outcome is selected based on the criterion of least cost. This approach to economising is expressed in Figure 6.2 with reference to the efficiency equation.

By contrast, the approach to economising regularly taken by sustainability entrepreneurs is exemplified by the process of structuring enterprises so that as many types of beneficial outcomes as possible are produced by each operational activity. In this approach to economising, when a particular outcome is required a decision on the means of achieving that outcome is based on the criterion of multiplying the range of benefit streams that can be produced. This approach is also expressed with reference to the efficiency equation in Figure 6.3, but it should be emphasised that in real life benefit stacking involves the stacking of qualitatively different types of beneficial outcomes which are often not amenable to formal computation. While the logic of synergy in 'first-order economising' refers to a reduction in input without a parallel reduction in output, in benefit stacking synergy refers to the co-production of multiple benefit streams from a single activity. In their own ways, these two distinct approaches to economising serve to guide the structuring of enterprises along different trajectories.

First-Order Economising	Benefit Stacking
$E_{FOE} = \frac{O_P}{I_{MIN}}$	$E_{BS} = \frac{O_P + (O_a + O_b + O_c + \ldots O_n)}{I_{BS}}$
Where	Where
'E_{FOE}' is first-order economising	'E_{BS}' is benefit stacking
'O_P' is the principle required outcome	'O_P' is the principle required outcome
'I_{MIN}' is the least cost activity producing O_P	'$O_{a..n}$' are other outcomes produced by I
	'I_{BS}' is the activity producing O_P and as many other desired outcomes as possible

Figure 6.3 Comparison of Modes of Economising

Incorporating such synergies into the design of the enterprise is a significant principle guiding the entrepreneurs' structuring activities. However, despite their innovative efforts to align goals, not all conflicts of competing ends can be avoided. When organisational tradeoffs are inevitable, the principle of strategic satisficing is a means of balancing competing ends. Simon identified satisficing as problem-solving activity that leads to a satisfactory rather than an optimal outcome (March and Simon 1967: 140). This means that outcome targets are set as threshold levels, rather than as maximal or minimal levels. In reality, due to the cognitive limitations of the human brain, satisficing is believed to be a trait characteristic of all organisational actors even if their intention is to maximise (Simon and Stedry 1969). But what makes sustainability entrepreneurs distinct is that they satisfice *strategically*, that is, explicitly and deliberately. Rather than viewing satisficing as an unfortunate limitation of human problem solving ability, sustainability entrepreneurs embrace satisficing and use it as a tool for balancing tradeoffs.

Avoiding the logic of maximisation allows these entrepreneurs to make complicated tradeoff decisions between different domains because one target does not receive an elevated status. When, for example, profit maximisation, maximising shareholder value, or cost minimisation are specified as goals, other outcomes and targets can only be advanced to the extent that they can demonstrate no impingement on those overriding goals. This severely limits the capacity to manage for social and environmental outcomes. Strategic satisficing provides considerable latitude for making tradeoffs among different ends once a target level of satisfaction is realised. For example, *Native*Energy's entrepreneurs described their financial goals this way: "I wouldn't say it's maximising profits for shareholders as much as increasing the *viability* of the business model and in the long term an exit strategy that gets a *reasonable* return for the investors" (T38: 37, italics added). By seeking threshold goals such as a 'viable business' and 'reasonable return', this allows *Native*Energy latitude to choose projects that more strongly benefit communities in need and to directly contribute to new renewable energy production by financing smaller projects. Depending on the domain in which targets are set, the criteria for satisfactory thresholds, such as 'viable', 'fair', or 'reasonable' are likely to be less easy to quantify. Though in practice, it is no easier to determine whether an outcome is a true

maximum or minimum than to determine if it is fair or viable (cf. March and Simon 1967). In the end, the decision maker must be reasonably confident that the outcome has satisfied the desired criteria.

In questions of target setting, as with other organisational design problems, an emerging enterprise's chief problem solver is the entrepreneur. As explained above, entrepreneurs wield considerable power in determining which design solutions will be implemented due to the authority invested in both their roles of entrepreneur and of principle resource owner (or steward). This includes the power to structure the flow of benefit streams. However, the entrepreneur's power is always shared to some extent with other stakeholders.[35] The amount of power an entrepreneur concedes depends on the extent on which other stakeholders' resources are depended, possibly mediated somewhat by the entrepreneur's charisma (Pfeffer and Salancik 1978). Thus, entrepreneurs have some, but not total, power to determine the structure of benefit flows.

In conventional businesses, benefits flow along power gradients, with the ultimate intended beneficiaries being resource owners, or those with the most power. In such cases the stakeholders who have the most control are also able to make the biggest claim to benefit from the enterprise. Thus, shareholders and senior management's interests are privileged above the interests of workers and other less powerful stakeholders. In terms of informal claims, depending on the context bribes and other perks can be captured by influential power brokers. But sustainability entrepreneurs work hard to structure their enterprises so that worth rather than power is the main driver of benefit allocations. One of ForesTrade's founders explained how the design of their payment systems was guided by this principle:

> "The goals were around sustainable development. Creating livelihoods within rural communities and helping micro enterprises so that as much of the income could remain in these communities. So we designed the projects and the payment systems in ways that would make the most difference to the most people." (T36: 27)

But the entrepreneurs were equally adamant that they were not operating charities, and that stakeholders needed to contribute to the enterprise to receive

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[35] Weber (1947) defines power as the probability that someone is able to achieve their will despite resistance from others.

benefits. Statements such as, "I never thought of it in terms of charity" (T31: 8), and "We're not a charity – we're driven by a business model" (T02: 13), were common. Thus, 'worthiness' is a function of both *need* and *contribution* to the enterprise. This involves creating occasions to provide those with greater need with the opportunity to claim benefits by making contributions to the enterprise. This is not limited to human stakeholders, but also includes natural systems. In such instances, a certain quality of natural resources is framed as making crucial contributions to the enterprise's other purposes, such as the quality of the coral at Chumbe Island, or the quality of the woodland at Hill Holt Wood. As one of Hill Holt wood's entrepreneurs explained about the contribution of the woodland to their goal of helping disadvantaged young people:

> "The countryside is a great healer. It's what we've found in our young people. That's the edge that allows us to really work with these young people. Bring them from these urban estates into this woodland environment and they actually *change*." (T02: 28)

The principle of worthy contribution integrates the goal of helping those in need with the justification, and necessity, of using benefit flows to induce contributions to the enterprise. In this way, the organising tensions of sustainability enterprise that would result from use of a conventional organising scheme are resolved by the use of perpetual reasoning as the guiding logic of organisation design. Through qualitative management, the substantive nature of the organising tensions is addressed. Through benefit stacking, possible conflicts between the three poles are transformed into synergies of efficient organisational configurations. Through strategic satisficing, the conflicts that do remain are balanced without sacrificing the importance of any single pole. Through the principle of worthy contribution, those with need are able to contend with those with power for claims to benefit stream. Thus, while efficiency of design and power over resources remain two fundamental poles that exert influence on an emerging organisational design, their influence is manifest differently in the process of sustainability entrepreneurship because they are approached with a markedly different design logic.

6.4 Cognitive Model of Sustainability Enterprise Design

The design logic of the entrepreneurs that resulted in the creation of successful sustainability enterprises were manifest not as a litmus test of dos and don'ts or wills and wont's, but as a more adaptable logic frame for reasoning through a wide array of design problems that had to be confronted as ever new situations arose. Reasoning based on this internally consistent logic set was used as a basis for interpreting and negotiating with the contextual environment.

What is significant is that the entrepreneurs in each enterprise demonstrated this form of reasoning in a range of different organising and managing situations, from broad decisions such as the operating domain and business model, to more day-to-day concerns such as performance targets and staff assignments. This reasoning was exercised intuitively rather than in a calculated fashion, but the entrepreneurs were nevertheless keenly aware of how their actions would change if they were approaching their tasks with a conventional set of reasoning.

The results of this discussion can be displayed in tabular form as a cognitive model of sustainability entrepreneurship. In this model, as displayed in Figure 6.4, the problem solving required for different types of design problems is guided by reference to specific design principles. To begin with is the most basic definitional problem of design – justifying the existence of the enterprise. Based on the purpose of resource perpetuation, sustainability entrepreneurs justify their enterprises' existence as a tool for generating benefit streams by enhancing the quality of resources (both material and human) for the longest time possible.

The central problem of configuring the organisational structures is framed in terms of achieving synergies. This is accomplished based on the principle of benefit stacking, whereby as many benefits as possible are stacked on to an operational activity. To the extent that the organisational structure creates conflict between competing ends, the operational problem is then framed in terms of balancing tradeoffs. Strategic satisficing is a guiding principle for setting targets and goals in which multiple satisfactory outcomes are strategically targeted. Tradeoffs are balanced by giving threshold criteria of satisfaction for each target. The managing problem of decision making is guided by the principle of qualitative management, in which the expected quality of outcomes and processes are used as criteria for decision making.

Finally, the problem of inducing contributions from stakeholders involves the allocation of material and non-material benefits. Guided by the principle of worthy distribution, benefit streams are structured to privilege worthy recipients by providing opportunities to contribute to the enterprise.

Design Problems	*Perpetual Reasoning*
Definitional problem:	Justifying existence
Guiding principle:	Resource perpetuation *Generate benefit streams by enhancing quality of resources for longest time possible*
Structuring problem:	Achieving synergies
Guiding principle:	Benefit stacking *Stack as many benefits as possible onto each operational activity*
Operational problem:	Balancing tradeoffs
Guiding principle:	Strategic satisficing *Strategically target multiple satisfactory outcomes*
Managing problem:	Making decisions
Guiding principle:	Qualitative management *Use expected quality of outcomes and processes as decision making criteria*
Inducement problem:	Allocating benefits
Guiding principle:	Worthy contribution *Structure benefit streams to privilege worthy recipients by providing opportunities for contributing to the enterprise*

Figure 6.4 Cognitive Model of Sustainability Enterprise Design

These principles integrate into an internally consistent logic system. In some respects, they are actually different ways of viewing aspects of one unified rationale. This can be seen by the fact that individual activities can often be justified based on

several of the principles. One example is the decision by *Native*Energy's founders to structure their exit strategy so as to hand over control of the enterprise to their closest Native American supplier partners. This one activity incorporates the principles of benefit stacking, strategic satisficing, qualitative management, and worthy contribution, and is consistent with the basic purpose of the enterprise.

6.5 Conclusion and Summary of Cognitive Model

Despite their emphasis on qualitative outcomes, each entrepreneur proved adept at securing those outcomes through earned income, and generating benefit streams that flowed to a host of stakeholders. What were considered to be benefits were not limited to financial rewards or other forms of material compensation, but included such qualitative benefits as personal development, access to opportunities, and so on. Each enterprise was a leader in its industry, and was consistent with or outperformed rival, conventional enterprises. This is not to suggest that such enterprises will always outperform more conventional enterprises in the marketplace, but it does demonstrate that they can.

While efficiency of design and power over resources remain two fundamental poles that exert influence on the emerging organisational designs, their influence is manifest differently in the process of sustainability entrepreneurship because they are approached with this markedly different design logic. The basis for this design logic is the unique instrumental view the sustainability entrepreneurs hold of their enterprises – namely, that the enterprises are for perpetuating rather than exploiting resources. The principles of perpetual reasoning that emanate from this view represent the integration of substantively rational organising rules into an organisational form based on formal rationality. Through the use of these heuristics, sustainability entrepreneurs are able to grapple with both intention and contingency. The result is the creation of sustainability enterprises, a novel organisational form built to sufficiently manage the tensions between activities that benefit self, other people, and nonhuman nature.

CHAPTER 7

PROCESSES OF SUSTAINABILITY ENTERPRISE DESIGN

Things derive their being and nature by mutual dependence, and are nothing by themselves.

Nagarjuna

Mūlamādhyamikakārikās (circa 2nd century CE)

7.1 Sustaining the Sustainability Enterprise

In the previous chapter we saw how successful sustainability entrepreneurs use a unique design logic to create new sustainability enterprises; that is, enterprises in which the same activities that contribute to the enterprise's own continued existence also contribute to sustainable development of the wider social-ecological system. This leads to the second guiding research question: How can an entrepreneur ensure the sustainability character of the enterprise lasts into the future, beyond the involvement of the original founders? To tackle this question I pose a number of retroductive questions based on the case studies, and then use analytical outcomes from the case data to help answer those questions. In doing this, the chapter first develops a descriptive stage model of sustainability enterprise design. Following this, the critical incidents and processes that drive the transition from one stage to the next are detailed. Finally, the implications of these processes for the pacing of critical transitions in the enterprise design process are explored. By the end of the chapter a full process model that describes and explains the process of sustainability enterprise design is developed.

7.2 Developing a Stage Model of Sustainability Enterprise Design

The premises of this guiding question suggest that for successful enterprises that continue as a going concern, a time inevitably comes when the founding entrepreneurs must relinquish control of the enterprise to other organisational stakeholders. Given that they intend for the enterprise to continue its purpose of contributing to sustainable development indefinitely, what do sustainability entrepreneurs do to help ensure this purpose remains with the enterprise after their departure?

This question could be framed in terms of the classic problem identified in the organisation and management literature of goal displacement (Etzioni 1964; Warner and Havens 1968). From this perspective, the entrepreneur's activities could be viewed as attempts to pre-emptively guard against tendencies for goal displacement that might occur after the entrepreneur's departure. But framing the problem in that way implies a static enterprise with rigid goals. What happens when the particular goals and methods of goal achievement that are suitable at the time the entrepreneur exits the enterprise become unsuitable as contexts change over time? It is well accepted that continued organisational survival is dependent on an organisation's capacity to adapt and change with changing circumstances. This poses a particular quandary for sustainability entrepreneurs. If ensuring an enterprise's continued contribution to sustainable development cannot be achieved by 'locking in' a particular set of goals and procedures for achieving those goals, then how can the central contributory quality of the enterprise be sustained without the entrepreneur's continued presence to guide the enterprise?

Perhaps the extant management and organisation literatures have little to say on this issue because this is not a pressing concern for entrepreneurship as it is conventionally understood. If the sole purpose of launching an enterprise is to obtain a financial return for the entrepreneur, then at the point at which the entrepreneur's cheque clears, all of his or her vested interests in the enterprise will also clear. In reality most entrepreneurs probably do have some, at least sentimental or prestige, interest in the future of their enterprises. But for sustainability entrepreneurs the continuity of purpose is of great concern because the purpose for which their enterprises were formed does not end when they end their involvement. Perhaps a more exact way to frame the problem is with what the nonprofit management literature terms 'mission drift' (Dees et al. 2002; Hishigsuren 2007; Jones 2007). 'Mission'

implies a guiding purpose that is more holistic than a goal, but also less tangible. However, even this framing still fails to capture the totality of the challenge. It is not only the organisational mission that must be maintained, but also the values with which the sustainability entrepreneurs have chosen to pursue that mission. Thus, the challenge a sustainability entrepreneur faces is how to maintain the enterprise's multi-purpose mission and the unique approach to achieving that mission, while acknowledging that the enterprise must necessarily change and evolve over time to continue achieving the mission. As one of the sustainability entrepreneurs stated upon reflecting on her exit from her company: "I think that the biggest challenge is how to keep those [core values] alive..." (T36: 33).

One possibility for labelling the intangible yet recognisably distinct mission and approach of sustainability enterprises is with the concept of organisational 'character'. This concept, originally developed by Selznick (1957), was revived by Birnholtz and colleagues to describe "the coherent content of the ensemble of dispositions that generates the distinctive actions of the organization" (2007: 317). They suggested these action dispositions are a form of procedural memory produced through joint problem-solving experiences. In the case of sustainability entrepreneurship, the procedural memory that in the face of continual novelty consistently produces recognisable activity patterns is the *perpetual reasoning* described in chapter 6. The principles of perpetual reasoning provide organisational actors with guidance for interpreting and structuring activity in novel situations in a way that is consistent with a core set of values. This produced enterprises with a sustainability 'character'. As described in section 5.6, balancing the interests of the 'self' and the 'other', where the 'other' includes both social and environmental interests, is the hallmark of this sustainability character. These enterprises consistently demonstrated the ability to balance the potentially competing interests of multiple goals by structuring activities so that beneficial outcomes in one domain reinforced the beneficial outcomes of other domains. From this perspective, the final challenge of the sustainability entrepreneur is to ensure that this character becomes a self-reliant property of the enterprise itself.

If character self-reliance is the 'functional endpoint' of the process of sustainability enterprise design from the entrepreneur's perspective, the 'initial condition' giving rise to the new venture can be considered to be the original entrepreneurial

intention. Sustainability entrepreneurs demonstrated a particular type of intention – an existentialist intention expressing dissatisfaction with current modes of operating together with a desire to create new meaning and values by organising activities in new ways. They expressed this frustration in their own ways:

> Native*Energy*: "[Through previous experience we had] realised a couple of fundamental challenges... It's like beating our heads against the wall...Gee, there's got to be a way to do this." (T21: 7-8)

> *ForesTrade*: "This evolved over my working with environmental groups or with NGOs and finding how those models weren't sustainable. And so wanting to address the major social and environmental challenges of the day."..."We were always aware of the challenge, but we were also always aware that if you just keep taking a step forward, you can make it possible. And so we just really kept looking at what was possible." (38: 39–40)

> *Hill Holt Wood*: "I was seeing a countryside that to me was going downhill fast. And I wanted to change that. I wanted to see a countryside that was going the opposite way, becoming a better place, environmentally, rather than worse. And to me it seemed doable...And it was the old thing of people saying, you can't do that, I'm not interested in doing that. Well bugger you, I'll do it." (T14: 8-9)

> *Chumbe Island*: "Actually it was something I was brooding over for years... seeing people blasting the reefs and trying to raise attention to this being a problem. And realising that nobody seemed to understand there was a problem... So I thought, why isn't there a marine park so people can see what is there, and learn about it?" (T30: 10-11)

At the point of inception, the potential for the emerging enterprise to develop a sustainability character is wholly dependent on the founding entrepreneur. A model of the sustainability enterprise design process therefore begins with an existential entrepreneurial intention and ends with an enterprise whose sustainability character is wholly self-reliant, as displayed in Figure 7.1.

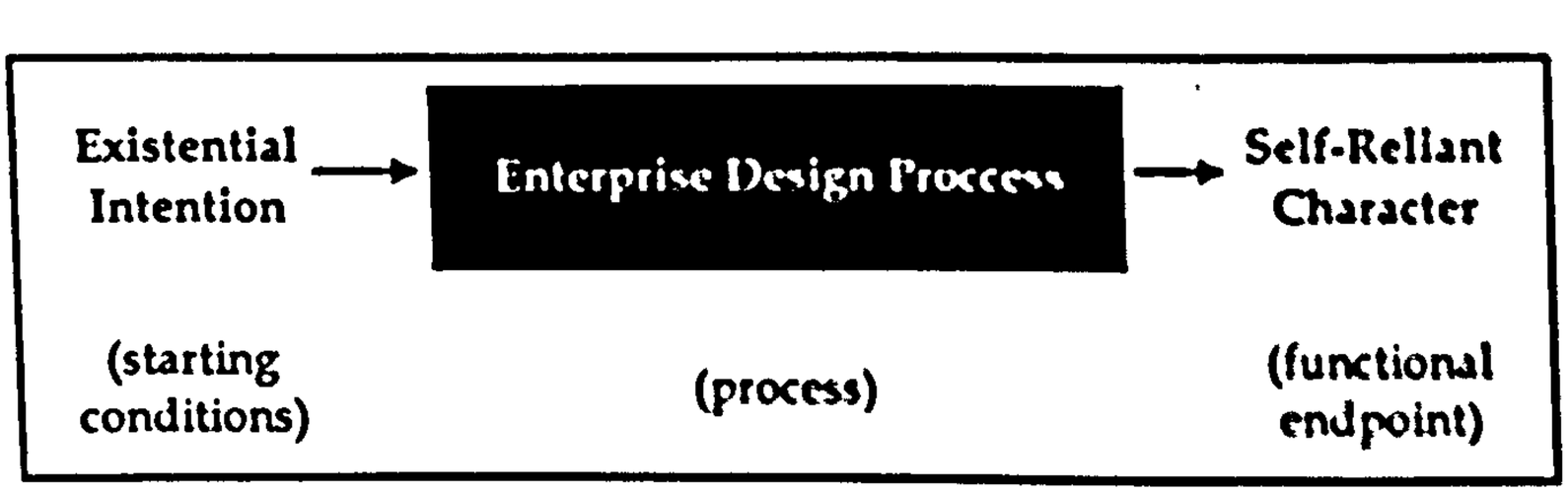

Figure 7.1 Starting and Ending Conditions of Sustainability Enterprise Design

From this we can see that the 'black box' linking the initial conditions to the functional endpoint must involve processes that somehow shift the sustainability character of the enterprise from being completely dependent on the entrepreneur to being completely independent of the entrepreneur. As presented in Figure 7.2, the extremes on the end of such a spectrum, plus a blended period in the middle in which the character is mutually dependent on the entrepreneur and the enterprise, suggest the process can be described by a three-stage model of decreasing entrepreneurial reliance and increasing enterprise self-reliance. The first stage, 'dependent origination', describes the initial period in which the enterprise is being formed, at which point the future character of the enterprise is completely reliant on the founding entrepreneur. The second stage, 'co-dependent cultivation', describes the period in which the entrepreneur, together with the enterprise's other stakeholders, are cultivating the enterprise to realise its full potential. At this point the enterprise character is a product of the co-dependence of the entrepreneur and the enterprise as a whole. The final stage, 'independent progression', describes the period in which the fate of the enterprise's character is no longer reliant on the entrepreneur. As the enterprise progresses toward the future, character maintenance is completely self-reliant on the enterprise itself.

