Mapping the *aliran* of the academic discipline of entrepreneurship:

A discursive representation.

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Attestation of Authorship

I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person (except where explicitly defined in the acknowledgements), nor material which to a substantial extent has been submitted for the award of any other degree or diploma of a university or other institution of higher learning.

Rob Lock
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Glossary

Aliran	The term *aliran* from the Malaysian and Indonesian languages has multiple meanings including: 'flow, drift, current, trend, channel, conduit, school of learning as well as an ideology.' [Echols and Shadily, 1994]. The word is used as having both singular and plural applications.
Sub-*aliran*	Components of an *aliran*, used in this dissertation in the context of being the ontologies of the discipline as represented by the *aliran*.
Episteme	A term used by both Foucault and Heidegger. Its use by Foucault is as a 'strategic apparatus' to determine what is included or excluded from a body of knowledge. The word is used as having both singular and plural applications.
Epistemic justification	The term epistemic justification [Bonjour, 1998] describes the manner by which knowledge is determined to eligible for inclusion or exclusion within an *episteme* by application of epistemology.
Epistemology	The method selected by academics to justify acceptability of knowledge as a basis for inclusion or exclusion of such knowledge. Commonly associated with terms such as rationalism, empiricism, etc..
Ontology	The way that knowledge is structured into domains or themes. Differs from epistemology in that the later defines what is acceptable into disciplines.
Prejudice	A bias, often with negative connotations, however Gadamer uses the term in a more positive sense that describes prejudice as enabling greater depths of understanding.
Disciplines	A body of knowledge in which permissible knowledge is defined by epistemic justification using of one form of epistemology or another. Gatekeepers regulate such permissible knowledge using epistemic justification.
Discourse	A body of knowledge that may not necessarily be defined by epistemology, but is defined by a '-logy' in that the knowledge within such '-logy' has some manifest relationship with other knowledge in the same '-logy'. A discourse is assumed to be larger than a discipline and many disciplines may contribute to a discourse.
Ontic knowledge	The knowledge contained in an ontic state is effectively infinite knowledge, greater than a discourse and includes all knowledge, including that which is forgotten or not yet known.
Connaissance knowledge *Savoir* knowledge	From Foucault *connaissance* knowledge is the basis of the 'system of objective knowledge', which I have taken to be the knowledge within a discipline; while savoir knowledge is the 'the experience of the self', which I have taken to mean the knowledge of the practitioners.

Gravitas	The concept of *gravitas* implies seriousness or weight rather than power. However *gravitas* is more than weight, it implies a force that can attract or repel. Like power, *gravitas* can be exercised, it can be shared and this, along with conformity to good form, is one of the underlying fundamentals of the process of citation.
Archaeology	From Foucault's 'systems of thought' I have taken archaeology to be the historical method as opposed to the ahistorical nature of the genealogy, another philosophical method outlined by Foucault.
Simulation Simulcrae	From Baudrillard [1994]. A simulation is an accurate representation of something, whereas a simulcrae is a less than accurate representation but which is not recognised as such and becomes a 'being' in its own right with an increasing separation from reality.
Foucault's Triangle	Foucault [1980] in a lecture given on the 14 January 1976, described the relationship between power, right and truth as a triangle. The relationship between the three is described by Foucault as having two limits: firstly the "rules of right provide a formal delineation of power, and secondly the effects of truth that this power produces and transmits, and which in turn reproduce this power" [Foucault, 1980, p93].
Heffalump	From A.A. Milne's Winnies the Pooh stories, a somewhat mythical indeterminate creatures of vague form and description. Used by Kilby [1971] to describe the discipline of entrepreneurship.
Phenomenology	A system of thought that endeavours to describe something 'as-it-is.' From Schmidt [2006] the origin of the term phenomenon means 'what shows itself in itself' and ontology is only possible as phenomenology.
Hermeneutics	A more interpretative system of thought that I use to examine the phenomenological archaeology of the *aliran*.

Note on APA referencing style used in this dissertation

I wish to state for the record that I do have reservations regarding the use of the required APA referencing system. These reservations apply to two areas.