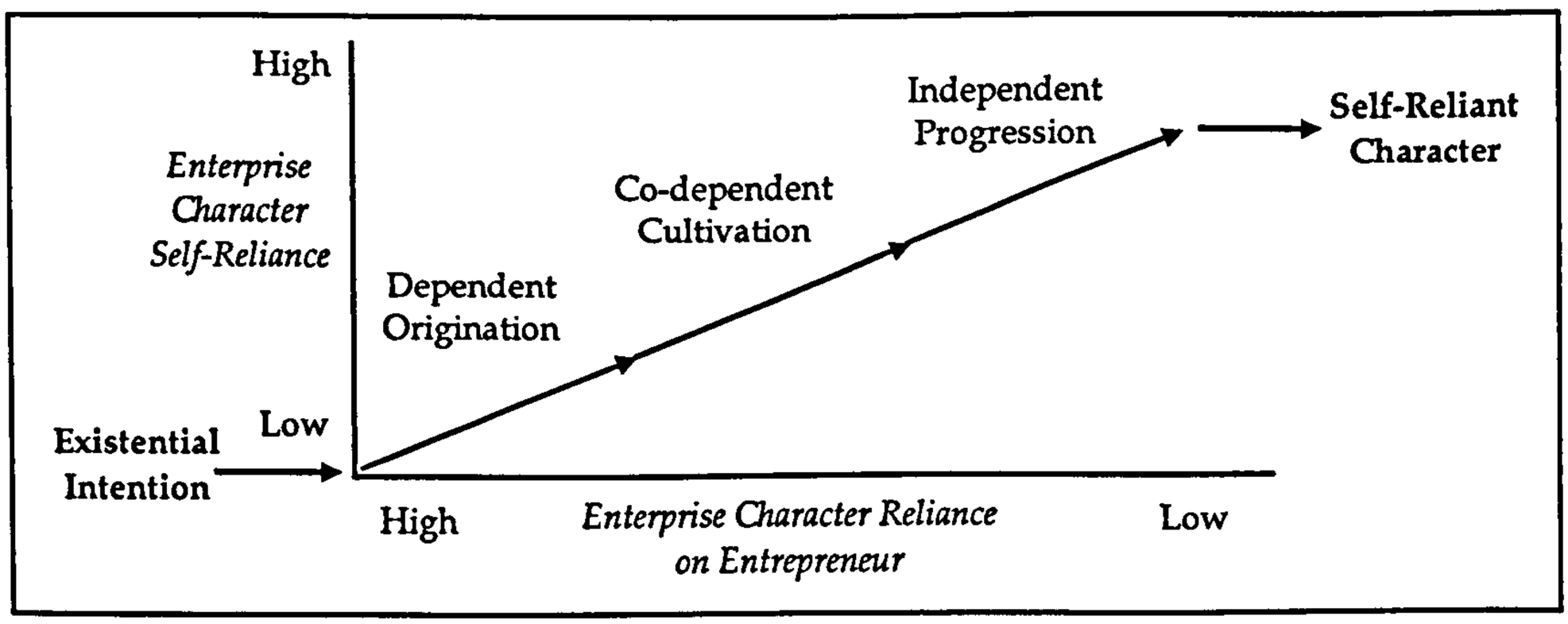

Figure 7.2 A Three-Stage Model of Sustainability Enterprise Design

This stage model provides a generalised descriptive account of the shifting locus of the enterprise's sustainability character. This is representative of the design histories of the cases in this study. The purposes that drove these enterprises and the possibility of achieving those purposes with innovative approaches to organis-

ing all germinated in the minds of individuals through their particular values and life experiences. However, to achieve those visions their purposes necessarily became shared visions, and their pursuits necessarily became collective endeavours. But if and how the locus of the distinct sustainability character passes from the entrepreneur to the enterprise as a whole depends on certain critical incidents and driving processes. A closer examination of the cases yields some insights as to what critical incidents must transpire for the enterprise to transition from one stage to the next, and what processes drive this progression.

7.3 Critical Incidents and Driving Processes

We can begin to address this issue with the help of Baier's (1986) use of Locke's notion of 'entrusting'. As Baier explained, we need the help of others "in creating, and then in not merely guarding but looking after the things we most value." She further explained that "we must allow many other people to get into positions where they can, if they choose, injure what we care about, since those are the same positions that they must be in in order to help us take care of what we care about" (1986: 236). This is certainly applicable to entrepreneurship and enterprise, as both require the contributions of numerous others to succeed. These contributory others are now usually referred to as organisational stakeholders (Clarkson 1995; Freeman 1984). Thus, the concept of entrustment as a "three-pronged predicate [where] A trusts B with valued thing C" (Baier 1986: 236) is a useful model for understanding the process of founding and developing a sustainability enterprise. In fact, the central importance of *trust* was a recurring theme that emerged from the case data, and is explored more fully below. But for now, suffice to say the point at which entrepreneurs step out of their enterprise's leadership and ownership positions is also the point in which they most fully *entrust* their enterprise to the care of other stakeholders. Thus, the culmination of this process of entrustment is one critical incident that must transpire.

But before entrustment can take place, there must be something to entrust. What is critical is that the entrepreneurs were able from the very start to structure their enterprises' activity patterns so that individually and in aggregate they reflected values consistent with their intended purposes. Thus both the outcomes

produced and the processes of achieving them – the ends pursued and the means of pursuit – embody the principles of sustainable development. This was made possible through the use of perpetual reasoning as a design logic that guided the entrepreneurs' efforts to reform existing resource flows and activity patterns into new organisational systems. Existing research has demonstrated the strong link between the interpretive schemes of strong organisational leaders and resulting organisational structures (Brief and Downey 1983; Downey and Brief 1986; Schneider 1997; Schneider and Reinhard 1993). As detailed in the previous chapter, there was a strong congruence between the founding entrepreneurs' values and the way they structured their enterprises, as interpreted with the perpetual reasoning design logic. Thus, the initial *configuration* of the enterprise's structures and processes in a way that reflects sustainability principles represents another critical incident that must transpire during the design process. The ongoing restructuring of the enterprise to account for changing circumstances was an important theme that emerged from the data, as will be discussed below.

However, there is still a key piece of the puzzle missing. Given that the sustainability character of the enterprises emanated from the intentions, values, and cognitions of the founding entrepreneurs, on what grounds can the entrepreneurs then trust the other enterprise stakeholders to maintain this character in their absence? While entrepreneurs may be forced to *rely* on other stakeholders, Baier argued that reliance and trust are not synonymous. Trust, specifically, is "reliance on another's good will" (Baier 1986: 234). But this is a question not only of other stakeholders' *willingness* to maintain the same character, but also their *ability* to maintain it. Thus, for entrepreneurs to entrust their valued enterprises to other stakeholders, they must have reason to believe those stakeholders are both willing and able to maintain its sustainability character. A key indication of why entrusting sustainability entrepreneurs did have reason for this belief was evident in the case data: the perpetual reasoning demonstrated by the entrepreneurs was also demonstrated by other key organisational stakeholders in positions of responsibility and authority. In other words, somewhere along the way these key stakeholders *appropriated* the entrepreneur's design logic and were using this interpretive scheme to guide their activities on behalf of the enterprise. Thus, the appropriation of perpetual reasoning

by other key stakeholders is the basis for entrustment, and this critical incident links the initial configuring with the eventual entrusting.

As displayed diagrammatically in Figure 7.3, these three critical incidents, *configuring*, *appropriating*, and *entrusting*, are necessary links connecting the sustainability entrepreneur's initial intention to the enterprise that is self-reliant in maintaining its sustainability character. However, an examination of the case data reveals that these critical incidents are only particular periods of what are otherwise ongoing design processes, which we can call 'structuring', 'culturing', and 'trusting'. These longer running processes are responsible for enabling the critical incidents to take place. It is the unfolding of these processes in concert that enable the enterprise to transition from one phase to the next. Therefore, the remainder of this section separately examines each of these processes before turning in the next section to explore the interaction of these three processes and the implications for the development of sustainability enterprises. While none of the entrepreneurs in this study's case set have fully completed the process of entrustment, some are close and all have progressed along the stages to the extent that their activities indicate what an idealised model of this process would necessarily entail.

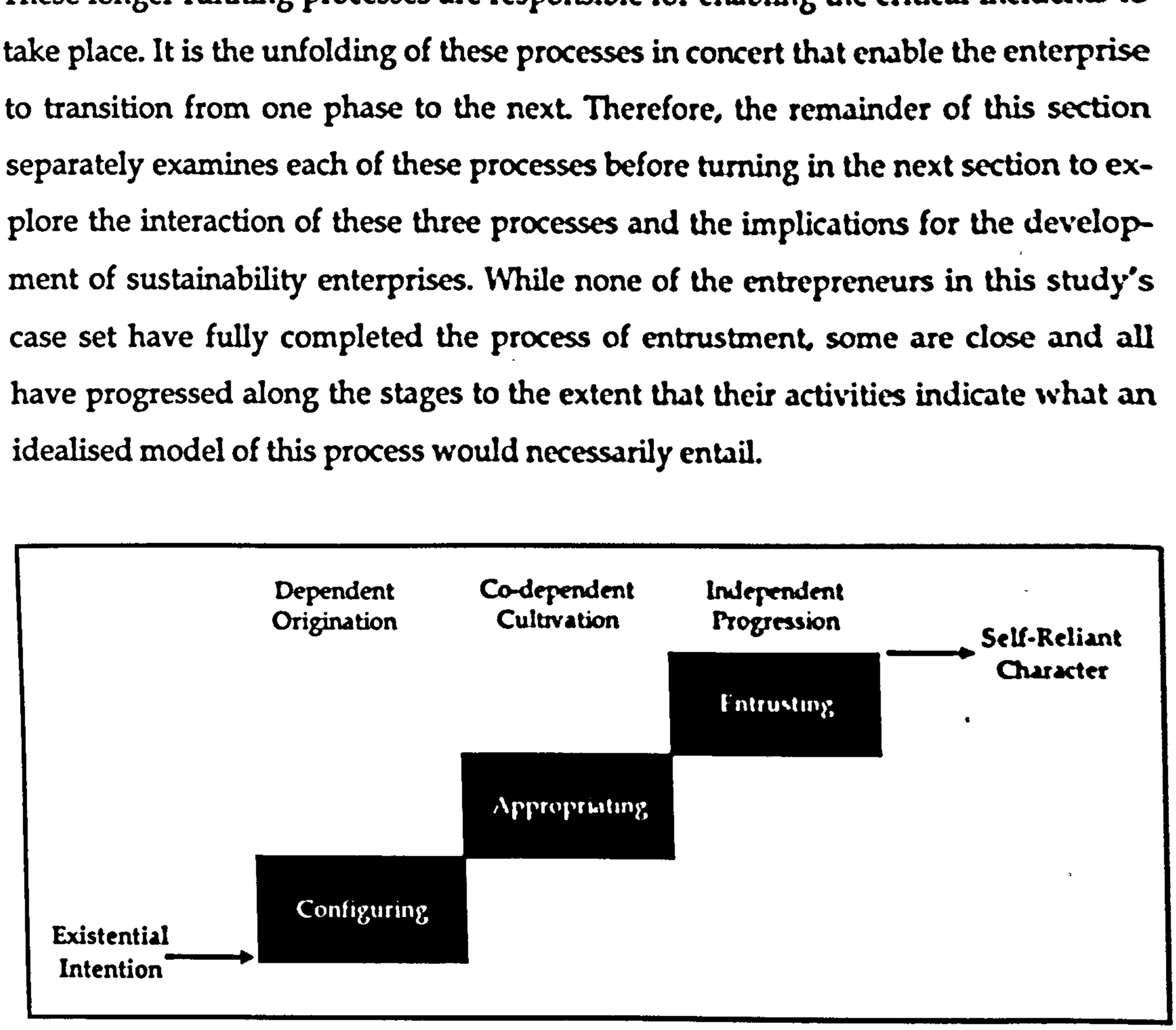

Figure 7.3 Critical Incidents Leading to Entrustment

7.3.1 *Trusting*

The central importance of trust was a theme that emerged from all of the cases, as evidenced by statements such as "building up trust was so important" (T09: 7), "it took a lot of trust for the farmers and the community to begin to work with [us]"

(T36: 17), and "you end up with key relationships with one or more key people and these partners, whether they're businesses or organisations, and trust is a huge issue there" (T18: 16). The presence or absence of trust played a key role in enabling or inhibiting the manner in which the entrepreneurs could enact their visions. A great deal of time and effort was spent on building trusting relationships with stakeholders, many of whom were initially sceptical of the entrepreneur's motives and intentions. This trust had to be built in both directions; first the entrepreneurs had to establish their trustworthiness in the eyes of key stakeholders, but later the stakeholders also had to prove their trustworthiness to the entrepreneurs. When trust building was successful it had the potential to result in new, previously unforeseen possibilities to extend the enterprise's mission. In the case of *Native*Energy the trusting relationship that developed between the entrepreneurs and their tribal suppliers led to the opportunity for the tribes to become owners of the enterprise. In the case of Hill Holt Wood, the trusting relationship that developed between the entrepreneurs and the community led to the opportunity for the community to take over control of the enterprise. Lack of trust was also an important issue. At Chumbe Island, lack of trust between some stakeholders was identified as a limiting factor in the enterprise's ability to exceed its present state of development, and at ForesTrade a sudden breakdown in trust instigated a drastic restructuring of the enterprise. Figure 7.4 displays the types of trust building that were associated with each stage of the enterprise's design process.

Design stage:	Dependent Origination	Co-dependent Cultivation	Independent Progression
Trusting process:	• Building organisational trustworthiness via legitimising activities	• Building stakeholder trustworthiness via capability development	• Transferring control from founders to trusted stakeholders via role replacement

Figure 7.4 Trusting Process of Sustainability Enterprise Design

Early in the enterprise design process, during the 'dependent origination' stage, all of the entrepreneurs faced a large degree of scepticism. Some of the early distrust stemmed from particular socio-cultural contexts in which the entrepreneurs

were operating. For example at Chumbe Island in Tanzania, the founder explained that as "investors, especially after forty years of socialism, you are seen like, profiteering, bad guy, coming to exploit the country; coming to exploit the people" (T30: 14). At Hill Holt Wood, the entrepreneurs faced some ethnic and lifestyle prejudices. As they explained, some members of the community reasoned: "'they live in a caravan, she's Irish, they're tinkers...' So we had to go down and we had to sort of address that. When people met us their *immediate* reaction was, 'But you're normal looking!' And we'd go, yes, what did you expect? So we had a lot of prejudices to break down" (T05: 6-7). At ForesTrade, the legacy of land appropriation from colonialism and dictatorship made working with the farmers to obtain organic certification more challenging, as one of the entrepreneurs explained: "Normally, and we've seen this over and over again, the first step for farmers having someone come in and map their farm is usually a first step in giving their land away" (T36: 16-7). At *Native*Energy, some initial distrust arose due to the enterprise's name, and the historical profiteering from the use of Native American cultural symbols. As one of their Native American tribal partners explained:

> "Once we realised they weren't Indians – because I was already busy doing a beer company that had taken a name from one of the people from the Lakota history and put that on the beer without permission. I was already sensitive to that sort of thing, the branding issue, and realising the power of brands, and wanted to find out how these guys were claiming themselves to be native." (T17: 6)

However, despite these socio-cultural challenges, the more significant challenge came from the new ground these entrepreneurs were breaking, and the unconventional ways they went about doing business. One of the entrepreneurs explained: "Put new company and new service category together and you get sceptical buyers" (T20: 16). In addition, the entrepreneurs' motives were questioned because they were claiming to be doing good things for the environment and society, and yet they were organised as for-profit enterprises. As the founder of Chumbe Island explained: "Being private we also were just not taken seriously. Chumbe was seen as another tourist project just being very smart in their marketing" (T31: 30-1). This challenge for the entrepreneurs resonates with the literature on legitimacy (Suchman 1995). However, the usual approach suggested by the literature of adapting business models and organisational forms to reflect currently accepted modes of

organising (e.g. DiMaggio and Powell 1983), was not an option for these entrepreneurs. Rather, they seemed to take two general approaches to the quest to obtain the legitimacy that they needed to obtain necessary stakeholder support. One approach was to communicate to sceptical stakeholders about what their enterprise was about and why they were insisting on doing things differently. These communications generally attempted to reframe their activities from an anomalous phenomenon worthy of suspicion to a laudable difference worthy of celebration and support. For example, one of the founders of Hill Holt Wood explained his conversation with a Forestry Commission planner about his desire to make a home and business in the ancient woodland:

> "[The planner said] 'You're serious? Out of the question. Not a possibility. Over my dead body. Think of the precedent.' And I said, yes, think of the precedent. Think of a woodland that's properly managed, that's open to the public, that provides jobs, that spreads an environmental message out to the wider public. All very positive things, I think, really. Sustainable development. It's all very positive. And now they've switched on. Now they've seen it. They like it." (T02: 8)

In addition to constantly communicating their mission and vision to reframe stakeholder perspectives, another important strategy for the entrepreneurs was to gain legitimacy by associating with other acceptable, reputable, and well-established organisations. For example, for Chumbe Island this was accomplished by applying for and winning prestigious conservation and responsible tourism awards. The entrepreneur explained the importance of the credibility the enterprise obtained from those awards: "That was actually more important. That was recognition of what we're doing. Because it was *very* hard in those days to be recognised" (T31: 30-1). For *Native*Energy, partnerships with well-known 'ethical' brands such as Ben and Jerry's, Stonyfield Farm, and Clif Bar were an important source of credibility. As the company's marketing director explained: "when you put that list of companies in front of someone and say, 'Well, these are the people, this is the kind of company that does this', it builds some credibility and acceptance..." (T21: 5).

Once trust in the entrepreneur's vision, motivation, and ability to deliver were established, trust building during the 'co-dependent cultivation' stage of enterprise development focused more on increasing the founders' trust in their organisational stakeholders. This trust was established only over time, and often after ex-

periences of close, repeated interactions between the entrepreneur and other stakeholders. For example, *Native*Energy developed a deep trust in some of their Native American supplier partners after a series of negotiations and other interactions over time. One of the entrepreneurs explained how this trusting relationship developed:

> "Basically, during the whole process of negotiating the agreement with the Rosebud Sioux tribe...we grew to respect them and they grew to respect us. And once that sort of negotiation was done, then it was all the interactions around how is this project going, the information exchange, how do we help, how do they help us... They were open, honest, and frank." (T19: 20-1)

Trust in other organisational stakeholders was based in large part on an assessment of how well their values aligned with the entrepreneur's values for the enterprise, and the intentions of the stakeholders to base their organisational activities on these values. For example, at ForesTrade, after a large-scale restructuring of operations brought about by a serious breach of trust, the entrepreneurs made their choice for a new country director to head all Indonesia-based operations based on the values they had observed in one of their employees over time. The entrepreneurs explained their choice:

> "We met Lucia and she started to help us with administration and just became pretty clear pretty quickly that she made sense to be the director. And it wasn't easy because we already had a bunch of men working for us and the idea of a woman – a Chinese woman – being their boss was not easy for their egos, but we could just see she cared about things. And we could see that she would be fair to people and really create the kind of culture that we wanted." (T36: 39)

But stakeholder values were not the only basis for trust. The competence, or capability to put those values into effective practice on the enterprise's behalf was also an important basis for trust. At Chumbe Island, developing the competence of the staff was an important means of building trust. As the entrepreneur explained:

"Training, training, training...Constant training...Now people are competent enough...I think the people that are working with us now, they're really doing good stuff." (T31: 20-1, 40). This attention to the values, intentions, and capabilities of stakeholders as the bases of trust support some of the literature on trust that distinguishes between several different types of trust, in this case what has been termed 'normative' trust, 'goodwill' trust, and 'competence' trust (Humphrey 1998; Lane 1998; Mishra 1996; Sako 2006). However, depending on the context, the entrepre-

neurs differentially identified some of these as being of more concern than others. For example, at Hill Holt Wood, the values of key stakeholders were identified as the greatest trust-based threat to the enterprise maintaining its mission. As one of the entrepreneurs expressed: "The danger would be if you have a chair [of the board], like we did have briefly, who was trying to bring people in with a different vision" (T10: 11). By contrast, at *Native*Energy when the entrepreneurs were seeking new investors they felt the values basis would take care of itself, but worried more about the competence of those who might have influence over the enterprise:

> "I think that anybody that invests in *Native*Energy is going to do so because they believe that what we are doing, that is, the direction we're going in is something that's worth investing in. So I don't really see them, as a practical matter, investing in *Native*Energy and then taking us in a different direction than what they invested in. I do ultimately worry about control because I don't know who these investors are yet. I don't know how well I trust them yet to make decisions for the company that affect me financially. Tom and I have the experience and they don't. And if they exercise control without experience, that makes mistakes. That's what worries me." (T19: 25-6)

During the final 'independent progression' stage of enterprise development the trusting process focused on shifting control and responsibility for the enterprise to a trusted group of stakeholders. As Baier suggested: "To entrust is intentionally and usually formally to hand over the care of something to someone" (1986: 240). Thus, for the sustainability entrepreneurs this period involved selecting and preparing a group of key stakeholders in whom the enterprise's future, and the purpose, values, and mission it embodied, could be entrusted. As with the other stages of trust building, this involved identifying stakeholders with the appropriate mix of values, goodwill, and competence to successfully guide the enterprise's continuous development. For example, the founders of *Native*Energy were comfortable with the values they shared with their Native American tribal partners, but felt that over the long term they needed to develop their chosen successors' competence in their business and market. As they explained: "we'll be looking for the best Native American talent to bring in" (T18: 24). Similarly, the founders of Hill Holt Wood felt they needed to prepare the community to be able to handle the responsibilities of looking after the enterprise. One of the entrepreneurs described the situation: "The community's got to have the ability to take it over. So it required development of the Hill Holt Wood management committee to a level where they could take it over" (T14:

10-11). When the founders of ForesTrade chose a new CEO to assume leadership of day-to-day operations, they looked for someone with the appropriate competencies, but also someone who they felt would champion the enterprise's values:

> "We brought in a new CEO with a lot of private sector experience... [When selecting him] we just asked a lot of questions about him and we learned that he'd grown up in Venezuela and gone to school in a two-room schoolhouse with small producers' kids and kids who came to school with no shoes and we knew he was a third generation farmer. So we figured with that kind of life experience we would find someone who really cared about the population that we were seeking to also serve." (T37: 10, 12)

The process of entrustment therefore involves replacing the organisational functions that the entrepreneurs serve with other trusted individuals. The two most important functions are that of day-to-day leadership and the ultimate source of control, ownership. This transition occurred in a different order in the different enterprises, and was always a graduated process, often stretching over a number of years. For example, at Chumbe Island the founder handed over the day-to-day leadership role a decade ago, but still retains sole ownership of the enterprise and continues to serve a governance and oversight function. With an exact opposite sequence, the founders of Hill Holt Wood turned over complete ownership to the community while they still continued in their roles as enterprise managers. At ForesTrade the founder's share of ownership has steadily decreased over time as they sought new investment capital, but only recently did they hand over day-to-day leadership to a newly selected successor. Similarly, *Native*Energy became majority owned by a trusted stakeholder group, although the founders still maintain their roles on the board and as the company's top executive officers.

As this look at the trust building processes of sustainability enterprise design makes clear, the act of entrustment is only one point in a long, and at times difficult, process of building trust between the entrepreneur and key organisational stakeholders. Baier's assessment of trust building appears applicable here: "Trust is much easier to maintain than it is to get started and it is never hard to destroy" (1986: 242). In the words of one of the sustainability entrepreneurs: It's "bloody hard work to get it. Because you don't start from that point. You have to win it. And it's taken us years to win it" (T10: 24).

7.3.2 *Culturing*

The importance of shared values and cognitions within the organisation was another theme that emerged from all of the cases, as evidenced by statements such as "I was getting a tutorial fast and could quickly see how important it was to have people that were really closely aligned to our values" (T36: 22), "it's just always been done this way" (T22: 12), and "it's part of the DNA" (T37: 13). This process was labelled a 'culturing' process because it resonates with the organisational culture literature. As is clear from our discussion of trust, the competencies of organisational stakeholders played a vital role in facilitating the enterprises' development. Although technical skills were important, in many instances the stakeholder competency the entrepreneurs cared most about was their ability to approach tasks and solve problems in a manner that was consistent with the entrepreneurs' own approach. This required shared values, consistent with the ideals of sustainable development, and a shared cognitive scheme, represented by the perpetual reasoning design logic. The process of culturing can be understood as the process of achieving these shared values and cognitions. Figure 7.5 displays the aspects of the culturing process that were associated with each stage of the enterprise's design process.

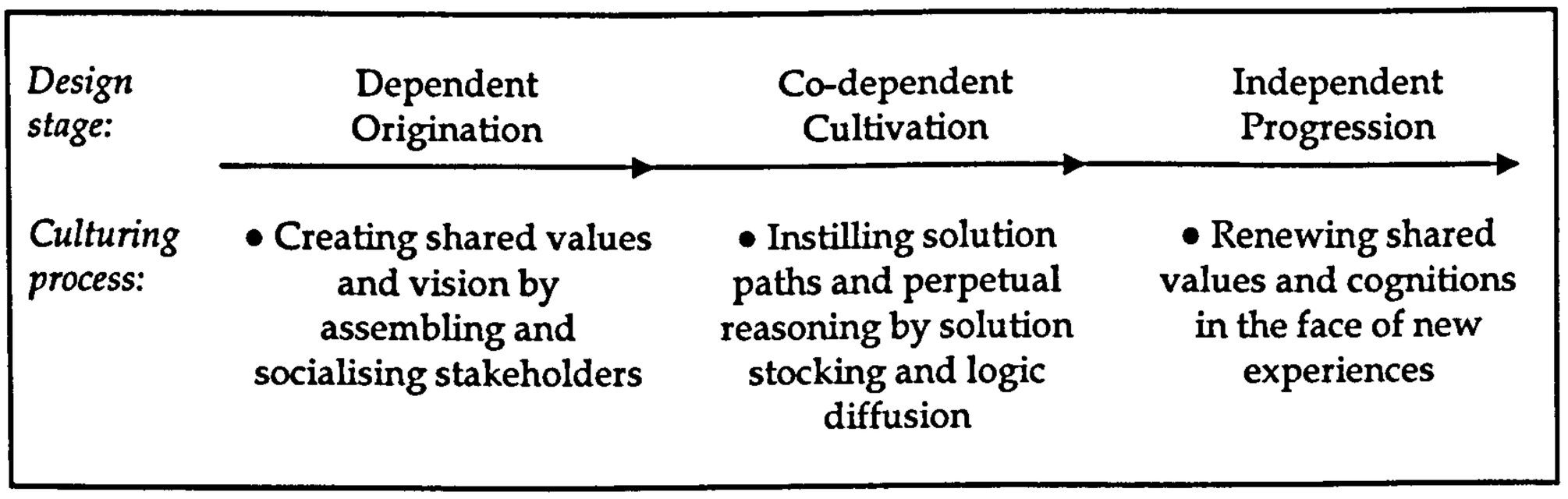

Figure 7.5 Culturing Process of Sustainability Enterprise Design

Recruiting critical support from stakeholders was an important ongoing activity for all of these enterprises, but it was particularly important during the early 'dependent origination' stage when the enterprises were first materialising. At this point the entrepreneurs sometimes had to make a difficult tradeoff between recruiting stakeholders with the desired skills, and recruiting those who demonstrated similar values. For the founders of ForesTrade, the results of this tradeoff were clear:

"the times that we've made mistakes is when we've hired people for mainly their skill sets and not their values" (T36: 31). Having shared values among stakeholders was not a matter of convenience, but of real and lasting import for two reasons. First, all stakeholders have some influence over organisational activities, no matter how small. Obviously the more control the stakeholder has over the organisation, such as senior management, significant investors, or members of the board, the more important it was to share common values. This was particularly important between co-founders when the enterprise was being launched by an entrepreneurial team. An early member of *Native*Energy's entrepreneurial team explained their group's common values based on their long history of shared experiences:

> "We'd been in that space for a long time. And so it wasn't as though four random guys got together and said, 'Hey, you want to form a company? I think there's an opportunity here. Let's go get it.' I mean this wasn't a Google kind of thing. It was - we'd been working hard on that vision..." (T21: 7-8)

The second reason it was important to have shared values among stakeholders is that the entrepreneurs were developing unconventional business models and organising activities in new and unusual ways. Shared values were important for fostering understanding of the necessity and significance of these innovative forms of organising. As one of the founders of Hill Holt Wood explained: "I think that was really pivotal. Getting some really key people, who are still here now eight or nine years later, who bought into this vision and this dream and didn't see that it was wacky. Or bought into it because they believed in it" (T05: 6). She explained one of the first activities they undertook when starting to build their enterprise: "We were slowly creating a bank of like-minded people as a support network. That happened very quickly. I think *that* - if you were to ask me what was the single most *pivotal* thing, I think that was really pivotal" (T05: 6). The primary means of attracting support from stakeholders with common values was by articulating the entrepreneur's vision for a future of new possibilities. These visions tended to be inclusive, participatory, and empowering toward key stakeholder groups, such as Hill Holt Wood's vision for a public-access woodland, *Native*Energy and ForesTrade's visions for empowering producers and consumers to make beneficial changes through their participation, and Chumbe Island's vision for a marine resource that

would contribute to educating the next generation of Zanzibaris about their unique natural endowments.

In addition to recruiting new stakeholders with similar values, two other mechanisms were employed for achieving shared values within the organisation. One was to try to spread the entrepreneur's values to stakeholders who did not necessarily share them, and the other, when all else failed, was to separate from stakeholders with irreconcilable differences. A number of the cases demonstrated evidence of employing these mechanisms. For example, at Chumbe Island the founder spoke of the importance of hiring employees from local communities: "you want to win them for the cause of conservation, and it's not just by paying them a salary, I mean their understanding..." (T31: 21). This is consistent with the literature on organisational socialisation and enculturation processes (Peterson and Smith 2000; Schein 1983; Shrivastava and Schneider 1984). This is not to say that the process of sharing values is necessarily unidirectional or that values do not evolve over time, but there must at least be a broad commonality of key values between the entrepreneur and other organisational stakeholders, and, as is clear from this discussion, sustainability entrepreneurs utilised a number of mechanisms to establish this shared value base for their enterprises.

During the 'co-dependent cultivation' stage of enterprise development, in addition to establishing a common value base around a shared vision, the culturing process also establishes a shared means of realising that vision. Up until this point the activities of the enterprise and the way it had gone about finding solutions to organising problems were heavily prescribed by the entrepreneurs based on their use of the perpetual reasoning design logic. But efforts to establish this approach as a permanent fixture of the enterprise meant it had become a sort of 'standard operating procedure' for the enterprise as a whole, independent of the entrepreneur. A first-order approach to this task is through what I have called 'solution stocking'. This entails stocking the enterprise's 'knowledge structures' (Lyles and Schwenk 1992; Walsh and Ungson 1991) with solution paths that the entrepreneur has already developed for the enterprise. These took the form of written plans such as environmental management plans, business plans, and other strategic documents. For example, Chumbe Island produces a management plan for the terrestrial and marine ecosystems every several years. Hill Holt Wood also started to produce a business

plan and environmental management plan. The entrepreneur explained his reasoning: "I don't feel I need a business plan. But the business does need one, if you see what I mean. I know where I'm going because I can see the end result..." (T06: 36). However, solution stocking is a static approach to infusing the entrepreneur's practical knowledge into the enterprise because written plans and strategies cannot adapt to changing contexts. So while management plans might be useful indicators for other organisational stakeholders of the entrepreneur's approach, the actual solutions they hold for organising problems are of little long term value.

More important was a dynamic approach of diffusion and appropriation of the entrepreneur's cognitive design logic to other organisational stakeholders. In this way, the perpetual reasoning design logic that begins as an entrepreneurial cognition evolves into an organisational cognition (cf. Schneider and Reinhard 1993). The mechanism by which this process took place appeared to be largely informal and unplanned. It occurred by means of stakeholders observing, discussing, and interacting with the entrepreneur. For example, the founder of Chumbe Island described her interactions with key stakeholders who eventually took on important responsibilities for the enterprise: "We were discussing all the time...We were of course discussing very intensively... I think the management team was quite close...we'd spend a lot of free time together" (T31: 26). Similarly, a long-time employee of *Native*Energy described his understanding of the enterprise's vision and particular style of doing business this way:

> "I don't think there was ever a sit-down discussion that said, 'Look, this is the way we're going to do it.' I think it's just always been done this way... We just had a strategic planning session over the last couple of days in Vermont. We were all in the same room and everybody who works for the company was engaged in the discussion." (T22: 12, 15)

Thus, the organisation-wide acquisition of the perpetual reasoning design logic is as much active appropriation by organisational stakeholders as it is passive diffusion by the entrepreneurs. The result, over time, is an enterprise that as a whole shares a common vision and a common understanding of the approach that is to be taken to pursue that vision. As a long-time employee of Hill Holt Wood explained: "I think you've got the kind of staff who stick around. Stick around, know exactly what the business is about, exactly how it operates, and things that are fundamentally important to that" (T07: 17).

During the final 'independent progression' stage the emphasis was on renewing the enterprise's shared values and cognitions. The literature stresses the importance of 'myths' and 'rituals', as well as informal 'storytelling' to maintain an organisational culture (Brief and Downey 1983; Downey and Brief 1986; Ranson et al. 1980). And in fact, there is evidence that these sorts of methods were employed. As one of Hill Holt Wood's founders explained:

> "Part of the reason the board members are involved is they *enjoy* it. Come to the board meetings, hearing what's going on at Hill Holt Wood, hearing the stories – the little stories – that Karen will tell about a young lad who's done this and done that, and the long convoluted stories about individual trainees and what they're here for. They just love it." (T10: 11)

But the continual process of renewal is also achieved with more formalised reflection processes. In addition to the informal storytelling, Hill Holt Wood's current managing director explained how she writes out the enterprise's core objectives and values, and then will

> "put that document up on the board and then on the back there's a crib sheet for people's comments to say, 'Just to remind you this is what our objectives are.' So, how do I – I mean I look at the environmental, the sustainability and environmental kind of thing, and we discuss it in our self-assessment report; we discuss it. And we make sure everything we do relates back to the values so the key tasks of the employee should relate back to the values of the woodland." (T08: 17-8)

ForesTrade's founders employed a similar technique, but they also emphasised how they attempt to keep the mission and approach relevant for the times:

> "We have a whole thing that we call the ForesTrade Sustainability Principles that's written up and they are the goals [and] practices that we stand by... But it is obviously a process – a constant renewal... To update it and [keep it] in line with the new trends in the areas we're operating in." (T38: 34)

The culturing process that occurs throughout sustainability enterprise design is critical to a sustainability entrepreneur's ability to maintain the purpose of their enterprise after their departure from it. It is during the critical incident of appropriation that the sustainability character transitions from being a characteristic of the entrepreneur to being a characteristic of the enterprise itself. Shared values among the enterprises stakeholders form an essential foundation for this, but it is only

when the unique perpetual reasoning of the entrepreneur becomes an organisational cognition more generally that the sustainability character of the enterprise is truly established. These are dynamic elements that must be continuously renewed over time, which is why static approaches such as solution stocking alone are insufficient. ForesTrade's founders summed up how the confluence of shared values and cognitions throughout the organisation resulted in a purpose-driven enterprise with a persistent sustainability character:

> "A lot of our field staff overseas are very committed to the mission and...you know people use the lingo, "It's part of the DNA." But I think that basically the folks in the field, and I think that a large number of the people that we've hired here in Vermont are very mission-driven." (T37: 13)

7.3.3 Structuring

The importance of structuring processes was a central theme that emerged from the case analysis, as evidenced by statements such as: "I think it's a lot to do with the structure" (T06: 27), "It turned out to be essential because...you really need to have a consistent approach and an accountability structure" (T38: 25), and "being structured that way [is] almost a necessity in order to get the project economics so that they'll work" (T19: 10). A critical element of this process – the perpetual reasoning design logic – was discussed in the previous chapter. However, that discussion is augmented here with a brief exploration of how this design logic was differentially employed as the needs of the enterprise changed over the course of the design process. Figure 7.6 displays the aspects of the structuring process that were associated with each stage of the enterprise's design process.

Structuring

Design stage:	Dependent Origination	Co-dependent Cultivation	Independent Progression
Trusting process:	• Creating new enterprise structures guided by principles of perpetual reasoning	• Gradually modifying organisational structures to reduce founder control and increase stakeholder discretion	• Modifying organisational structures to support long-term maintenance of enterprise character

Figure 7.6 Structuring Process of Sustainability Enterprise Design

At the 'dependent origination' stage, the entrepreneur's full attention was directed toward configuring a new business model with structured processes that would serve the intended purpose of contributing to sustainable development and satisfying the entrepreneur's own needs, and that could be financially supported by earned income. The entrepreneurs were driven to solve specific social and environmental problems before they knew what the solutions might be. They engaged the task of problem solving by drawing on their previous experiences and inquiring into new possibilities. As the *Native*Energy entrepreneurs explained: "there were things we were quite painfully aware of at the time that didn't work very well and other things that had the promise to do well. And that's what was the basis for creating the business strategy that followed" (T20: 3). The founder of Hill Holt Wood described his efforts to solve the problem of devising a new business model:

> "You've got to be out there everyday. You've got to see how the whole thing hangs together. So I was seeing that as the issue, but how do you pay for it, is the question that I was asking myself. And it was when I went to the conference in '92 that I thought, ah! this is the way to do it! So then it was a case of, how do I go on to prove it?" (T14: 9)

This points to what was often the most central question for the entrepreneurs: how to design solutions that could be supported through earned income activities in the competitive marketplace. It was usually this last element that linked the other aspects together. As the founder of Chumbe Island explained: "The coral reef motivation was the main motivation. The education of kids was next. And then tourism became instrumental in the whole package" (T31: 16). It is clear that earning income was not the purpose driving the enterprise design process. Rather, these entrepreneurs viewed earned income as a means of achieving specific social, environmental, and personal outcomes. At this point, as the entrepreneurs fashioned their new enterprises to achieve their multi-purpose missions, the design process by necessity was almost completely controlled by the entrepreneurs. Thus, it was the sustainability purpose of the entrepreneurs that was becoming manifest in the character of the structures and processes of the new enterprises.

During the 'co-dependent cultivation' stage this sustainability character became the co-product of the entrepreneurs and the interactive processes of other organisational stakeholders. The structuring process entailed a gradual modification of organisational activities to incrementally reduce the control of the founding en-

trepreneur and increase the discretionary control of other organisational stakeholders. For example, at Hill Holt Wood, the management structure was eventually modified so that

> "every ranger and senior ranger has an area of the wood that they're responsible for. And they have to manage that bit of the woodland and they...can develop ideas in there. Anything major obviously they have to clear it... with the senior ranger. The senior ranger, if they think it's really major they bring it higher, they bring it to Karen or to me. But otherwise there's a freedom there that the rangers can stamp their own mark on. And that will become part of their reviews." (T06: 20)

The notion of incrementally increasing the discretionary responsibilities of employees during their career progression was recognised in organisation theory by Thompson (1967), and an explanation of this as graduated testing of whether the stakeholder's "implicit theories of organizing" matched those of the entrepreneur's was offered by Brief and Downey (1983: 1076). But for these authors the organisation was held to be static, or constant, and it was the employee's career that was progressing. For the cases in this study we see the same incremental increase and testing of stakeholder discretionary responsibilities, but it has more to do with the *enterprise's* progression from a start-up with strong founder control to a more established enterprise in which performance is a collective achievement.