Firstly the APA system tends to be an Americanized system that does not takes into consideration non-Caucasian systems of nomination, thus ignoring the cultures and traditions of many parts of the world, in particular Asia. APA does not allow for use of Chinese or Vietnamese names in their traditional formats. Nor does APA allow patronymic systems of nomination that are part of the Islamic culture. For example Mahathir Mohamad is, under APA, referenced as Mohamad, M. which is very incorrect culturally. His name is Mahathir and his father's name is Mohamad. The father's name is not the familial name under patronymic systems. I believe that the APA referencing system is still in the process of development and needs to address such issues at some time in the future.

Secondly, as discussed in this dissertation, citations are a system of showing good form. Using Aristotelian traditions involves a separation of form and substance. To delineate this separation of the necessity of good form from substance I have parenthesized any citations with square brackets, e.g. Foucault [2004]. I use the rounded brackets '( )' for any parenthesized comments that relate to substance rather than form. This use is most apparent in Part Four when I include the *gravitas* of the cited article from the *aliran* as part of the reference in the form Author [year] (*gravitas*). The square parenthesis follows good form, whereas the rounded parenthesis provides substance.

Abstract

In this study, I consider the status of the academic discipline of entrepreneurship as represented in refereed journal articles and citations in the Web of Science database within a broad philosophical framework, developed for this investigative purpose.

This dissertation firstly explores an understanding of knowledge as offered by French social theorist, Michael Foucault, identifying two forms of knowledge. Using Foucault's distinctions, I develop models that position *savoir* and *connaissance* knowledge, which I define as practical applications of understanding and academic orientations of explaining, in relation to disciplines and discourses. The strategic apparatus of the *episteme* is included in my models as a discipline-based method of determining the acceptability of knowledge into the discipline, incorporating the varied roles of gate-keepers, intellectuals and other participants into the models. The roles of epistemology and ontology are discussed and included in the models.

Further, drawing on the works of German philosopher, Martin Heidegger, I introduce the concept of an ontological test as a possible means to consider whether an academic discipline clearly understands its 'meaning of being' or, alternatively, could be considered to have passed Foucault's point of epistemologization and be termed a 'dubious discipline'. Academic thinking on entrepreneurship has come under an array of criticism from within the discipline, including criticism as to a perceived lack of objectivity. The models developed in this dissertation are applied to the discipline of entrepreneurship in order to better understand the development of the discipline of entrepreneurship and the reasons for this criticism.

Using the *episteme* of the Web of Science database, I apply citation analysis to identify those articles and texts which are considered within the entrepreneurship discipline to have the highest *gravitas*. These high *gravitas* articles are used to create an archaeological representation or *aliran* that illustrates the development of the discipline over time and the ontological development of sub-*aliran*. This *aliran* is a phenomenological representation

of the discipline based upon the *episteme* to depict the *episteme* 'as it is'. This representation is hermeneutically interpreted to discern the development of various sub-*aliran,* and identify the possible influence of gate keepers with high *gravitas* in such development.

Based upon my survey of high gravitas articles from the aliran, I found there was a general exclusion of practitioner both as an audience for and as a source of *savoir* knowledge. Admittedly this finding could well be attributed to the nature of the *episteme* selected for the research. The exception to this general finding was in the Venture Capital sub-*aliran*.

Further findings indicated an apparent feature of the *aliran* was a higher than expected level of demarcation between the organization and the firm. This demarcation had several features including an increasing trend towards learning by the organization as applied to entrepreneurship. Firms were not perceived to engage in learning but did engage in new ventures and undertook innovation. These functions were not indicated within the *aliran* to be part of the functions of the organization. Innovation was also not shown to be an activity conducted by individuals but was a preserve of the firm. These findings are consistent with the political structure of the Academy of Management's Entrepreneurship Division and indicate the influence this body likely has on the discipline.

In some instances, as might be expected, there was an overt level of construction of some sub-*aliran* by those with high *gravitas* in the discipline. This was most apparent in endeavours to add 'corporate' nominations to entrepreneurship, innovation and venturing. In the case of corporate entrepreneurship, such overt construction was perceived to be less than successful. However, the changing orientation offered by such construction is seen to offer a new direction to entrepreneurship which may be realized in the fledgling Strategic Entrepreneurship sub-*aliran*. Some sub-*aliran* observed were considered to be more introverted due to restraints imposed by the political structuring of the discipline.