In the final 'independent progression' stage of enterprise design the focus of structuring activities was on reconfiguring enterprise structures to support maintenance of the sustainability character without the founding entrepreneur's guiding influence. By this point the entrepreneurs function mostly in governance and oversight roles, and therefore the structures reconfigured are mostly concerning these functions. For example, one of the founders of Hill Holt Wood explained:

> "The articles of memorandum were driven by the board. And they were very concerned that our aims and objectives were cast iron. They were absolutely set in concrete. That there was no way you'd get a group of people coming into the business and trying to dominate it and take a different direction... We're still thinking about it, that there might be a second tier of governance...that will have a slightly different remit. They aren't driven by the business model so much. They would say, "no way boy-o, there's *no way* you're felling these trees, you can't do that." (T06: 26-7)

Where entrepreneurial leadership in daily operations did remain beyond ownership and governance, it was codified, or formalised, and mechanisms were

established to try to ensure future organisational stakeholders would be consistent with the founding values and culture. As the ForesTrade founders explained:

> "What Thomas and I sort of did instinctively and winged and did in the field we're now really trying to formalise the process of internal self-assessment and evaluation and then reporting and then developing strategies and goals..." (T37: 12)

Introducing procedures for perpetuating the character of the enterprise were not limited to the activities of top directors and managers. Activities at lower levels of the organisation were also structured for this purpose. For example, a long time employee of Hill Holt Wood described some of the differences over time: "In those days [new rangers were] sort of thrown in... Now what they do is each new ranger follows somebody for a day and then somebody else for the next day and so on and sees how they all work and interact" (T11: 20). Through such mechanisms the informal culture is passed on to new organizational stakeholders. Thus, through the structuring process of sustainability enterprise design, the sustainability character becomes manifest in the enterprise's structured activities and processes, and over time these structures are gradually modified to self-perpetuate the enterprise's sustainability character.

7.4 A Process Model of Sustainability Enterprise Design

7.4.1 Interactive Processes and the Shifting Role of the Entrepreneur

The combined processes of sustainability enterprise design are displayed in Figure 7.7. It is the outcomes of these structuring, culturing, and trusting processes, operating in concert, that explains how the enterprise develops an enduring sustainability character that is independent of the entrepreneur. The important point is that these processes do not operate separately, but interact and reinforce one another. In the 'dependent origination' stage the critical incident is the configuration of the emerging sustainability enterprises by the entrepreneurs, but this process necessarily involves the support of others. To obtain this support the entrepreneurs must establish their own trustworthiness by legitimating their, often unconventional, organising activities. At the same time, achieving a sustainability character in the enterprise requires contributing stakeholders share basic values about the enterprise's purpose

and means of achievement. It is the interaction of these three design processes that results in the emergence of a sustainability enterprise, although at this point the sustainability character is wholly dependent on the entrepreneurs.

In the 'co-dependent cultivation' stage the critical incident for the enterprise's development is the diffusion and appropriation of the entrepreneur's perpetual reasoning design logic by other organisational stakeholders. The goodwill and common vision (provided by shared values) and growing competence (provided in part by the appropriation of the design logic) of organisational stakeholders forms the basis for the entrepreneur's growing trust in them. This is facilitated by gradual modifications in the organisational structure to give incrementally more discretionary control of activities to stakeholders other than the entrepreneur.

In the final 'independent progression' stage the critical incident is the entrustment of the enterprise to a key group of organisational stakeholders. This is supported by modifying organisational structures and processes to reinforce and perpetuate the enterprise's sustainability character, independent of the founding entrepreneur. While the main focus is at the level of enterprise governance and ownership, it also includes activities throughout the enterprise hierarchy. This stage represents a period of renewal for the enterprise as the founding values and modes of operating are reaffirmed, while space is also made for the new enterprise owners and leaders to reinterpret the meaning of these traditions in light of the changing times. Through these processes and stages the locus of the enterprise's sustainability character transitions from being wholly reliant on the entrepreneur to being wholly self-reliant on the enterprise itself.

To effectively shepherd the enterprise through these various stages of the design process, the entrepreneur must take on different roles as the process advances. At the very start the entrepreneur functions as a 'scout', looking for trends, changes, new ideas, and new possibilities, and searching for solutions to specific environmental and social problems. This was evident in each of the enterprise design histories. For example, Hill Holt Wood's founders explained how he solved his enterprise's design problems: "I network a lot. I meet people a lot. I absorb a lot from other people. I see lots other projects and what works and what doesn't work. And from all that information, I sort of 'pshhht' into this is what we want" (T06: 34). While the new enterprises were being formed the entrepreneurs functioned as

'evangelists' for their visions and their new organisations. This is an apt metaphor because the entrepreneurs truly and deeply believed in their visions, the values they embodied, and their approach to realising those visions. And, importantly, they were attempting to build a network of other believers to support their efforts. As one of the ForesTrade entrepreneurs explained: "I've become pretty good at selling vision and values. You have to have a strong and unshakable faith in the rightness of your vision and values, plus a healthy dose of chutzpah" (Marcel 2005: 16).

Once the enterprises were established, the entrepreneurs functioned as 'role models' as the other organisational stakeholders appropriated their approach to organising through informal observations and interactions. As a long-time employee of *Native*Energy explained: "there's not a lot of time to talk about philosophy and approaches... While we're [working] we're learning more about each other and learning more about what it is that philosophically we bring..." (T22: 13). During the later stages of the process, the enterprises were largely self-functioning, without the need for continual direction by the founders. However, the entrepreneurs still provided general governance and oversight, acting as 'guardians' to ensure the enterprises remained true to purpose and maintained their sustainability characters. As the founders of ForesTrade explained: "We've begun the process of transferring leadership...We both function on the Board. [Thomas is] kind of their Chief Sustainability Officer. He's sort of the 'uncle' that advises and guides and helps with the decisions" (T36: 32-3). And finally, although none of the entrepreneurs in these cases have yet completely separated from their enterprises, when they do it is likely they will transition into more of a 'mentor' role. They would no longer have any direct control over the enterprise, but they would likely remain available to provide occasional advice and support, and continue to champion the enterprise and its purpose.

This description of the shifting roles of entrepreneurs is not meant to suggest that the roles are mutually exclusive. Of course the entrepreneurs may, to some degree, always be scouting for new opportunities for the enterprise, and may always be evangelising their visions and approaches, and so forth. But grouping these particular metaphors with each stage of the process indicates which entrepreneurial function is particularly important at that stage.

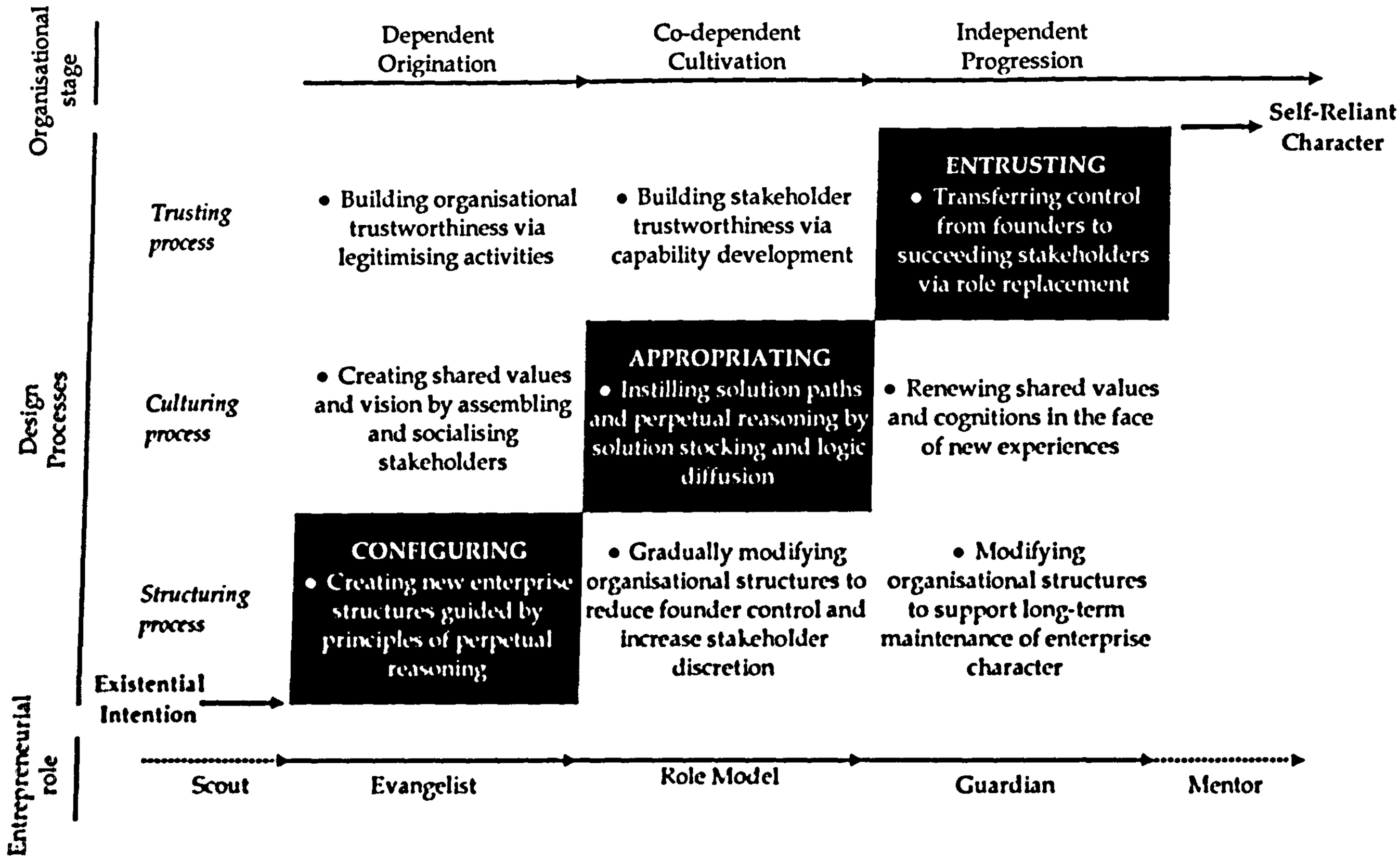

Figure 7.7 Process Model of Sustainability Enterprise Design

7.4.2 *Pacing of Stage Transitions*

In real life there is quite obviously a 'fuzzy' boundary between the stages of the model, and the critical incidents can in fact occur over an extended period of time. The process is not necessarily linear, and may involve repeated loops and digressions along the way. The pace of progression from one stage to the next, or the lack of progression from one stage to the next, is therefore highly variable. For example, during ForesTrade's design history, broken trust in some of the stakeholder partners on whom the enterprise depended resulted in the enterprise reverting back to the first stage, in which the entrepreneurs drastically restructured the enterprise and asserted greater control over organisational activities in an effort to maintain the enterprise's legitimacy. In another example, Hill Holt Wood's founders for several years could not find a business model that would achieve their purposes. As a result, they spent a prolonged period in 'scout' mode looking to create opportunities.

By contrast, the need for a 'scouting' role was fairly quickly surpassed by Chumbe Island's founder. However, while all on-site operations on Chumbe Island are now completely entrusted to local staff, the founder is nevertheless left in the role of 'guardian' indefinitely due to the local investment climate and lack of a key stakeholder group with sufficient trust or ability to assume total responsibility for the enterprise. At *Native*Energy, even though the founders have identified a route to entrustment and have started down that path, they remain very much in control of the enterprise. This is partly because they do not yet want to step away from their leadership positions, but also because their chosen successors have not yet developed the competence to be fully entrusted with the enterprise.

7.5 Conclusion and Summary of Process Model

The full model, as depicted in Figure 7.7, is intended to describe and explain the process of sustainability enterprise design. This is a process model that draws attention to some defining features of key stages in the sustainability enterprise's design history. Because the occurrences of later stages depend on previous ones, these stages can justifiably be considered to be sequential stages. While individual entre-

preneurs may take a unique and, at times, indirect route of progression through these stages, what the model shows is the conditions that are necessary for that progression to occur. When it does occur, the enterprise's sustainability character becomes an enduring property of the enterprise itself, even as the enterprise necessarily evolves to ensure survival into the future.

CHAPTER 8

DISCUSSION: AN EMERGENT ORGANISING PARADIGM

When he looked out over the rising, he felt himself to be facing a world-thought with extraordinarily long sight.

Martin Anderson Nexø

Pelle erobreren (1906)

8.1 Considering the Implications and Contributions of Findings

The previous two chapters presented the study's findings as they related specifically to the guiding research questions posed at the beginning of the study. The first guiding research question, how can an entrepreneur create a sustainability enterprise?, was addressed in Chapter 6 by developing a cognitive model of sustainability enterprise design. The second guiding research question, how can an entrepreneur ensure the sustainability character of the enterprise lasts into the future, beyond the involvement of the original?, was addressed in Chapter 7 by developing a process model of sustainability enterprise design. This chapter considers the findings as a whole, and posits that these models represent the emergence of a new organising paradigm that transcends the currently dominant approaches to organising. The first part of this chapter develops that argument and then explores the implications of the emergent paradigm for the concept of sustainability entrepreneurship. The second part of this chapter explains the contributions of this study's findings for knowledge in this and related fields.

8.2 Dominant and Emerging Organising Paradigms

8.2.1 Beyond the Self-Other Dichotomy

Milbrath defined a 'dominant social paradigm' as "society's belief structure, which organizes the way most people perceive and interpret the functioning of the world around them" (1996: 276). Similarly, in the theory and practice of organisational management, Volberda observed that 'dominant management perspectives' operate based on underlying "organizing principles" (1998: 18). In institutional theory, these are usually known as 'field logics' or 'institutional logics' (Scott 2001). Friedland and Alford explained that institutions have "a central logic – a set of material practices and symbolic constructions – which constitute its organizing principles", and that "without content – that is, the distinctive categories, beliefs, and motives created by a specific institutional logic – it will be impossible to explain what kinds of social relations have what kind of effect on the behaviour of organizations and individuals" (1991: 248, 252). Greenwood and Hinings suggested these worldviews are translated into recurring organisational forms, or 'archetypes', which they defined as "a set of structures and systems that reflects a single interpretive scheme" (1993: 1052). Using these concepts, the currently accepted, and highly institutionalised, worldview of formal organising can be seen to accommodate two broad organising paradigms, as summarised in the centre and left-most columns of Figure 8.1.[36]

One organising paradigm is based on the assumptions of self interest, that all actors act and react opportunistically (what Williamson 1993b: 97 described as "self-interest seeking with guile"), and that therefore others can be used (some would say exploited, e.g. Perrow 1991) for one's own gain. The underlying goal is the accumulation of resources (Friedland and Alford 1991). It is taken for granted that benefits will flow proportionally with power, so that those with the most power are entitled to the most benefits. Thus it seems natural that those who own the most stock in a company get the most influence over decisions (voting rights) and get the largest dividends, or that managers and executives receive significantly more compensation than do 'ordinary' labourers. This constellation of assumptions can be represented

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[36] As discussed in section 2.2.2, these broad organising paradigms are also evident in Blau and Scott's (1963) typology of organisations.

with an aphorism drawn from a common caveat in contract law, 'Buyer Beware'. The archetypical organisational form that accompanies these assumptions is the standard business organisation.

The other organising paradigm is based on the assumptions that work should be undertaken in the interest of others, that actors should behave altruistically (what Khalil 2004 described as the negation of self-interest qua charity), and that others, particularly those most vulnerable such as impoverished communities or highly threatened ecosystems, should be protected. Resources should be distributed with those who are more needy being entitled to more resources (cf. Loseke and Fawcett 1995; Polonsky 2003). This constellation of assumptions can be represented with an aphorism drawn from a common precept in the healing professions, 'First Do No Harm'. The archetypical organisational form that accompanies these assumptions is the standard charitable organisation.

Organising paradigm	*'Buyer Beware'* (*Dominant*)	*'First Do No Harm'* (*Dominant*)	*'In Perpetuity'* (*Emerging*)
Purpose	Self-regarding	Other-regarding	Regarding self with other
'Other'	Exploitation	Protection	Activation
Behaviour	Opportunism	Altruism	Mutualism
Resources	Accumulation	Distribution	Perpetuation
Benefits	Power	Need	Worthy contribution
Organisational form	Business	Charity	Sustainability enterprise

Figure 8.1 Dominant and Emergent Organising Paradigms

The institutionalised nature of these paradigms is manifest both in the formal institutions of society, such as legal forms, regulations, tax laws, financing

mechanisms, and so forth, and in the informal schema that individuals use to make sense of an organisation and to grasp what it is all about (Jepperson and Meyer 1991). So ingrained are these two dominant organising paradigms that even researchers exploring new forms of social, environmental, and sustainability entrepreneurship appear unable to consider possibilities outside of this dichotomy. For example, in the environmental entrepreneurship literature, Pastakia (2002) was compelled to distinguish between 'commercial ecopreneurs' and 'social ecopreneurs'. In the social entrepreneurship literature, Paredo and McLean (2006) synthesised perspectives on entrepreneurship with a single dichotomous spectrum running between social goals (benefiting others) and commercial goals (benefiting self). And in the emerging sustainability entrepreneurship literature, Dean and McMullen (2007) categorised anything not 'profit-driven' as being 'mission-driven', and relegated the latter to the field of social entrepreneurship rather than entrepreneurship proper.

With these assumptions come certain expectations about the appropriateness of an organisation and its activities (DiMaggio and Powell 1983; Meyer and Rowan 1977). The highly institutionalised dichotomy of these organising paradigms presents a challenge for sustainability entrepreneurs: because they conform to neither of these dominant organising paradigms, sustainability entrepreneurs can more easily run afoul of society's expectations. This can be particularly problematic for the critical tasks of attracting resources and inducing stakeholder participation (cf. Delmar and Shane 2004; Tornikoski and Newbert 2007). This may explain why the entrepreneurs in this study took particular pains to legitimise their activities by repeatedly explaining what they were about, how they were different, and most importantly, *why* they were different; they placed strong importance on obtaining certifications, awards, and other third-party credentials; and they specifically targeted companies and organisations with strong ethical reputations for strategic partnerships, thus employing a 'strategic', rather than 'conforming', approach to legitimacy (as detailed in Chapter 7).

The innovative approach to enterprise design demonstrated by these sustainability entrepreneurs suggests that in attempting to realise their new organisational visions from within the medium of established institutions, the dialectic tension between the assumptions of conventional organising logics is producing a new

organising paradigm, as summarised in the right-most column of Figure 8.1.[37] This emerging paradigm eschews the dichotomy between opportunistic business and altruistic charity in favour of a new logic based on integrating the interests of 'self' with 'other'. In this case, the 'other', including both other people and nonhuman nature, is an object of neither exploitation nor protection; rather, the 'other' is viewed as having latent potential that can be activated for the benefit of both. The relationship between 'self' and 'other' is based neither on exploitation nor altruism, but on a mutualism in which multiple benefit streams are co-produced through the perpetuation of human and natural resource quality. Thus resources are not utilised for accumulation or distribution, but perpetuated into the future along with the resulting benefit streams. With this logic, benefit flows are directed toward worthy contributors to the enterprise, thus serving both the needs of others and the needs of the enterprise. In light of these characteristics, this constellation of assumptions could be dubbed with the aphorism 'In Perpetuity'.[38] The archetypical organisational form that accompanies these organising assumptions is the *sustainability enterprise*.

Far from being a middling compromise between business and charity, the organisational forms being pioneered by sustainability entrepreneurs represent innovative organisational solutions that resolve the shortcomings of conventional organising logics in incorporating principles of sustainable development (as detailed in Chapter 6). This paradigm need not replace the other two established systems of organising logics, but over time may establish itself as a third, accepted and equally institutionalised, organising paradigm, thereby increasing both the choices and opportunities for entrepreneurs to come.

8.2.2 Implications for the Expanding Concept of Sustainability Entrepreneurship

This emerging organising paradigm points to two analytically important distinctions revealed by this study that may help to provide clarity for the field and reveal

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[37] Morgan (1997: 291) argued that dialectic contradictions "can be resolved only by modifying the basic 'rules' of the game", which is the level at which these sustainability entrepreneurs are 'playing the game'.

[38] Perhaps as a sign of the global *zeitgeist*, Cohen and colleagues (*Forthcoming*) also identified the environmental objectives of sustainability entrepreneurs with the term 'perpetuity'. However, the concept of 'perpetual reasoning' in this study was developed independently and is derived directly from the case data (see T06: 49-50).

new possibilities. One is the distinction between self-interest and profit-seeking, and the other is the distinction between market actors and market logics.

The first distinction recognises that entrepreneurial motives can be self-interested without being primarily profit-seeking. This is not a new insight in entrepreneurship research, as 'craftsmen' (Cooper and Dunkelberg 1986) and 'lifestyle' (Marcketti et al. 2006) entrepreneurs, for example, have been identified as being primarily motivated by quality of work and quality of life considerations rather than financial gain. However, self-interest and profit-seeking continue to be conflated in the literature, and this conceptual confusion has hindered theorising on sustainability entrepreneurship and other alternative forms of entrepreneurship. For example, Cohen and colleagues (*Forthcoming*) explored a range of entrepreneurial motives directed at society, the environment, and at the entrepreneurs themselves. However, they equated the self-interested component of sustainability entrepreneurial motives solely with the desire for profit maximisation. The problem with this assumption is that it limits the range of possible sustainability entrepreneurial activities to only those that provide opportunities for earning a competitive return on investment for the entrepreneur.

In contrast, this study's findings suggest sustainability entrepreneurs are indeed interested in obtaining benefits for themselves as well as others, but these self-interested benefits are not limited to profit seeking. The self-interests of the sustainability entrepreneurs in this study centred more on financial security for the enterprise and for themselves. This suggests the financial benefits to self are needed only up to a point, and that other lifestyle-related self-interested motives were of greater priority, such as living in the location of their choice, doing work they are passionate about, and contributing to a cause near and dear. In conceptualising entrepreneurship in general, and alternative forms of entrepreneurship such as sustainability entrepreneurship in particular, it is important to recognise profit-seeking as only one of many possible self-interested motives for entrepreneurial activity.

This is also true at the organisational level. For these same reasons it is important not to assume all organisations that operate in the competitive market are profit-driven enterprises. For the enterprises featured in this study, profits were merely a means to other valued ends – ends that include benefiting others as well as the 'self' in a multitude of ways not limited to financial benefits. Thus the impor-

tance of the conceptual definition used in this study of 'enterprises' as organisations that operate based on earned income (regardless of goals and motives), as opposed to profit-seeking businesses, which are one particular type of market-based enterprise.

Recognising the second distinction – that sustainability entrepreneurs operate within markets but without conforming to conventional market logics – is important for appreciating the full potential presented by sustainability entrepreneurship. Dean and McMullen (2007) and Cohen and Winn (2007) argued that sustainability entrepreneurs are driven by seeking economic rents, and therefore their value to society rests in their ability to redress environmental damage caused by potentially profitable market failures. Dean and McMullen then went on to suggest sustainability entrepreneurs are simply part of the self-working process by which "market systems and the institutions that define them evolve over time in a manner that can resolve social ills" (2007: 72). While it is true that market failures can lead to social and ecological 'ills', it is also true that 'properly' functioning markets can and do lead to undesirable social and ecological outcomes as well. Markets are concerned strictly with *economic* efficiency based on price signals. Economic efficiency does not necessarily equate to the most desirable social or ecological outcomes. It has been demonstrated that undesirable outcomes occur even when we can assume the criteria of perfect information and secure property rights are met.

On the social side, markets are mechanisms for achieving efficient allocation of scarce resources, not equitable distribution of wealth (cf. Lutz and Lux 1988). For example, the Prebisch-Singer Thesis suggests that over time the international terms of trade systematically widens the wealth gap between higher-income industrial countries and lower-income primary producer countries (Singer 1998). The Staples Thesis posits a similar phenomenon operating within, as well as between, countries (Innis 1956). On the ecological side, the assumption that high prices lead to resource conservation is not always accurate, such as when high prices of rare species are equated with luxury goods, promoting exploitation to the point of extinction (Courchamp et al. 2006); or high discount rates result in 'liquidating stocks' of relatively slow-growth species (Clark 1973; Swanson 1994) resulting in the 'sequential exploitation' of living resources (Holling et al. 1998); or when development leads to biotic homogenisation (Lockwood and McKinney 2001). In fact 'properly' function-

ing markets tend to result in the convergence of poverty and environmental degradation, in that the global 'production-consumption chain' tends to cluster low-value, high-material intensity economies (primary industries) on the one hand, and high-value, low-material intensity economics (tertiary industries) on the other (Fischer-Kowalski and Amann 2001).

This suggests the role of sustainability entrepreneurship for sustainable development is not just limited to making markets work better (i.e. increasing efficiency, productivity, and redressing market failures), as Dean and McMullen (2007) posited, but can actually work counter to prevailing market logics even while functioning within the market system. In this way sustainability entrepreneurs can address some of the social and environmental problems that are created by market economies, even when markets do work 'properly'. This is possible because sustainability entrepreneurs are driven by purposes other than those provided by market incentives. Their ability to operate as actors within markets while transcending market logics opens the true possibility that sustainability entrepreneurship may contribute to larger effects on the socioeconomic system by redefining the most basic, taken-for-granted 'rules of the game'. This supports adopting the most expansive concept of sustainability entrepreneurship, as consistent with the works of Young and Tilley (2006), Schlange (2006), and Clifford and Dixon (2006) (as was described in section 2.3.1 and summarised in Figure 2.7).

From this discussion we can see the importance of distinguishing between at least three types of entrepreneurship based on entrepreneurial motives: 'responsible entrepreneurs', who are conventional, profit-seeking entrepreneurs but who are motivated to try to reduce their negative environmental and social impacts out of a sense of duty (cf. Fuller and Tian 2006); 'opportunistic entrepreneurs', who may directly contribute to environmental and social improvements but, because they are primarily motivated by profit-seeking, will only do so for as long as market incentives exist (cf. Cohen and Winn 2007; Dean and McMullen 2007; Walley and Taylor 2002); and 'sustainability-driven entrepreneurs' whose fundamental purpose for starting an enterprise is to contribute to improved social and ecological wellbeing, as well as to satisfy their own quality of life interests, and who earn market-based income as a means to achieving these ends (cf. Clifford and Dixon 2006; Parrish 2007; Schlange 2006; Young and Tilley 2006). The first two types continue to rely on

the dominant organising paradigm to engage with their social and ecological environments, while the last type has rejected this paradigm in favour of a newly emergent organising logic that resolves the shortcomings of conventional organising logics to incorporate principles of sustainable development in organising activities.

8.3 Contributions to Knowledge

The findings of this study make three principal contributions to our understanding of the emerging phenomenon of sustainability entrepreneurship and enterprise. In addition, the study also provides a number of secondary insights for the more established fields of entrepreneurship, organisation, and sustainable development research. These contributions are discussed in that order.

8.3.1 *Primary Contributions: Sustainability Entrepreneurship and Enterprise*

When this research project began there was little known about sustainability entrepreneurship. There was no explicit empirical work on the subject, and the newly emerging conceptual work even questioned whether the phenomenon existed in reality (Tilley and Young 2004). Since this study began a handful of other conceptual works (Cohen et al. *Forthcoming;* Cohen and Winn 2007; Dean and McMullen 2007; Schlange 2007; Tilley and Parrish 2006; Young and Tilley 2006) and empirical studies (Clifford and Dixon 2006; Schlange 2006) have been conducted. While all of these authors agree that sustainability entrepreneurship is about how entrepreneurship can contribute to sustainable development, there is considerable range in the way the phenomenon is conceptualised, and therefore differing opinions as to the potential scope of contributions that sustainability entrepreneurs can make to sustainable development. The findings of this in-depth, exploratory study provide three principal contributions to this emerging field.

The first principal contribution is a cognitive model of sustainability entrepreneurship that specifies a unique design logic, termed *perpetual reasoning*, that guided the process of sustainability enterprise design. This model was developed to answer the first guiding research question: How can an entrepreneur create a sus-

tainability enterprise? The findings suggest the purpose embodied by sustainability entrepreneurship – to perpetuate the quality of human and natural resources for as long as possible – results in a number of organising tensions with which conventional design logics are unable to contend. This provides a possible explanation for why instances of successful sustainability entrepreneurship are so rare, and why conventionally designed enterprises have such a difficult time incorporating sustainability principles (cf. Azzone and Noci 1998; Post and Altman 1994).

However, the entrepreneurs in this study also demonstrated a solution to this problem. These sustainability entrepreneurs were able to successfully design new sustainability enterprises because the principles of perpetual reasoning are uniquely suited to overcome these organising tensions. These design principles are rooted in the purpose for which the enterprises were created. Thus, in the case of successful sustainability entrepreneurship, the purpose embodied in the process of enterprise design resulted in both unique organising tensions and unique deign principles to overcome these tensions. The difference, therefore, between successful and unsuccessful sustainability entrepreneurship may depend on whether the entrepreneurs are attempting to design sustainability enterprises using conventional design logics. This supports the view of sustainability entrepreneurship as a form of expertise (Mitchell 1995; Sarasvathy 2001a) or 'maturity' (Thorpe et al. 2006), in which the practical and mostly intuitive knowledge and abilities of entrepreneurs are used to co-produce new opportunities and new possibilities through skilful interpretation and interaction with changing social and ecological contexts (Dimov 2007a; 2007b; Dutta and Crossan 2005; McMullen and Shepherd 2006; Sarason et al. 2006). Therefore, rather than a set of prescriptive rules (Van Aken 2005), the principles of perpetual reasoning represent a flexible design gestalt or set of generative rules (Niiniluoto 2001; Yoo et al. 2006) that result in novel outcomes with a unified character.

The second principal contribution is a process model of sustainability entrepreneurship that demonstrates the way these design principles and the underpinning values become embedded in the enterprises' formal and informal structures. This model was developed to answer the second guiding research question: How can an entrepreneur ensure the sustainability character of the enterprise lasts into the future, beyond the involvement of the original founders? The findings suggest

the process of sustainability enterprise design results in an enterprise with a sustainability character that is independent of the entrepreneur and is instead self-reliant on the enterprise itself. This allows the enterprise to continue to achieve its multi-purpose mission while also enabling it to necessarily adapt and evolve over time with changing contexts to ensure survival into the future. The processes of sustainability enterprise design do in many ways reflect the processes of conventional organising (cf. Katz and Gartner 1988; Kimberly 1980; Reynolds and Miller 1992), including establishing legitimacy (Delmar and Shane 2004; Tornikoski and Newbert 2007), obtaining stakeholder support (Sarasvathy and Dew 2005; Yamada 2004), acquiring access to needed resources (Starr and MacMillan 1990), configuring formal structures and processes and an informal organisational culture (Ranson et al. 1980; Schein 1983), increasing stakeholder discretion (Brief and Downey 1983; Thompson 1967), and eventually relinquishing ownership and control to other stakeholders (Rubenson and Gupta 1996).

However, the cases in this study were substantially different from most entrepreneurial ventures as conventionally understood in that the purpose with which the entrepreneurs founded their enterprises does not end with entrepreneurial succession. Because sustainability enterprises are intended as tools for contributing to sustainable development rather than tools for personal financial gain, maintaining the enterprise's sustainability character after founder succession is of great importance to the founding entrepreneurs. Haveman and Khaire provided empirical support for the argument that "when organizations are born out of founders' ideological zeal... [the] founders' departures are very likely to lead to loss of organizational vision, poor performance, and ultimately to failure" (2004: 441). Therefore, character maintenance is by no means certain, and loss of a defining organisational character may in fact lead to serious organisational difficulties. However, the results of this study demonstrated how sustainability entrepreneurs pre-emptively mitigated this threat through the use of interactive design processes to transition the locus of the enterprise's sustainability character from being wholly reliant on the entrepreneur to being self-reliant on the enterprise itself. The process model also provides explanations for the pacing of this transition, as well as for why some entrepreneurs are able to complete this process while others are not.

The third principal contribution is the proposition that this approach to enterprise design represents the emergence of a new organising paradigm. This proposition derives from a consideration of the findings as a whole – the implications of both the cognitive and process models of sustainability enterprise design. These models represent an approach to enterprise design that eschews the dualistic divide between 'opportunistic' business and 'altruistic' charity in favour of a new logic based on the co-production of multiple benefit streams through the perpetuation of human and natural resource quality. This suggests a resolution to the apparent disagreement in the field over whether sustainability entrepreneurship is a unique form of entrepreneurship, as some contend (e.g. Schlange 2006; Young and Tilley 2006), or whether it merely represents conventional entrepreneurship operating in the environmental and social services sectors, as others contend (Cohen and Winn 2007; Dean and McMullen 2007). These findings suggest sustainability entrepreneurship is in fact a distinct form of entrepreneurship to the extent that it embodies a very different set of organising assumptions. Recognising this difference makes an important contribution by demonstrating that market actors need not follow market logics to successfully function in a competitive market. This opens the real possibility that sustainability entrepreneurship has the potential to do more than address the symptoms of systematic social problems (Cho 2006), and may in fact contribute to larger effects on the socioeconomic system by both challenging taken-for-granted assumptions and offering viable alternatives.

8.3.2 Secondary Contributions to Related Fields

In addition to these principal contributions, the study also makes several secondary contributions. Methodologically, it demonstrates the usefulness of critical realism as a research philosophy for the environmental social sciences. Adequately addressing the relationship between human systems and ecological systems requires an appreciation of the real processes with which actors must contend, including the flux and flows of ecological, institutional, and organisational processes; but it also requires an appreciation of the ideational processes by which humans attribute meaning to the ecological and social realities they experience (Biersack 1999; De Laplante 2004; Greenberg and Park 1994). In this study we saw how entrepreneurs were able to

take ecological and social realities, and through the existential meanings they attributed to them, construct new organisational realities in the form of innovative sustainability enterprises. Thus, critical realism is a useful philosophical perspective for this line of research because it attends to the real processes of contexts and mechanisms as well as the double hermeneutic of human action. It also provides a unified framework linking the normally divided natural and social sciences.

For similar reasons, the study's findings provide some insight for better understanding how to address sustainable development. As Kottak (1999) explained, sustainable development concerns the realities of human and environmental wellbeing as well as the ethnoecologies that we humans use to understand those realities. The results of this study suggest meaningful social change for sustainable development involves multilevel interactions between the content and functions of society-wide institutions, the patterned activities of organisations, and the practices of individuals, but that these are ultimately rooted in the taken-for-granted values and cognitions of individuals. This suggests frameworks for approaching sustainable development such as Giampietro's (1994) hierarchical value model, or Maiteny's (2000) multilevel 'psychodynamic model of meaning and action' are likely to prove the most insightful and useful. This supports the view that, while institutional contradictions, diffusions, mutability, and other institutional features may provide the impetus for change (Clemens and Cook 1999), the creative and collective activities of individuals that lead to novel interpretive paradigms and related forms of social organisation are a vital component of this change process (Fligstein 2001; Lounsbury and Crumley 2007; Mutch 2007).

To the fields of entrepreneurship and organisations more generally, this study addressed the longstanding call to more explicitly link entrepreneurship and organisation theory (Aldrich 2001; Katz and Gartner 1988: 433; Walsh et al. 2006), and the more recent call to investigate how entrepreneurial motives other than profit maximisation effect entrepreneurial cognitions (Mitchell et al. 2007). To the first point, this study's findings suggest Bruyat and Julien's (2000) concept of an 'entrepreneur ⇔ enterprise' dialogic is a useful description of the venturing process for a period, but that this dialogic is ultimately a transitory feature of the new enterprise creation process. Viewed over a longer time horizon, this process is actually about the gradually changing nature of this dialogic relationship from one determined

largely by the entrepreneur to one largely self-determined by the emergent organisational system. This has implications for the ability of the enterprise to survive and thrive without the founding entrepreneur, and the ability of the entrepreneur to affect organizational change at a fundamental, systemic level. The findings also demonstrate that entrepreneurial motives and values are fundamental to the types of cognitive and social processes utilised during new organisation creation, and to the organisational forms that result. For entrepreneurship theory this suggests that the assumption of profit-seeking, rather than serving as a distinguishing feature of entrepreneurship research, is unnecessarily constraining the applicability of the concept and its potential to help explain a wider range of phenomenon. For organisation studies, this demonstrates the importance of treating cognitive dimensions (emphasised by 'new' institutionalism) and value dimensions (emphasised by 'old' institutionalism) as two complementary elements.

For practitioners, this study suggests successful organising requires entrepreneurs be true to their values, motives, and inner passions. If this includes a drive to contribute to sustainable development, then the principles of perpetual reasoning represent one way to guide the sustainability enterprise design process, although they cannot guarantee success. This is not to say that the model of sustainability enterprise design developed in this study is the only way to create a sustainability enterprise, but it is one method that has proven successful in a wide range of market and socio-cultural contexts. It also points to the importance of operating in a context in which it is likely that trusting relationships can develop, and where one is likely to find supporters with the potential for shared values.

Finally, implications of this study for policies to promote sustainability enterprise are twofold. First, the findings suggest that institutionalised rules and regulations intended to protect public welfare or environmental quality can in fact impinge on the potential benefits derived from new, unconventional approaches to organising human activities. One of the key insights of this study is that even vulnerable ecosystems and human populations have latent potential that can be activated for mutual benefit. Attempts to 'protect' these ecosystems and populations could prevent opportunities for truly beneficial sustainable development (although some occasions may justify absolute 'protection' from human activity). In particular, legal and financial institutions seemed to be especially relevant for the entrepre-

neurs in this study. Second, viewing sustainability entrepreneurship as a form of expertise suggests support for aspiring sustainability entrepreneurs should focus on the appropriation and use of general design principles rather than prescriptions of specific design solutions. In this way, entrepreneurs can continue to produce novel organising solutions for sustainable development in the face of continuous change and uncertainty.

8.4 Conclusion and Summary of Discussion

In this chapter the findings on principles and processes of sustainability enterprise design were considered together, and this led to the proposition that these may represent an emerging organising paradigm. Together, the principles, processes, and paradigm of sustainability enterprise design represent the three principal contributions of this study. In addition, the diverse array of secondary insights provided by the findings suggest the concept of 'sustainability enterprise design' can indeed serve as a useful unifying concept that both draws on and contributes to related fields. We now move to conclude the study by reflecting on the research process as a whole, and considering whether the paradox of sustainability entrepreneurship has been resolved.

CHAPTER 9

CONCLUSION: THE PARADOX RESOLVED?

What we call the beginning is often the end
And to make an end is to make a beginning
The end is where we start from.
We shall not cease from exploration
And the end of all our exploring
Will be to arrive where we started
And know the place for the first time.

T. S. Elliot
Little Gidding (1942)

9.1 A Review of the Study

This chapter concludes the study by briefly reviewing the research undertaken, reflecting on its limitations, then looking forward to possibly fruitful avenues for future research. The chapter concludes with reflections on the motivation and aspirations that drove the pursuit of this research project.

This study began by describing the apparent paradox presented by sustainability entrepreneurship (Chapter 1). It was observed that the explanatory narratives of the dominant paradigm in the literature concerning enterprises and entrepreneurship involve three common tenets: economic efficiency, profit maximisation, and capital accumulation. The presence of sustainability-driven enterprises that do not conform to the premises of this dominant paradigm yet are not only surviving but thriving in the competitive marketplace presented a paradox in need of redress. In light of this, two guiding research questions where set: (1) how can an entrepreneur create a sustainability enterprise, and (2) how can an entrepreneur ensure the

sustainability character of the enterprise lasts into the future, beyond the involvement of the original founder?

To answer these questions the study first reviewed the extant literature in the established fields of entrepreneurship, organisations, and sustainable development, and the emerging interdisciplinary fields of organisation design, sustainability enterprise, and sustainability entrepreneurship (Chapter 2). It was also proposed that the concept of 'sustainability enterprise design' could serve as a unifying concept that would both draw on and inform the other fields. Crosscutting themes from this review suggested that both organisations and entrepreneurship have been shown to be continuously reinterpreted for their times, and that sustainable development now presents an important context for reinterpretation. The other crosscutting theme suggested that entrepreneurship, organisations, and the concept of sustainable development each represent attempts to reduce uncertainty. Entrepreneurship in particular has been described as a process of leveraging uncertainties into new opportunities to create value for society. This suggested that the entrepreneurial approach to problem solving may serve a unique function for society as it faces a range of social-ecological challenges with which conventional approaches to problem solving are unable to contend. The review also demonstrated that the recently emerging literature on sustainability entrepreneurship has contributed to expanding the concept of entrepreneurship to explore how it might contribute to sustainable development, but the literature lacked consensus on the proper scope of the possibility-space for this new concept.