While the discipline of entrepreneurship may not to be able to pass Heidegger's ontological test and could be considered a dubious discipline (doubtless like so many

others), this finding should not be deemed to be unduly negative. As with Gadamer's rehabilitation of prejudice, the term dubious could be rehabilitated to be positive and encourage moves towards greater objectivity, or at least greater rigour, within the discipline of entrepreneurship.

Part One: Introduction

1.0.00   This dissertation focuses on the academic discipline of entrepreneurship that has come to some prominence over the last half century or so. Firstly I examine the concept of 'the discipline' from a philosophical perspective, drawing, in particular, on the works of social theorist Michael Foucault and philosopher Martin Heidegger. Based on these works, a model is developed placing the discipline into the context of a nesting of knowledge. This nesting is based upon the respective degree of conceptualisation or contextualisation of knowledge and as such portrays the inter-relationship between discourses, disciplines and ontic states. The model also portrays the function of strategic apparatus, such as *episteme*, and how these function in regards to the on-going development of disciplines. The roles of practitioners, intellectuals and academics within the model are also developed, as part of the model, together with the role of citations via the medium of academic journals and the exercise of power between these components of the model,

1.0.01   Secondly, based upon the models of knowledge and the various components of epistemology and ontology that I have developed and elucidate in the next chapters. I create, based upon the *episteme* of entrepreneurship from the Web of Science database, an archaeology of the discipline of entrepreneurship, that shows the significant flows and evolving history of the discipline over time. Using citation analysis an *aliran* of the discipline development can be outlined using those most highly cited articles being considered to have the greatest *gravitas* in the discipline.

1.0.02   This *aliran* serves to illustrate the way that the discipline of entrepreneurship has developed based upon the acceptability of 'prejudiced' knowledge, using Gadamer's

rehabilitated version of prejudice. Sub-*aliran* are identified as part of the process. These, together with an assessment of the respective roles of *connaissance* and *savoir* knowledges in the development of the discipline, contribute to a discussion of whether the discipline has created a simulation or a simulcrae of entrepreneurship, as per Baudrillard [1994] and whether or not the discipline of entrepreneurship can be considered dubious, as per Foucault [in Dreyfus and Rabbinow, 1983].

1.0.03   Part One comprises four chapters and is structured as follows. The first chapter introduces the discipline of entrepreneurship focusing in particular on criticisms from within the discipline on the manner, both epistemological and ontological, in which it has developed. The philosophic lineage I use in this dissertation is then introduced. The last sections of chapter one outlines the intended contributions of this dissertation to collective *connaissance* knowledge.

1.0.04   The second chapter is an introductory discussion on the epistemology I use in this dissertation in particular reference to the difference between *savoir* and *connaissance* types of knowledge. The primary difference is that one is considered to be the 'know how' of the practitioner and the second the 'knowing that' of the academic. This is something that I consider significant primarily from my own unique perspective as a commentator on the discipline of entrepreneurship and one who has actually been entrepreneurial at different times in my life. The positionality of my own role viz a viz being both a business person who has been entrepreneurial and my current role of investigating the discipline that purports to study that which I do, is discussed in the third chapter.

1.0.05   The last chapter in Part One maps the remaining four parts of the dissertation.

1.1 Introducing the focus of this research

1.1.1 Entrepreneurship
1.1.2 Philosophy
1.1.3 Intended contributions

1.1.0   The purpose of this chapter is: firstly to introduce the discipline of entrepreneurship which is the subject of this investigation and briefly discuss some of the issues associated with its development; secondly to introduce the philosophic background which I will be using in the investigation; and thirdly to present the intended contributions of this work.

1.1.1. Entrepreneurship

1.1.1.00   The rapidly growing academic discipline of entrepreneurship has attained what some consider to be significant levels of growth over the last 40 years; however this growth has come under criticism from within the discipline as to the manner in which it has developed. This section introduces some of those criticisms, which are covered in more depth in chapter 2.5, and introduces Foucault's notion of dubious disciplines.

1.1.1.01   The academic discipline of entrepreneurship has, been described as being one of the fastest growing fields of academic study.

> The academic study of entrepreneurship over the last 40 years can be considered to be a success, and especially since the early 1980s it has increased exponentially as few other fields have been able to showcase (Katz 2000, Steyaert 2003) [Steyaert and Katz, 2004, p181].