Following this review a sensitising framework was developed to provide a starting point for an exploratory, theory-generating study of the process of sustainability enterprise design (Chapter 3). This sensitising framework was developed by modifying Bruyat and Julien's (2000) interpretation of Gartner's (1985) framework for understanding new venture creation. Specifically, the framework used in this study added to the other frameworks by positing generative rules and development logics as the mediating factor in Bruyat and Julien's concept of an 'entrepreneur ⇔ enterprise dialogic'. A research design was then developed and methods of data collection and analysis were selected based on a critical realist philosophy of science (Chapter 4). This involved an intensive research design using a naturalistic-qualitative strategy. Purposeful sampling was used to select four cases of successful

sustainability entrepreneurship based on three criteria: the enterprises had to be between five and fifteen years old, not in financial decline or at risk of insolvency, and both social- and environmental-purpose activities had to be embedded within the business activity. Data collection included over 40 hours of interviews with entrepreneurs and other organisational stakeholders, 60 primary documents totalling over 1600 pages, 15 secondary documents published by other researchers and journalists, and digital photographs documenting site visits to the enterprises' operations. Narrative and coding techniques were used for qualitative analysis of the data. This process of data analysis consisted of three phases: an initial process of reducing and describing the data in light of the purposes of the study, a subsequent process of re-organising the data to facilitate conceptual understandings, and a final process of abstracting a conceptual framework that accounts for the data but also goes beyond the data to inform theory.

The final process step of abstracting an explanatory framework involved an iterative 'grounding' of the emerging framework in both the case data and an extant theoretical perspective so that the resulting explanatory models could both account for the empirical cases and transcend these data to provide a general account of sustainability enterprise design. Institutionalism (reviewed in Chapter 3) was selected at this point as a theoretical perspective to serve as a lens through which to view the analytical results, and in this way allow for a deeper understanding to be developed. The theoretical models that resulted from employing this research design and methods of data collection and analysis provide an analytically general account of the phenomenon. These explanatory models were validated by obtaining feedback from the participating entrepreneurs, among other methods.

The results of this analysis consisted first of composite narratives of each enterprise's unique design history, constructed from the multiple stakeholder interviews, primary documents, and external sources (Chapter 5). These cases exemplified the concept of sustainability entrepreneurship because, in each instance, the entrepreneurs successfully created enterprises that thrive on producing beneficial social and environmental outcomes. In other words, they have designed their enterprises so that the activities that support the ability of the enterprise to survive and thrive in the marketplace are the very same activities that produce beneficial social and environmental outcomes. Balancing the interests of the 'self' and the 'other',

where the 'other' includes both social and environmental interests, seemed to be the hallmark of successful sustainability entrepreneurship.

Three major findings resulted from this study. The first is a cognitive model of sustainability entrepreneurship that specifies a unique design logic, termed *perpetual reasoning,* that guided the process of sustainability enterprise design (Chapter 6). This model was developed to answer the first guiding research question: How can an entrepreneur create a sustainability enterprise? The findings suggest the purpose embodied by sustainability entrepreneurship – to perpetuate the quality of human and natural resources for as long as possible – results in a number of organising tensions with which conventional design logics are unable to contend. Thus, the purpose embodied in the process of enterprise design resulted in both unique organising tensions and unique design principles to overcome these tensions.

The second principal contribution is a process model of sustainability entrepreneurship that demonstrates the way these design principles and the underpinning values become embedded in the enterprises' formal and informal structures (Chapter 7). This model was developed to answer the second guiding research question: How can an entrepreneur ensure the sustainability character of the enterprise lasts into the future, beyond the involvement of the original founders? The findings suggest the process of sustainability enterprise design results in an enterprise with a sustainability character that is independent of the entrepreneur and is instead self-reliant on the enterprise itself. This allows the enterprise to continue to achieve its multi-purpose mission while also enabling it to necessarily adapt and evolve over time with changing contexts to ensure survival into the future.

The third principal contribution is the proposition that this approach to enterprise design represents the emergence of a new organising paradigm (Chapter 8). This proposition derives from a consideration of the findings as a whole – the implications of both the cognitive and process models of sustainability enterprise design. These models represent an approach to enterprise design that eschews the dualistic divide between 'opportunistic' business and 'altruistic' charity in favour of a new logic based on the co-production of multiple benefit streams through the perpetuation of human and natural resource quality. These findings suggest sustainability entrepreneurship is in fact a distinct form of entrepreneurship to the extent that it embodies a very different set of organising assumptions.

The study's findings therefore contribute primarily to the emerging field of sustainability entrepreneurship and enterprise, although some secondary contributions are also made to the related fields of sustainable development, entrepreneurship and organisations more generally (Chapter 8). So have these contributions resolved the paradox of sustainability entrepreneurship? They have made advances toward that end by demonstrating that market actors need not follow market logics to successfully function in a competitive market. This allows for the possibility that sustainability entrepreneurship may in fact contribute to larger effects on the socio-economic system by both challenging taken-for-granted assumptions and offering viable alternatives to current approaches to organising. But this study represents only the first step in developing a more comprehensive understanding of the phenomenon. To appreciate the need for adding to knowledge on this subject I now address some of the limitations of the study, before exploring possible avenues for future research.

9.2 Limitations of the Study

The strengths and weaknesses of the research design and specific methods used were detailed in sections 4.5, 4.6, and 4.7, and the limitations of using institutionalism as a theoretical perspective were discussed in section 3.3.1. However, it is useful to consider the limitations of the study as a whole to contribute to our understanding of sustainability entrepreneurship. By far the biggest limitation to researching this phenomenon is the lack of cases available to study. As it happened, this study was intended to be an in-depth, exploratory, theory generating study based on only a small number of cases. However, the scarcity of known cases of sustainability entrepreneurship left little choice but to employ this type of research design anyway. This forestalls the ability to make empirical generalisations, although analytical generalisations are still possible.

In addition to their limited number, cases of sustainability entrepreneurship are also difficult to find. Because the concept is not widely used or identified with, sustainability entrepreneurs and enterprises go under a variety of names. There is no association or registry or other directory of sustainability enterprises that are roughly consistent with the concept as understood in this study. This restricts the

degree to which theoretical sampling can be used, and as a result sampling strategies must include a large dose of opportunistic sampling. To overcome these challenges in this study I tried to tap into networks of 'ethical' and alternative entrepreneurs and used word of mouth to learn about enterprises that might fit my criteria. My own lack of language fluency beyond English also restricted the population of cases from which I could choose. It might have been fruitful to expand the geographic range of cases to include more European and South American cases, for example. However, I was fortunate to find entrepreneurs who s worked in a variety of regions and cultural contexts but who were fluent in English. Where necessary, a translator assisted with some of the stakeholder interviews and documents.

Another limitation was the amount of data that could be collected from each case. The original intention was to spend two weeks on site at each enterprise's operations. However, the extreme time pressures that the entrepreneurs and their enterprises were operating under made this plan unworkable. The amount of data that can be obtained from time and resource constrained small and medium sized enterprises is a limitation for this research. To overcome this challenge I became more flexible with my methods of data collection, such as conducting some interviews over the telephone and obtaining some documents and other communications over email. In the end, the entrepreneurs and other stakeholders were extremely generous with their time, providing me with multiple hours of interviews (totalling over 40 hours for the four cases). In addition, shorter site visits were made to all of the enterprises, which proved helpful for formulating better interview questions.

9.3 Suggestions for Future Research

Together, the findings and limitations of this study suggest a number of further questions that need attention to create a more complete understanding of the phenomenon. This research represents an attempt to theorise from the *inside-out*. That is, it addresses the mechanics of sustainability entrepreneurship at the individual and enterprise level, and the implications of these for the evolution of society-wide institutions.

But understanding the phenomenon of sustainability entrepreneurship will remain incomplete without coupling this with complementary theorising from the

outside-in. This would address the context of sustainability entrepreneurship, which situates (enables and constrains) the activities of the entrepreneur and enterprise, and the implications for the prevalence and effectiveness of the resulting activities. This is analogous to Harré and colleagues' (1985) discussion of macrostructual and microstructural explanations, and the need for a comprehensive theory to encompass both. For example, they suggest gene theory and the micro structures of DNA, together with natural selection theory and the macrostructural dynamics of ecological systems has provided a unified foundation for the biological sciences. In the research discussed in this study, although the emergence of a new pattern in the logics of organising is identified, without reference to a more macro-level theory of social change it is impossible to decipher what impacts this emerging pattern may or may not have on the evolution of society-wide activity patterns.

What is needed in future conceptual and empirical work to advance a more comprehensive understanding of sustainability entrepreneurship is a multi-level perspective that can link the cognitive and social processes entrepreneurs use to imagine and construct new social artefacts, the inter- and intra-organisational processes that structure the evolution of these social artefacts over time, and the society-wide processes that promote, inhibit and otherwise mediate changes within the greater social-ecological system. Institutional theory is one perspective this study has demonstrated can usefully inform research in this field. For example, the insights of this study that sustainability entrepreneurs operate with an organising paradigm that is fundamentally different than the dominant organising paradigms that most of society is structured around suggests future research using an institutional perspective could make a closer study of the nature and consequences of the relationship between sustainability entrepreneurs and their institutional environments. Legal and financial institutions seem particularly relevant: legal institutions because entrepreneurs must embody their innovative organisational designs within existing legal frameworks, and financial institutions because financial investors and lenders epitomise the 'exploitative' type reasoning, of maximum financial gain in the shortest time possible, and are most likely to be at odds with the 'perpetual' type reasoning of sustainability entrepreneurship. And yet, sustainability entrepreneurs, like other entrepreneurs, require financial capital to create their new enterprises. This may also involve greater attention to the local contexts of sustainability entre-

preneurship, which should lead to more precise, and region-specific, recommendations for policy and practice.

Other perspectives can also usefully contribute to our understanding of sustainability entrepreneurship. For example, the findings of this study could be misinterpreted to suggest sustainability entrepreneurship is a panacea for producing beneficial social and environmental outcomes within a market context. This study has demonstrated how sustainability entrepreneurship can contribute to sustainable development, but it is not meant to suggest that it is the whole solution, or even that it is always an appropriate solution. Thus, future research would benefit from adopting a critical theory perspective, such as that provided by political ecology (Greenberg and Park 1994; Rocheleau *Forthcoming*), to investigate in which situations sustainability entrepreneurship is likely to be beneficial, in which situations it will likely be unable to contribute, and in which situations it might actually be detrimental. For example, in regions with significant human population stress and critical ecosystems the identified need for the provision of ecologically compatible human livelihood opportunities suggests sustainability entrepreneurship could make substantial contributions to human and ecological wellbeing (cf. Brandon and Wells 1992; Salafsky and Wollenberg 2000; Wells 1998). However, sustainability entrepreneurship can only exist where market opportunities exist. It is therefore limited in part by the creativity of entrepreneurs to create new opportunities, but there are also real limits to where markets *can* be established, or where it is appropriate to establish markets. To extend this last point, some commentators have cautioned that expanding the domain of entrepreneurship out of the economic realm may bring with it economic rationales to all spheres of society (Brenkert 2002), or questioned whether it is wise to rely on private enterprise to provide social goods (Cho 2006).

9.4 Concluding Thoughts

From the beginning and throughout the duration of this research project the motivation has been to understand how people, if they so choose, can create enterprises that survive and thrive by contributing to sustainable development. At the beginning of this project I expected to find sustainability entrepreneurship to be not altogether different than conventional entrepreneurship. I suspected that sustainability

entrepreneurs may simply choose different opportunities to pursue based on their particular goals and visions, and that once these opportunities were selected the process of entrepreneurship was likely to be quite similar. Many similarities were in fact found, but I was genuinely surprised as the data began to suggest that sustainability entrepreneurs go about organising their new enterprises with a profoundly different rationale and organising logic than do conventional entrepreneurs, as understood by the extant literature. This suggests that the more significant impact of sustainability entrepreneurs may not be the immediate benefits they bring to vulnerable communities and ecosystems, but may rather be as 'institutional' entrepreneurs they are engaged in challenging and redefining some of the most basic, taken-for-granted assumptions about how we humans organise our collective activities.

Learning from these entrepreneurs, we may even conclude that perhaps the biggest challenge to achieving sustainable development is to recognise the taken-for-granted assumptions that underlie our own worldviews and thereby structure our interactions with the social and ecological world around us. Appreciating the activities of these truly innovative entrepreneurs requires that as a research community we question the field's dominant paradigm that values entrepreneurship for its ability to accumulate material wealth and confers the mantle of success based on growth rates and profit levels. Emphasising these facets may in fact obscure the more profound effects entrepreneurship has on the greater social-ecological system, both positive and negative. Perhaps defining entrepreneurship in terms of new value creation serves to skew our focus away from the possible harm that can also be created by entrepreneurial activity. Grasping this variety requires extending, reinterpreting, and revising the concept of entrepreneurship in light of the times. This study has argued that the concept of sustainability entrepreneurship represents one important extension and reinterpretation.

Recognising that this study is also a product of its time, I hope that in some way it has contributed to the questioning of today's taken-for-granted assumptions about how human activities are organised, and that it has helped to reveal new possibilities for organising to meet the challenges and the promise of realising an ecologically compatible qualitative improvement in the experience of life on earth.

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APPENDIX I: Index of Primary and Secondary Documents

PRIMARY DOCUMENT DATA REGISTER				
Case	**Document**	**Description**	**Date**	**Pages**
Hill Holt Wood	P01	[Plan] Initial Business Plan for Circulation. Prepared by Nigel Lowthrop.	1991	11
Hill Holt Wood	P02	[Application] A submission to North Kesteven District Council for consideration as a unique case to provide a straw bale, autonomous warden's dwelling within the community wood Hill Holt. Prepared by Nigel and Karen Lowthrop.	2000	8
Hill Holt Wood	P03	[Report] Valuation Report for Part Hill Holt Wood. Prepared by JHWalter, Chartered Valuation Surveyors.	1 Feb. 2005	25
Hill Holt Wood	P04	[Plan] Hill Holt Wood Business Plan 05-06 (Draft). Prepared by HHW Project Director and Lincolnshire Co-operative Development Agency.	10 May 2005	17
Hill Holt Wood	P05	[Report] Hill Holt Wood Social Audit: Panel Briefing Pack. Prepared by Teresa Butler of Huddersfield Pride Ltd and the Social Audit Network.	2 Oct. 2005	9
Hill Holt Wood	P06	[Report] Hill Holt Wood Social Audit: Final Draft (Amended). Prepared by Hill Holt Wood Staff.	7 Oct. 2005	33
Hill Holt Wood	P07	[Promotional material] Introduction to Hill Holt Wood. Prepared by Gordon Hunter, Director Linconshire Community/Foundation.	Undated	1
Hill Holt Wood	P08	[Map] Map of Hill Holt Wood Property.	Undated	1
Native Energy	P09	[Plan] Native Energy Initial Business Plan (Confidential Draft). Prepared by *Native* Energy Management Committee.	23 Mar. 2001	39
Native Energy	P10	[Memo] Overview and History of *Native* Energy (Draft). Prepared by Tom Boucher.	7 March 2006	5
Native Energy	P11	[Promotional material] About *Native* Energy. Includes list of projects, partnerships, and testimonials.	Undated	8
Native Energy	P12	[Promotional material] NativeEnergy's Perspective.	Undated	3
Native Energy	P13	[Promotional material] Welcome to *Wind* Builders.	Undated	2
Native Energy	P14	[Promotional material] Introducing *Cool* Homes.	Undated	2
Native Energy	P15	[Promotional brochure] *Cool* Home with remooable energy: A New Tool for Climate Action Heros.	Undated	2
Native Energy	P16	[Promotional brochure] NativeEnergy: Bringing New Renewables to Market.	Undated	2
Native Energy	P17	[Promotional material] NativeEnergy: Providing Organizations with Green Power RECS and GHG offsets to Meet Environmental, Social and Financial Goals.	Undated	8
Chumbe Island	P18	[Plan] Chumbe Island Initial Feasibility Study.	1991	19
Chumbe Island	P19	[Map] Map of Chumbe Island showing sea depths and reef beds.	1995	1
Chumbe Island	P20	[Letter] Collection of letters addressed to a Zanzibari government ministries regarding the policy environment for CHICOP. Prepared by Sibylle Riedmiller.	1996	17

Chumbe Island	P21	[Report] Chumbe Island Progress Report 1994-1997. Prepared by Sibylle Riedmiller.	1997	9
Chumbe Island	P22	[Forum post] Private sector investment in marine conservation. Prepared by Sibylle Riedmiller.	6 Mar. 2000	5
Chumbe Island	P23	[Forum post] Constiutional and legal context of Chumbe Reef Sanctuary. Prepared by Sibylle Riedmiller.	22 Mar. 2000	3
Chumbe Island	P24	[Forum post] Incentives for non-consumptive use as alternative to heavy taxation. Prepared by Sibylle Riedmiller.	28 Apr. 2000	2
Chumbe Island	P25	[Press release] British Airways Tourism for Tommorrow: Global Award Winner.	28 May 2000	3
Chumbe Island	P26	[Press release] Chumbe is 1 of 14 winners of the UNEP's Global 500 Roll of Honour award.	1 June 2000	3
Chumbe Island	P27	[Forum post] Marine zonation and community participation. Prepared by Sibylle Riedmiller.	1 June 2001	3
Chumbe Island	P28	[Press release] Chumbe awarded the Green Hotelier of the Year Independent Environmental Award from the International Hotel and Retaurant Association.	15 Oct. 2001	2
Chumbe Island	P29	[Article] International Tropical Marine Ecosystem Management Symposium 2. Prepared by Sibylle Riedmiller.	2003	15
Chumbe Island	P30	[Statistics] Summary of poacher trends at Chumbe 1994-2002 based on ranger reports. Includes chart.	2003	2
Chumbe Island	P31	[Report] Environmental Education Report (Phase 3). Prepared by Lisa Baum.	Jan-04	7
Chumbe Island	P32	[Application] TO DO! 2004 Contest for Socially Responsible Tourism. Includes accomplishments of CHICOP. Prepared by Sibylle Riedmiller.	31 Aug. 2004	10
Chumbe Island	P33	[Press release] Chumbe wins Responsible Tourism Award sponsored by Responsibletravel.com, The Times newspaper (UK), World Travel Market, and Geographical Magazine.	12 Nov. 2004	1
Chumbe Island	P34	[Report] Terrestrial Science Update. Prepared by Carol Daniels.	2004	12
Chumbe Island	P35	[Report] Marine Science Update. Prepared by Carol Daniels.	2004	30
Chumbe Island	P36	[Article] How can the private sector benefit from investing in marine conservation?. Includes income & occupancy rates 1998-2003. Prepared by Sibylle Riedmiller.	2004	4
Chumbe Island	P37	[Press release] Chumbe named Award Finalist for Smithsonian magazine/Tourism Cares for Tomorrow.	18 Aug. 2005	2
Chumbe Island	P38	[Paper] Environmental Education Case Study. Prepared by Lisa Baum, Molly O'Bryan, Mikala Peters.	2005	3
Chumbe Island	P39	[Slide presentation] Chumbe Island Income Figures. Prepared by Sibylle Riedmiller.	2005	15
Chumbe Island	P40	[Slide presentation] TFI - Chumbe Pay For Nature. Prepared by Sibylle Riedmiller.	2005	26

Chumbe Island	P41	[Application] For WIOMSA Honorary membership for Sibylle Riedmiller. Includes accomplishments of Riedmiller and CHICOP.	2005	6
Chumbe Island	P42	[Report] Environmental Education Report (Phase 5).	June 2006	15
Chumbe Island	P43	[Statistics] Summary of annual statistics for school trips 2000-2005.	2006	1
Chumbe Island	P44	[Manual] Chumbe reef monitoring manual. Prepared by Elizabeth Tyler.	2006	101
Chumbe Island	P45	[Statistics] Database of research projects carried out on Chumbe Island 1994-2006.	2006	1
Chumbe Island	P46	[Paper] Chumbe Island Coral Park Introduction. Prepared by Sibylle Riedmiller.	2006	14
Chumbe Island	P47	[Article] Environment and Development in Coastal Regions and in Small Islands. Coastal region and small island papers 12. Prepared by Sibylle Riedmiller.	Undated	6
Chumbe Island	P48	[Map] Map of Chumbe Island showing landmarks.	Undated	1
Chumbe Island	P49	[Article] Private Sector Management of Marine Protected Areas: The Chumbe Island Coral Park Project in Zanzibar/Tanzania. Coastal region and small island papers 12. Prepared by Sibylle Riedmiller.	Undated	6
Chumbe Island	P50	[Educational material] Chumbe Island Coral Park, Introductory Teachers Pack: The Coral Reef. Prepared by Eleanor Carter.	Undated	521
Chumbe Island	P51	[Educational material] Miamba ya Matumbawe: Chapa ya pili. Prepared by H.M. Omar.	2005	555
ForesTrade	P52	[Report] Report on Trip to Takengon, October 9-13, 2002. Prepared by Lucia Li.	14 Oct 2004	33
ForesTrade	P53	[Memo] Timeline for Business Milestones	23 June 2003	2
ForesTrade	P54	[Informational pamphlet] Promoting Sustainability at the Source: ForesTrade's Leadership in Sustainable Trade.	22 July 2004	3
ForesTrade	P55	[MOU] Surat Pernyataan Kerjasama [Trans.: Statement of Partnership]	14 Sept 2005	1
ForesTrade	P56	[Memo] ForesTrade's Sustainability Programs and Practices.	January 2006	3
ForesTrade	P57	[Map] Sketsa Parsil Ladang/Sketch Farm Plot of Land	19 Apr 2006	1
ForesTrade	P58	[Memo] Summary of ForesTrade, Inc.'s Collaboration with International Conservation Organizations 1996-2006.	22 May 2006	4
ForesTrade	P59	[Spreadsheet] ForesTrade Sales History	March 2007	3
ForesTrade	P60	[MOU] Jenis Pelanggaran Dan Sanksi [Trans.: Breaches of Contract and their Consequences]	Undated	1

SECONDARY DOCUMENT DATA REGISTER			
Case	**Description**	**Date**	**Page Nos.**
Hill Holt Wood	O'Brien, Liz. Hill Holt Wood: Social Enterprise and Community Woodland. Social Research Group, Forest Research: Surrey, UK.	April 2004	1-34
Hill Holt Wood	Government News Network (GNN). Hill Holt Wood in Lincolnshire 'Helping to Save the Planet'. Department for The Environment, Food And Rural Affairs (East Midlands).	7 March 2005	1-4
Hill Holt Wood	Jackson, Richard; Aubrey, James; Hollingworth, John; Wright, Bruce. MBA Consultancy Project for Hill Holt Wood. University of Lincoln: Lincoln, UK.	June 2005	1-48
Hill Holt Wood	Sacks, Justin. Public Spending for Public Benefit. New Economics Foundation: London, UK.	July 2005	85-89
Hill Holt Wood	Case study - Hill Holt Wood. Social Enterprise Coalition: London, UK.	4 Oct. 2005	1-2
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Native Energy	Gough, Bob. Embracing the Wind. EnergyBiz Magazine: Aurora, CO, USA.	Jan/Feb 2006	82
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Chumbe Island	Buckley, R. Case Studies in Ecotourism. CABI: Wallingford, Australia.	2003	15-16
Chumbe Island	Fick, Dave. Africa: Continent of Economic Opportunities. STE Publishers: Johannesburg, SA.	2006	
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ForesTrade	Wheeler, David; McKague, Kevin; Thomson, Jane; Medalye, Jacqueline. Sustainable Local Enterprise Networks: 30 Case Studies. Schulich School of Business, York University: Toronto, Canada.	2003	37-38

APPENDIX II: Interview Topic Guide

Interview Theme Guide

Over time, quantity and qualities of each – and WHY?

Key Stakeholders & Categories (owners, investors, employees, gov't agencies, customers, learners) (What did / does each bring to the enterprise? What do they want / get in return? HK,SK,FK,EK,RK,MK)

Financials (sources, uses)

Activities of founders and employees (production, networking, business plans or other documents produced, demonstrating value & legitimacy, etc)

Vision(s) of key stakeholders

Organizational structure (accountability & responsibility: governance [ownership & control], operational, legal status)

Institutional Environment (common operating model innovating from, operating domain, what is taken for granted and what is not)

Ecosystem (opportunities, constraints, changes, fit with business strategy)

APPENDIX III: Categorising Analysis

Philosophy	(Refs)	**Process**	(Refs)	**Players**	(Refs)	**Organisation**	(Refs)	**Outcome Evaluations**	(Refs)
Balance	18	Contingency	27	Government	5	Financing	7	Benefits	51
Diversity	12	Formalizing	20	Stakeholder Relation	85	Governance	25	Contributions	11
Env Values	24	Idea Generation	27			Income	35	Env Conditions	14
Exploitation	7	Investment	4			Management	30	Reward	20
Fairness	6	Legitimacy	2					Risk	7
Growth	8	Networking	20					Success	12
Interpretation	26	Opportunity	21						
Just Do It	10	Partnership	11						
Market	5	Problem Solving	11						
Motivation	26	Stabilizing	5						
Perpetuation	23	Succession	27						
Philosophy	19	Trust	22						
Place Specific	2								
Quality	46								
Satisficing	8								
Stacking	4								
Sus Dev	15								
Synergy	29								
Tradeoffs	10								
Vision	81								
Worthy	2								
	381		197		90		97		115

Figure III.1 List of Initial Themes Clustered into Five Meta-Categories

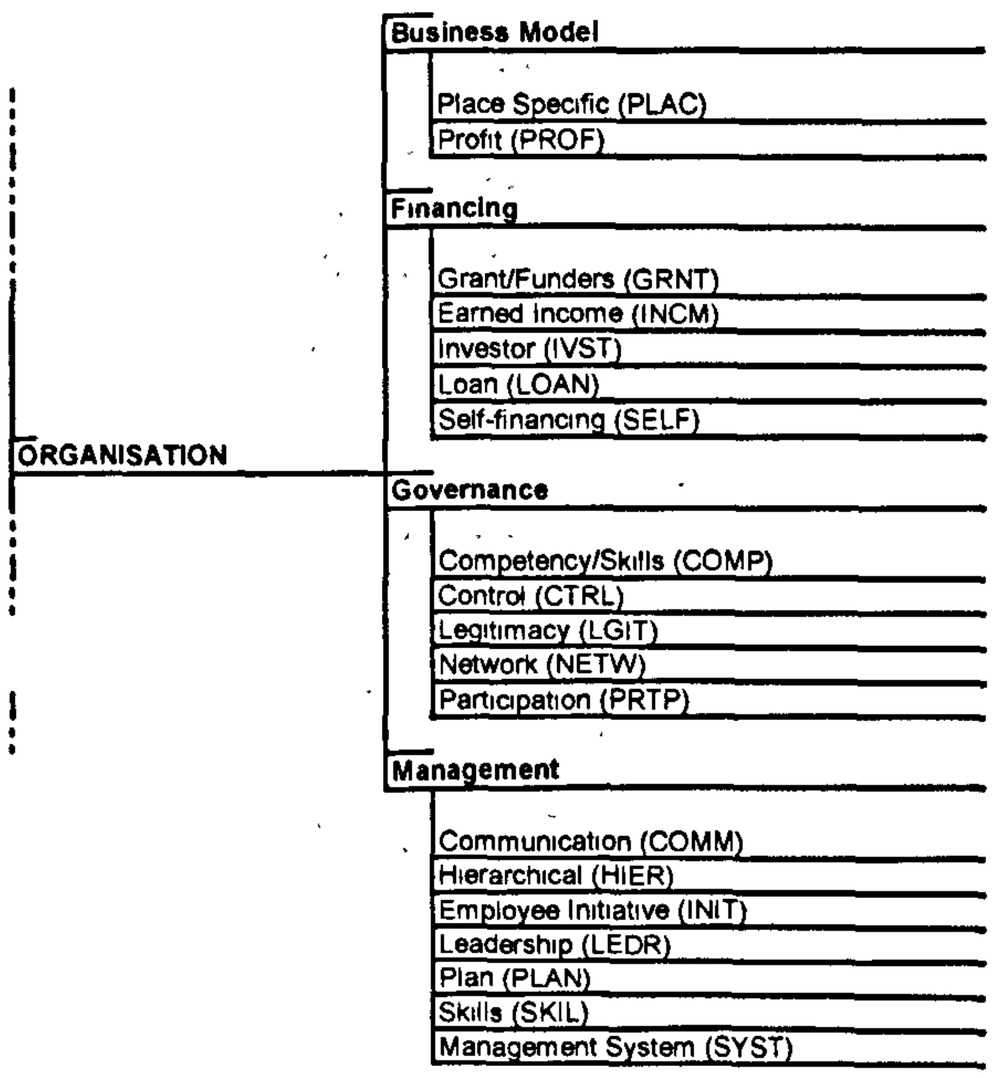

Figure III.2 Three-tier Ordering System for Categorical Analysis

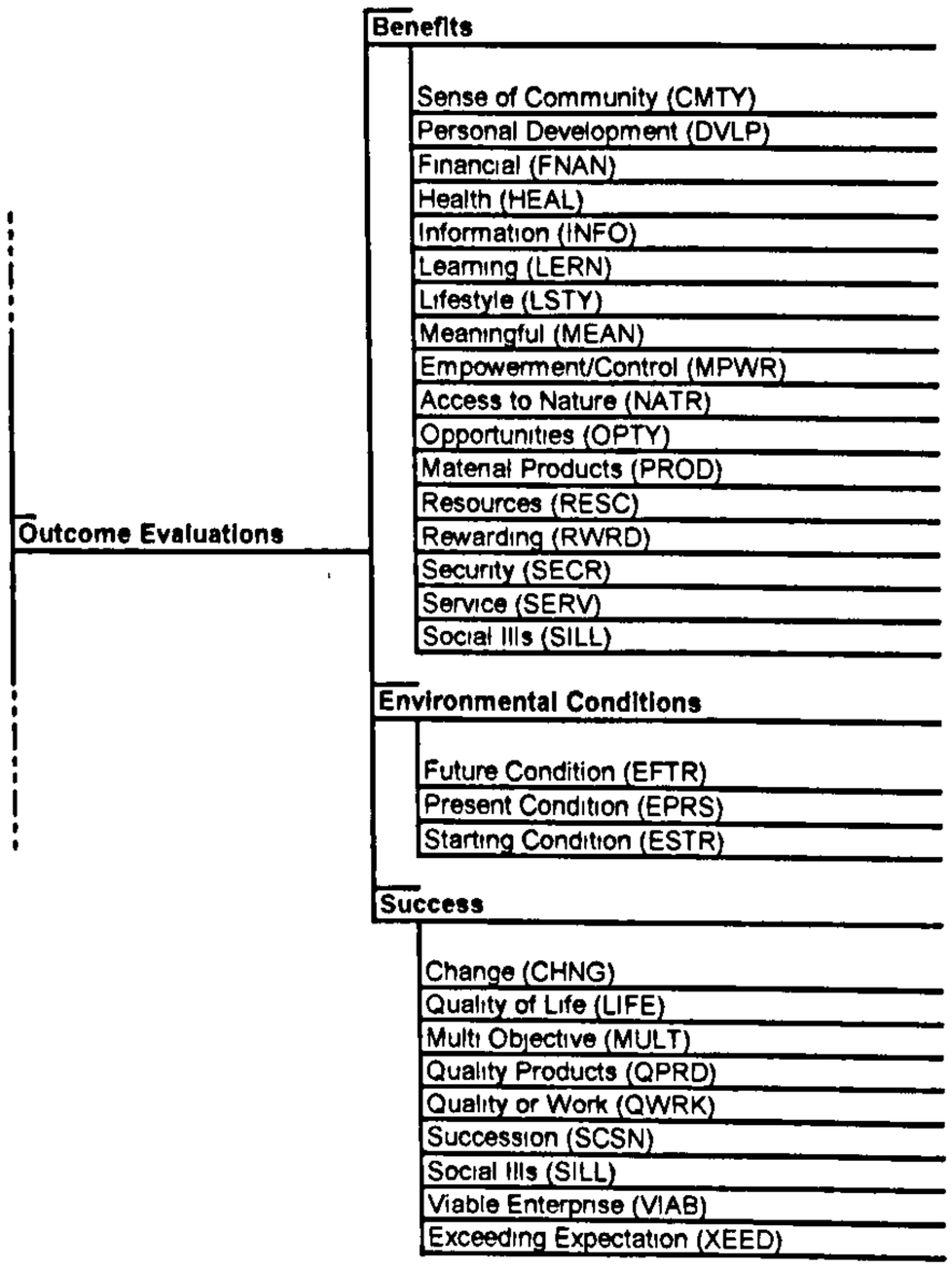

Figure III.2 Three-tier Ordering System for Categorical Analysis (cont.)

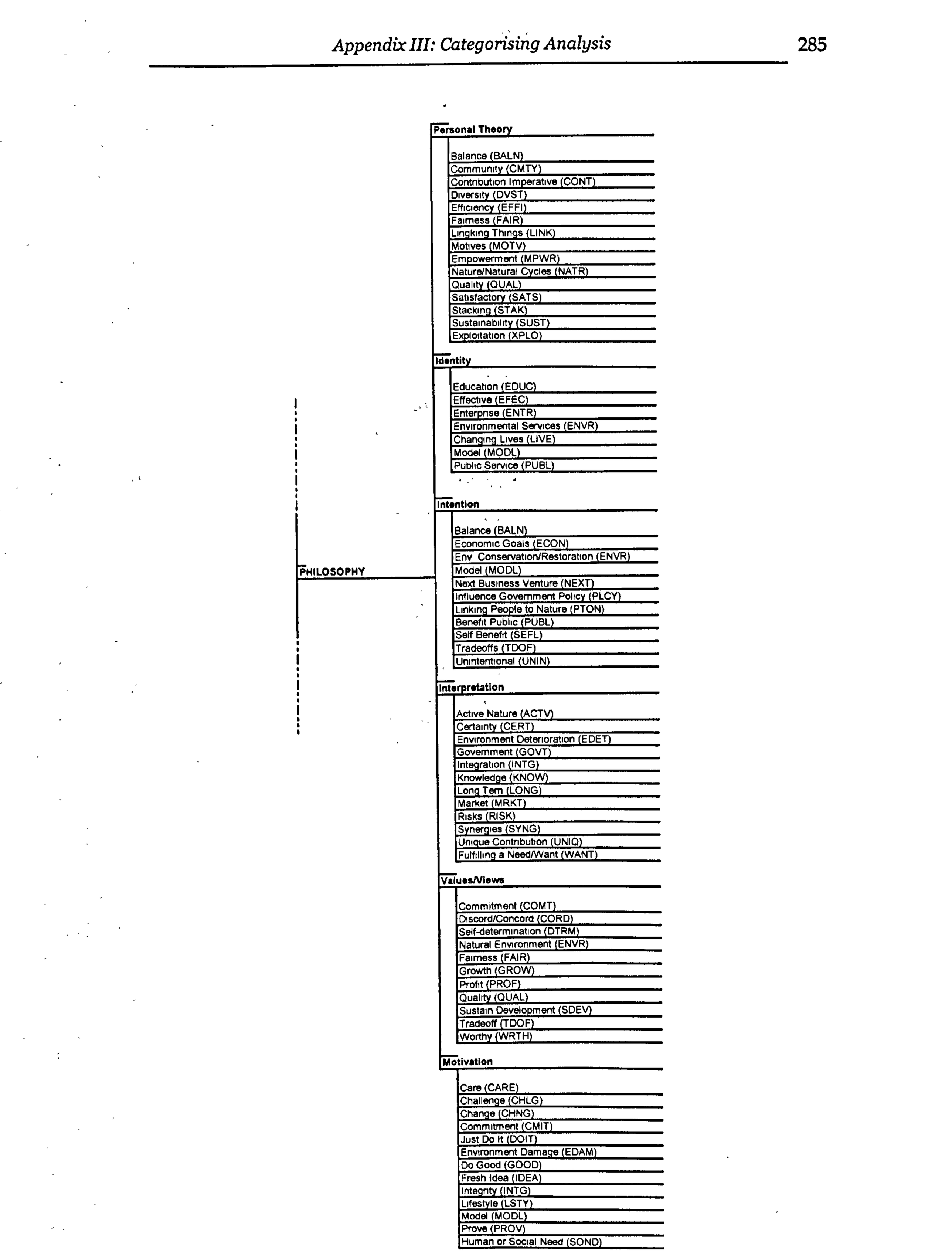

Figure III.2 Three-tier Ordering System for Categorical Analysis (cont.)

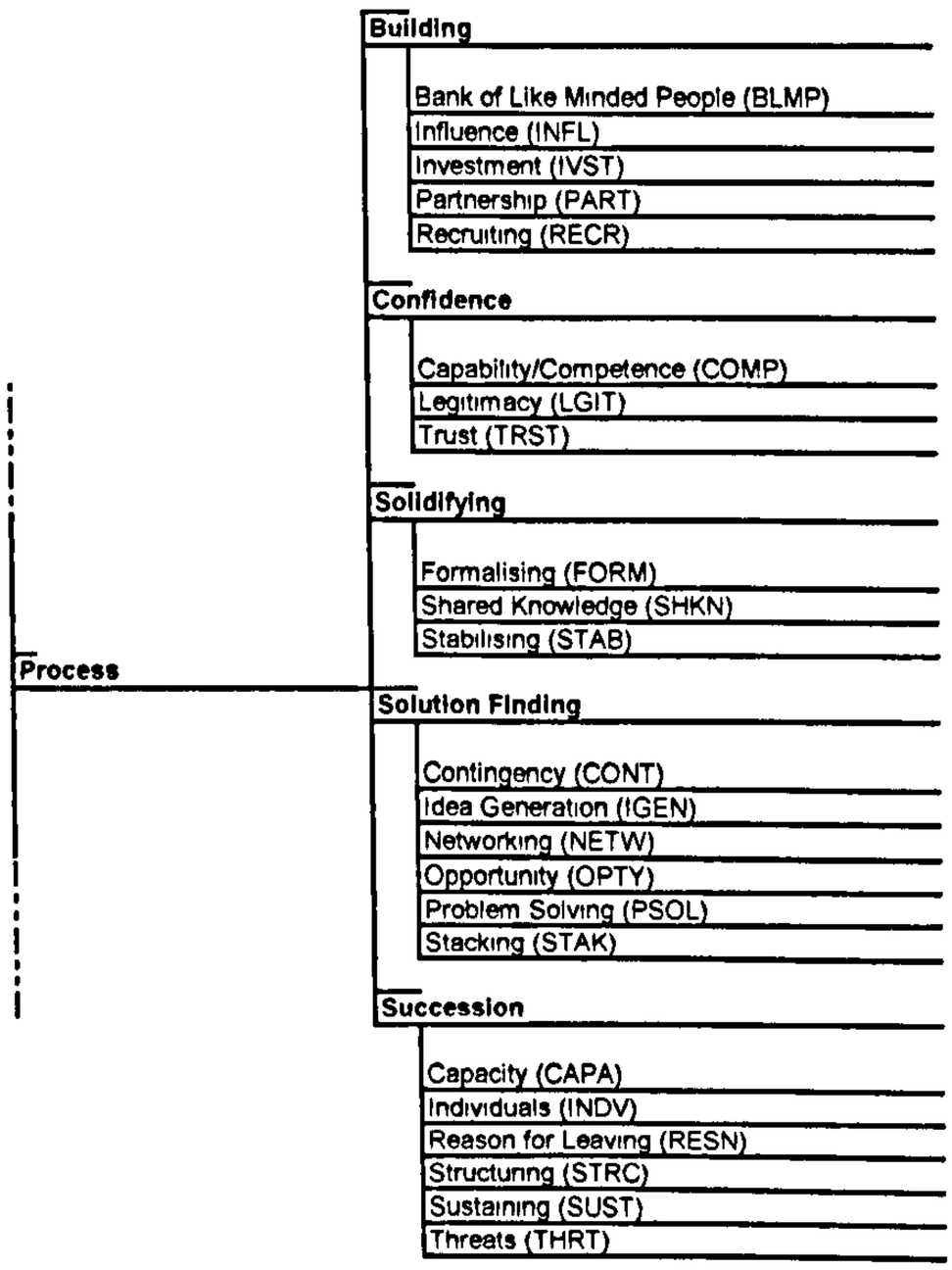

Figure III.2 Three-tier Ordering System for Categorical Analysis (cont.)