> Over the last five years the Academy of Management's Entrepreneurship Division has "dramatically outpaced the growth of every other division" by 77 percent (Shaver, 2004) [Murphy, Liao and Welsch, 2006, p1].

1.1.1.02   The volume of academic material and opportunities produced within the discipline has reached levels some consider significant.

> No less than 1,600 universities offer 2,200 entrepreneurship courses. There are at least 277 endowed faculty positions and 44 refereed entrepreneurship journals (Katz, 2003). There are over 100 established and funded entrepreneurship centers offering resources, consulting, and guidance to entrepreneurs, with pedagogical opportunities for students [Murphy, Liao and Welsch, 2006, p13].

1.1.1.03   The discipline's influence has extended into other academic fields: "From the 1980s onwards, the field of entrepreneurship exploded and was assimilated into almost every soft science discipline" [Filion, 1997].

1.1.1.04   However, despite such growth, the academic discipline of entrepreneurship has come under some criticism, including from those within the discipline. In 1988, Sexton raised the question of whether "the field is growing or just getting bigger?" [cited in Steyaert, 2005, p2]. In the same year, Low and MacMillan [1988], produced a less than complimentary review. They advised scholars in entrepreneurship that "the field will be better served in the future if the issue of theoretical perspective is addressed directly and unstated assumptions avoided" [p146]. Low [2001] later described the discipline as being in its adolescence.

1.1.1.05   Drawing on the analogy of a group of blind men describing an elephant by the different body parts that they could touch, Gartner [2001] commenting on research he had conducted in 1990 "found that entrepreneurship scholars held very different beliefs about the nature of entrepreneurship, and that they had very different views of what entrepreneurship, as a phenomenon, consisted of" [p2]. In a similar vein to Low and McMillan, Gartner [1990] also advised "that only by making explicit what we believe can we begin to understand how all of these different parts make up a whole" [p28]. Reviewing the situation a decade or more later Gartner [2001] commented "I am not sure that the entrepreneurship field has reached some sense of theoretical clarity during the past decade" [p2]. Even the measure of what determines entrepreneurial 'success' is unclear as Kearins, Luke, and Corner [2004] point out in their article 'What constitutes successful entrepreneurship? An analysis of recent Australasian awards experiences', saying that "there has been little empirical work substantiating these elements or exploring the extent to which they appear to be considered when judgments are made about entrepreneurial success" [p1]

1.1.1.06   Kilby [1971] describes the 'product', being the output by the discipline of entrepreneurship, as being a 'heffalump' – a fictional creature of indeterminate description, somewhat similar to an elephant, from the Winnie The Pooh children's tales by A.A Milne.

> It is a large and important animal which has been hunted by many individuals using various ingenious trapping devices ... All who claim to have caught sight of him report that he is enormous, but they disagree on his particularities. Not having explored his current habitat with sufficient care, some hunters have used as bait their own favourite dishes and have then tried to persuade people that what they caught was a heffalump. However, very few are convinced, and the search goes on [p1].

1.1.1.07   Thornton [1999] has described the discipline as being rife with 'camps', while Dery and Toulouse [1996] have attributed the 'social relationships' between participants within the discipline as inhibiting the flow of knowledge. O'Connor, Cherry and Buckley, [2006, p1] have described the "contentious definitional debate in entrepreneurship", with camps fighting for control of the definition of entrepreneurship, as if this exercise in reductionism would somehow bring the successful aspirant of this holy grail of entrepreneurship, due recognition.

1.1.1.08   Dery and Toulouse [1996] focus on the epistemological development of the discipline, or lack thereof, commenting:

> In contrast, epistemological reflections in entrepreneurship remain largely normative, and draw their inspiration from the formal and philosophical spheres. What is more, though epistemology's primary object is the field of research, this field itself is rarely seen as an empirical object to which researchers should apply the methodological rules they admit are essential to establish the scientific validity of their work. It is somewhat as if the mere fact of membership in a field could procure an intimate and even objective, knowledge of its epistemological foundations. When the field is studied empirically, authors confine themselves to exposing the cognitive and methodological content of the texts studied, thereby losing sight of all the social and collective intricacies governing the constitution of the corpus. (Churchill & Lewis, 1986; Fried & Hisrich, 1988; Hornaday & Churchill, 1987) [p286].