APPENDIX IV: Explication of Data Analysis Process

What follows is a brief summary and selected examples of the cognitive processes that were involved in my explorations of the case study data, and that resulted in the models presented in chapters 6 and 7.

IV.1 Principles of Sustainability Entrepreneurship

IV.1.1 Developing the Concept of 'Benefit Stacking'

Early in the study, one of the entrepreneurs spoke about what he termed 'income stacking' (T02: 1), in which he attempted to generate multiple small income streams from a few resources or activities that, when 'stacked' together, were sufficient to ensure the financial viability of the enterprise. Primed with this concept, further explorations of the data revealed that this approach was used not only for stacking incomes, but also for stacking a host of other benefits to meet other goals, including social and environmental goals (see Figure IV.1). At this point I broadened the concept to 'benefit stacking' to encompass this more general approach. Organising so as to stack multiple benefits seemed to contrast with organising based on specialisation of operations to maximise a particular outcome. As specialisation is associated with efficiency of operations, I considered benefit stacking to be the opposite of efficiency as an organising principle. To test this concept with the data I looked for instances in which the entrepreneurs discussed efficiency and found that, contrary to my expectation, efficiency of operations was still an ever-present concern. Re-evaluating the concept in light of this evidence, I realised that, rather than being opposed to organisational efficiency, benefit stacking was in fact a different approach to ensuring efficiency of activities. I compared this with some of the literature on organisational efficiency to show how specialisation and benefit stacking both lead to efficient, though qualitatively different, outcomes.

	Benefit stacking to leverage scarce resource to greatest effect
Native-Energy	"It's like supporting tribal wind farms and supporting family farmer projects – it's a win-win in that it provides the company what it needs, but then also makes, at the same time, the company more attractive to our potential customers and at the same time potentially creates more economic benefits for the tribes. So, it was compelling to us for all three reasons." (T19: 19)
Fores-Trade	"When we were able to get the farmers to do this – basically the slicing and drying in their communities, mainly as sort of a cottage industry – they were able to get more share of the value of the finished product...and we were able to get a lower price. A lower cost." (T37: 18)
Hill Holt Wood	"'Why have you got ten young people digging a ditch out when you could bring a JCB in and do it in an hour and they're going to take weeks?' I said, it's not about that, it's about the team building, it's about the learning, it's about all sorts of things. It's not about digging the ditch, but we get the ditch done as well." (T02: 6)
Chumbe Island	"The coral reef motivation was the main motivation. The education of kids was next. And then tourism became instrumental in the whole package." (T31: 16)

Figure IV.1 Sample Quotes Related to the Concept of 'Benefit Stacking'

IV.1.2 Developing the Concept of 'Strategic Satisficing'

The other key concepts of the models were developed through a similar process of identifying themes and iteratively testing and reworking them in light of further data and ideas from the literature. For example, when I examined instances in which key decisions or judgments had to be made, conventional justification for decision making such as least cost or most revenues, profit, return, sales, market share, and so on, were rarely if ever given. Instead, terms such as viable, fair, healthy, reasonable, and other similar terms were routinely used (see Figure IV.2). Taken together, these terms all indicate various criteria for determining how much is *enough*. Rather than 'most' or 'least, 'maximum' or 'minimum', these entrepreneurs were establishing various thresholds beyond which more or less of something, whatever that something was, lost its urgency as an overriding goal. This reflected Simon's notion of 'satisficing'. After looking at some of Simon's writings on this topic I noted an important difference between what was described by Simon and what I was observing in my own data. Whereas Simon held satisficing to be an implicit, unavoidable, and unfortunate characteristic of human problem solving due to cognitive limitations of the human brain, my data suggested sustainability entrepreneurs were satisficing explicitly and intentionally, that is, strategically. I then questioned my data

as to *why* these entrepreneurs were apparently finding it useful to employ strategic satisficing in their approaches to problem solving. The answer was found in the theme of 'balance'. Strategic satisficing, it seemed, enabled the entrepreneurs the flexibility needed to balance multiple goals and purposes – a key functional capability that is a distinguishing feature of successful sustainability enterprises. To test this concept I searched the data for instances of the entrepreneurs attempting to minimise or maximise a particular outcome. What I found was that while efforts were made to reduce or increase some factors as much as possible, such as reducing costs and risks, or increasing reputation or market share, these objectives were secondary to the main objectives of the enterprise. The entrepreneurs did not launch their enterprises to, for example, minimise risk; they launched enterprises first and foremost to achieve environmental, social, and personal goals. It is with these primary organisational goals that strategic satsificing was used to achieve success in multiple domains.

	Strategic satisficing to balance multiple objectives rather than maximising any one overriding objective
Native-Energy	"...on balance, I think we sort of try to engage in fair trade, if you will, and make sure that the projects get a fair price from us that beats our competitors and we try to maintain a thin enough margin that our retail price is still attractive but offers, you know, cost coverage and, eventually profit, as well for us." (T19: 29)
Fores-Trade	"I wouldn't say it's maximising profits for shareholders as much as increasing the viability of the business model and in the long term an exit strategy that gets a reasonable return for the investors." (T38: 37)
Hill Holt Wood	"If we were just running it for profit...we would be doubling the numbers of kids here. And doubling our income, or turnover. We're not doing that because the footprint that it would leave on the wood would be unacceptable from an environmental point of view." (T04: 26-7)
Chumbe Island	"...as long as it pays for itself, then it's making enough money." (T30: 42)

Figure IV.2 Sample Quotes Related to the Concept of 'Strategic Satisficing'

IV.1.3 Developing the Concept of 'Qualitative Management'

Another theme that emerged involved *what* exactly the entrepreneurs were managing for. It became apparent that when considering a decision, the entrepreneurs were considering the quality of a *state* that would result, rather than a particular quantitative outcome (see Figure IV.3). So, for example, they made decisions based

on the quality of experience that would result for employees or customers, or the quality of the environment that would result, or the quality of life for organisational stakeholders, or the quality of a product or service. What became apparent was that the reason for this difference was because the entrepreneurs really cared about the outcomes – these multidimensional outcomes were the goal, not simply a means to an end. These qualitative outcomes were the purpose for the enterprise's existence. To test this concept with the data I looked for instances where quantitative decision factors were part of the consideration for a decision. What I found was that in many situations the quantitative decision factors were considered in light of the qualitative effects they would produce. So for example, whether or not to pursue growth opportunities, whether or not to pursue a particular income stream, how to allocate financial resources – in many cases these decisions were made based on the multidimensional, qualitative effects that would result. In some cases purely quantitative decisions were made, such as how much profit the founders hoped to earn. But in these cases the quantitative goals were threshold goals to satisfy a particular need (which is an instance of strategic satisficing, as described above). Weber's concept of formal versus substantive rationality was used to help explain why this different approach was observed. Just as Weber pointed to a set of ultimate values that guide substantive rationality, so too did the qualitative-based decisions of these entrepreneurs mirror the values on which their enterprises were based.

	Managing for outcome and process quality
Native-Energy	"So I think the ethic of, 'We're going to do this right no matter what even if it means we're going to have to do things a bit more slowly and we're not going to be able to be as aggressive as we'd like to be in certain areas.' That, I think, has been pretty much the mantra of *Native*Energy." (T22: 10)
Fores-Trade	"So, because we have to distribute so that all farmers can really get the benefit of this programme. And then my staff will decide which belongs to which location." (T33: 13)
Hill Holt Wood	"So it's improving the quality of the results, in terms of the young people and how they progress and how they benefit from what we do. But also it's the quality of time for staff. That if they are one to one or one to two, they don't have the stress and the hassle of kids trying to cause mayhem." (T06: 14)
Chumbe Island	"It's done by need. So for example, with my accountant, before this accountant there was a woman. And I knew she was overworked. So therefore, what can I do to improve the working situation and get an assistant?...And then we can look at whether we can afford it or not." (T31: 16)

Figure IV.3 Sample Quotes Related to the Concept of 'Qualitative Management'

IV.1.4 Developing the Concept of 'Worthy Contribution'

It was evident in the case data that when choosing organisational stakeholders, as well as when choosing operational locations for their enterprises, these entrepreneurs were basing their decisions on more than just which person or place was most convenient, or could provide the best service, or was the least expensive, and so forth. Rather, there was a pattern to the types of individuals and geographic locations chosen. There was a crosscutting logic or rationale behind their choices. Upon examining the data, it became clear that these selections were made because the entrepreneurs deemed the particular person or location as more *worthy* than others (see Figure IV.4). This concept of worth was related to characteristics such as need, vulnerability, marginalisation, and so forth. However, this finding seemed to contradict another crosscutting theme, which was that the entrepreneurs all emphatically stressed that they were not running charities, they were running businesses that would not be used for philanthropy. To reconcile this apparent contradiction I posed the question to the data of why these *particular* worthy stakeholders were chosen when other, equally 'needy' or vulnerable people or ecosystems were not chosen. The answer that presented itself was that these particular worthy stakeholders also had another important attribute – they also could make meaningful contributions to the enterprise. Thus, 'worthiness' was a function of both need and contribution. Thus the concept of 'worthy contribution' was formed.

	Directing benefits to worthy contributors rather than the most powerful stakeholders
Native-Energy	"Tribes had been terribly disadvantaged for several hundred years, basically, and are really struggling in many cases." (T20: 6)
Fores-Trade	"When we were looking at sites to operate in we looked for communities and ecosystems that were vulnerable where we could make the most difference." (T36: 17-8)
Hill Holt Wood	"[There was a need for a] holistic approach to be taken for the young people in the community who most need it...So I think it was at that point that Nigel said hang on, let's look at this, let's look at this opportunity that has arisen. And *that's* where the business opportunity came to develop the training for the hardest-to-reach group." (T05: 11)
Chumbe Island	"...at the very beginning, we handed over to local people. And they had to develop this, see the benefit for them as well. ...If you want to win them for the cause of conservation, and it's not just by paying them a salary. I mean their understanding...They see the future." (T31: 20-1)

Figure IV.4 Sample Quotes Related to the Concept of 'Worthy Contribution'

IV.1.5 Developing the Concept of 'Perpetual Reasoning'

Although each of the previous principles had their own reasoning, or logic, that explained the content of the concepts and how they were put to use, there seemed to be a crosscutting rationale that linked these concepts together. To explore this issue I questioned the data as to *why* these principles were used. This question pointed to another theme regarding the relationship between stakeholders, natural resources, and the enterprise. Contrary to conventional businesses, where the value of stakeholders and material resources was determined based on their contribution to the enterprise, in these cases the reasoning seemed reversed. The enterprise was values based on the contribution it made to people and nonhuman nature. To test this idea I examined how the entrepreneurs answered questions about the purpose of their enterprises and why they felt the need to create new organisations. While their reasons did include some self benefits, a fundamental reason was to contribute to the welfare of vulnerable people and nonhuman nature. Specifically, they sought to contribute to these ends by designing business models that would derive income and other benefits streams by improving human and natural resource quality indefinitely. The term 'perpetual reasoning' came from one of the entrepreneurs who described his business model as a "perpetual...long-term model" (T06: 49-50).

	Purpose is to perpetuate the quality of natural and human resources, not to obtain greatest financial return in shortest time possible
Native-Energy	"...the ability to provide a very positive sustainable economic growth opportunity for the tribes seemed like just a very good thing to do. So when you can combine that with the environmental benefits of promoting renewable energy and direct greenhouse gas reductions, it just to us was a natural fit" (T20: 6)
Fores-Trade	"We set up this business in order to do rainforest preservation and sustainable development." (T36: 5) "We ended up discovering that that business partner and we were incompatible because like so many others [he] had much less patience – wanted to make a quick buck and really get a large ROI..." (T36: 12)
Hill Holt Wood	"That strikes me as a viable business for 1500 years. And when you come back at 1650 years, does it really matter if you bury on top of who was buried 1500 years ago? You can start that cycle again. So it's perpetual...I've come up with this long-term model." (T06: 49-50)
Chumbe Island	"So it encourages this type of investment which goes for high profits in short time...So if you're not prepared to do that, you have a very hard time." (T30: 15-6) "...that's the primary purpose. To get an area preserved in a sustainable way. To include education and conservation management. Local kids are taken there for education for free, to understand why this is degraded and we have a third of our staff employed for conservation, rangers and a marine biologist." (T30: 2)

Figure IV.5 Sample Quotes Related to the Concept of 'Perpetual Reasoning'

IV.2 Processes of Sustainability Entrepreneurship

Many themes emerged from the case data, but the three themes of trusting, culturing, and structuring were developed because they provided an explanation to the guiding research question. After a number of themes had been identified, I asked the data how the entrepreneurs could ensure their enterprises would continue to function as sustainability enterprises after they handed over ownership and control. This question drew attention to the fact that, in many cases, only after the enterprises were up and running and the founders started to loosen their control over operations did they begin to formalise their plans and approaches. I termed this 'solution stocking' because it represented the entrepreneur's attempts to communicate to other stakeholders what had at the start been in their heads – some of the solutions they had found for organising problems. However, this approach seemed short-sighted, because the management plans were only relevant for the next few years. The real insight came when I noticed that other key organisational stakeholders were exhibiting the same perpetual reasoning type rationales as the entrepreneur. This provided an answer to the question of how the sustainability character of the enterprise was to endure, and it provided a focal point around which to order some of the other emergent themes as I sought to understand exactly *how* this transition took place.

Preparations for eventual succession, whether related to the transferral of leadership or ownership and control, seemed to involve three themes: adjusting organisational structures, selecting key stakeholders to hand over responsibility to, and ensuring the stakeholders exhibited the desired values and purpose. From these three themes I investigated how the entrepreneurs were attempting to get to a point where they could feel confident to hand over their enterprise. This brought to the fore the themes of trust, shared values and cognitions, and structuring activities. These themes were elaborated by exploring how they related to the need to shift the locus of control from the entrepreneur, at the start of the enterprise, to the enterprise system itself by the time of succession. Laying these themes across three stages of enterprise development provided a framework for elaborating on these themes and linking with other themes (see Figures IV.6, IV.7, and IV.8). The result was a process model that both described and explained the extended process of enterprise design.

	Structuring organisation to embody sustainability purpose	*Evolution to less founder control, more stakeholder discretion*	*Re-structuring to maintain character in absence of founder*
Native-Energy	"Thinking beyond green electricity or electricity use…so it was a whole issue of how to get people thinking about their entire carbon footprint." (T20: 4)	"We're working on a plan for them to be training up some tribal folks, ultimately to do that work…So we are looking for a long-term transition for that." (T17: 27)	"It was a way to provide a means for we, as founders, to have an exit strategy. It was a way to create lasting benefits for the tribes that go beyond simply the wind farms themselves. So, I don't know, it all fit together. It was a good solution."(T20: 29)
Fores-Trade	"The goals were around sustainable development…So we designed the projects and the payment systems in ways that would make the most difference to the most people." (T36: 27)	"…so I stepped off partly because I was ready to do other things, but also just feeling a need to create the space for someone of high calibre to take on running [day-to-day operations]." (T37: 15)	"I head the Social Responsibility Committee where we're working to embed a whole process in the company…of assessment and evaluation and reporting that will keep things on track." (T36: 33-4)
Hill Holt Wood	"It was about, not reliant on monoculture, which had been the driver for forestry and agriculture for years. It was about getting mixed incomes to actually find a way to make things viable and make things hang together. With the key element of involving the community from the start." (T03: 3)	"…every ranger and senior ranger has an area of the wood that they're responsible for. And they have to manage that bit of the woodland and they …can develop ideas in there." (T06: 20)	"The articles of memorandum were driven by the board. And they were very concerned that our aims and objectives were cast iron…That there was no way you'd get a group of people coming into the business and trying to dominate it and take a different direction." (T06: 26-7)
Chumbe Island	"Everything had to be done with the tides...so to not have any damage to the reef it has to go at the highest tide. So there was only everyday a window of time you could take over. And if you miss it, had to wait for another day." (T31: 40-1)	"Of course at the end of the day I have to approve major expenditures…I'm the boss but I'm very much hands off. Very much hands off." (T30: 30)	"Keeping it in private hands, with similar contractual agreements and arrangements, and a similar set-up is all I can do to keep it a park" (T30: 33)

Figure IV.6 Sample Quotes Related to the Concept of a 'Structuring' Process

	Value-based selection	*Appropriation of cognitive approach*	*Renewal of shared values and cognition*
Native- Energy	"We'd been in that space for a long time. And so it wasn't as though four random guys got together and said, 'Hey, you want to form a company?...' I mean this wasn't a Google kind of thing. It was – we'd been working hard on that vision..." (T21: 7-8)	"I don't think there was ever a sit-down discussion that said, 'Look, this is the way we're going to do it.' I think it's just always been done this way." (T22: 12)	"...we just had a strategic planning session over the last couple of days in Vermont. We were all in the same room and everybody who works for the company was engaged in the discussion." (T22: 15)
Fores-Trade	"I was getting a tutorial fast and could quickly see how important it was to have people that were really closely aligned to our values." (T36: 22)	"I help with communication by email and then I can see that he was really wanting to help farmers and to – not only farmers, actually at that time – farmers, local NGOs, and local exporters. So all parties can work together." (T33: 35)	[Maintaining awareness of the company's sustainability principles] is obviously a process – a constant renewal... to update it and in line with the new trends itself in the areas we're operating in." (T38: 34)
Hill Holt Wood	"I think that was really pivotal. Getting some really key people, who are still here now eight or nine years later, who bought into this vision and this dream and didn't see that it was wacky. Or bought into it because they believed in it." (T05: 6)	"I think you've got the kind of staff who stick around. Stick around, know exactly what the business is about, exactly how it operates, and things that are fundamentally important to that." (T07: 17)	"We discuss it in our self-assessment report, we discuss it. And we make sure everything we do relates back to the values so the key tasks of the employee should relate back to the values of the woodland." (T08: 11)
Chumbe Island	"Among the first people we had were marine biologists. An Australian lady... just fell in love with the place and...[wanted] to stay here for some time and work..." (T31: 9)	"We were discussing all the time...We were of course discussing very intensively... I think the management team was quite close...we'd spend a lot of free time together." (T31: 26)	"[Talking together about what Chumbe is about] is often a bonding thing...And it's to do with the whole conservation, environmental education side." (T29: 25)

Figure IV.7 Sample Quotes Related to the Concept of a 'Culturing' Process

	Building trust in founder	*Developing trust in stakeholders*	*Entrustment of enterprise and purpose to stakeholders*
Native-Energy	"They get a...proper sense of security when they see that folks who have expertise in what we do are choosing us." (T20: 18)	"During the whole process of negotiating the agreement with the Rosebud Sioux Tribe...we grew to respect them and they grew to respect us." (T19: 20)	"We continue to promote the evolution of the company to be a tribal-owned, eventually probably 100% tribal-owned operation." (T:18: 8)
Fores-Trade	"[We had to find] a core group of people that were...willing to give us the benefit of the doubt. Once we could demonstrate our own credibility and trustworthiness, then it would enable these projects to grow." (T38: 32)	"We met Lucia and she started to help us with administration and just became pretty clear pretty quickly that she was made sense to be the director. And we could see that she would be fair to people and really create the kind of culture that we wanted." (T36: 39)	"I think that the biggest challenge is how to keep those [company values] alive...And the Board can keep it on track. And that's where we are right now." (T36: 33-4)
Hill Holt Wood	"But they didn't believe it to start with – didn't trust me at the start. But we've won them round." (T10: 25)	"The community's got to have the ability to take it over. So it required development of the Hill Holt Wood management committee to a level where they could take it over." (T14: 10-11)	"And he said, 'I think what we have to now do, we have to divorce the land, the land that the houses are on has got to belong to the community...[so that] they have control of it then.'" (T05: 18)
Chumbe Island	"As far as we know, this was the first private marine park in the world, and people just didn't believe it... So the awards were a way of getting the recognition." (T31: 30-1)	"Training, training, training...Constant training...Now people are competent enough...I think the people that are working with us now,. they're really doing good stuff." (T31: 20-1, 40)	"It would have to be carried on by someone as conservation minded... Whatever I would do with it has to be guaranteeing the continuation of what's there now." (T30: 31-2)

Figure IV.8 Sample Quotes Related to the Concept of a 'Trusting' Process