The suggestion herein is that merely being part of the discipline entitles some members of the discipline to assume an authority that may not necessarily be substantiated by solid research.

1.1.1.09 The most succinct criticism of the discipline comes from Montayne [2006, p549]. "The theory of entrepreneurship is one of the weakest links in modern economics". There is a possible dichotomy of disciplinary growth on one hand and criticism of the very elements of the discipline on the other.

1.1.1.10 Given these criticisms, it is possible to question the status of the discipline, French social theorist Michel Foucault [in Dreyfuss and Rabinow, 1983, p116] has raised the notion of 'dubious disciplines'. Does the discipline of entrepreneurship justify a description as being a dubious discipline? Or is it appropriate even to describe disciplines as dubious? These questions underpin the current study.

1.1.1.11 Foucault [in Dreyfuss and Rabinow, 1983] was referring to human sciences in general which he lumped together as being candidates for dubiety. Yet even before attempting to answer the question of whether disciplines can be considered dubious or not, it is necessary to consider what a discipline is and how the knowledge within a discipline differs, not only to general knowledge, but also to discourses on such knowledge(s) that could pertain to the discipline. Answers to these questions could be considered to provide parameters to define the outline of a discipline.

1.1.1.12 Foucault undertook much work on discourse and later in his career started to focus more on the discipline. (Note, much of Foucault's early work also focused on discipline, in a different sense of that word.) However, it is still unclear in Foucault's work how a discourse is differentiated from a discipline, if at all. This dissertation develops a method to delineate between discourse and discipline and the different knowledges that they contain in relation to the academic discipline of entrepreneurship. This method has its origins in philosophy where I sought a mechanism or strategic apparatus that can be used as a methodological basis to examine disciplines and the type of knowledges they contain.

1.1.2 Philosophy

1.1.2.00 What is knowledge, how is knowledge constituted, and who can consider what is acceptable knowledge? Questions of this nature tend to fall within the field of philosophy and for this reason this dissertation has a philosophical perspective that is introduced in this section.

1.1.2.01 This dissertation takes a philosophical approach involving 'philosophy-as-in-concepts' and in particular the application of these concepts. It intends to add a pragmatic slant to what is traditionally, particularly in regards to the works of Foucault and Heidegger, taken as less than pragmatic, philosophically. This pragmatism is from a 'know-how', rather than a 'know-that' perspective is discussed further in section 1.2.

1.1.2.02 The question of knowledges in their plurality and how they are treated within the concepts of epistemology and ontology are an integral part to this discussion. The relationship between ontology and epistemology has been described as confused [Gruber, 1993]. This dissertation intends to offer a delineation to reduce such confusion. Heidegger's work 'Being and time' is considered an authoritative text on ontology while Foucault's work on knowledge and in particular the aspects of power on knowledge are an integral part of epistemology, being the theory of knowledge. Both are drawn on.

1.1.2.03 From Foucault the lineage of archaeology is used in this dissertation as the philosophical method as opposed to the ahistorical nature of the genealogy, another philosophical method outlined by Foucault. While traditionally associated with lineage the term genealogy has been re-assigned a role as another form of 'strategic apparatus' to deconstruct or to create another reality using the ahistorical. To avoid confusion, I use the word lineage instead of genealogy, in this dissertation, when discussing the aspect of the flow of knowledge and ideas over time. While the term genealogy is often associated with Nietzsche's [1998], 'On the genealogy of morality' it can in itself trace a lineage back to Schopenhauer's [1995] 'On the basis of morality'. In the downstream lineage from

Nietzsche it comes to Foucault's genealogy to form part of French social theory of the 1960s.

1.1.2.04 While Foucault [2004] has said that archaeology is more associated with study of *savoir* rather than *connaissance* knowledges, my later discussion of different knowledge types, in section 1.2, outlines support for the concept of using an archaeology in the study of *connaissance* knowledge within the discipline, as well as defining *savoir* and *connaissance* knowledges.

1.1.2.05 Foucault's works are traditionally associated with power. While power is not the subject of discussion per se, it is the lineage and flow of power that are integral to the archaeology. According to Schmidt [2006] it is the collective prejudices of the *episteme* that constitutes this historical reality. The *episteme*, introduced by Foucault, is used as a strategic apparatus to define such a collective and the flows of power such prejudices create. This idea is outlined in greater detail in section 1.2.

1.1.2.06 The philosophical lineage I draw upon flows from Husserl, to Heidegger, to Gadamer, Merlau Ponty and onto Foucault. It is the philosophical flow of the concepts over time and through history. Using Heidegger and Foucault, usually considered to be from different European schools of thought, may be considered to be epistemologically unjustifiable. However during the course of this dissertation, I provide justification for the used of such mixed philosophical methodologies.

1.1.2.07 These philosophical methodologies manifest themselves in phenomenology and hermeneutics. I endeavour to demonstrate the viability of mixed methodologies with both the empirical orientation of phenomenology and the interpretative relativism of hermeneutics, offering the idea that these are not necessarily diametrically opposed nor mutually exclusive, with the lineage offering a flow of support for utilising both [Schmidt, 2006]. Furthermore to add to the mixed equation, in this dissertation, I use both quantitative data collection techniques with a more qualitative analysis of such data. The

methodology I have developed could be considered innovative and is one of the intended contributions of this dissertation that are detailed further in the next section.

1.1.3   Intended contributions

1.1.3.00   In addition to illustrating the dictomous issue of the rapidly growing academic discipline of entrepreneurship, that is apparently facing adolescent type growing pains, together with an analysis of whether the discipline of entrepreneurship could be considered dubious, there are various aspects of this work that could be considered to be breaking new ground

1.1.3.01   This is the first research, of which I am aware, that sets out to create a model, or series of models, that delineates the relationship between the concepts of ontology and epistemology, along with offering definitions as to the boundaries of discourse, discipline and what is termed ontic knowledge. These models are intended to offer future researchers a grounded philosophic, as well as a pragmatic, base from which to develop further research.

1.1.3.02   Furthermore, this research utilizes Foucault's concept of the *episteme* as a strategic apparatus and is also a first time, to my knowledge, that the concept has been utilised in this manner in a piece of research. Gadamer's [1989] use of the term 'prejudice' lends a positive nuance to what is more commonly associated with bias and possibly used more negatively. An *episteme* is an apparatus of power. How the flow of knowledge is influenced by the particular *episteme* and maybe influenced by the prejudices within the *episteme* is an integral part to this research. By deconstructing the epistemic and ontological development of the discipline of entrepreneurship I intend to illustrate how these 'collective prejudices' [Schmidt, 2006] are significant in the evolution of the discipline.

1.1.3.03   Apart from the development of the conceptual models discussed above this dissertation also develops the concepts of *savoir* and *connaissance* knowledges (that are

introduced in the next section). I look at the discipline from the perspective of one whose primary focus has been from the domains of *savoir* knowledge. This positionality does provide me with something of a unique perspective and this review of the discipline, not by a peer, but by a usual subject of the research by the discipline, is hoped will shed a fresh and constructive light, albeit through a process of deconstruction, on the discipline of entrepreneurship and its future development.

1.2. Epistemology: The theory of knowledge

1.2.1 Knowledges
1.2.2 *Episteme*
1.2.3 Epistemic analysis

1.2.00   This dissertation intends to deconstruct the epistemological, as in epistemic, and ontological development of the discipline of entrepreneurship. This chapter provides some initial insights into the approaches to epistemology that I will be using and my personal reasons for attempting this deconstruction. The positionality that I assume is detailed more in section 1.3. However it is briefly introduced here in order to add emphasis to my rationale for stressing the differences between *savoir* and *connaissance* knowledges. The terminology and etymological relationship between the terms used are explained in more detail in section 2.1 (see also glossary, pages v & vi).

1.2.01   My background is generally non-academic and as a business person I have, at times in my life, often been in a position where I have been entrepreneurial. Venturing into the academic world in middle age I have developed a curiosity to better understand what academics say and think about the kinds of things I do when I am being entrepreneurial.

1.2.02   Reading academic literature on the subject of entrepreneurship and interacting with some academics in the field soon led to me having some dissonance. On one hand, there were domains in the field to which I could relate, albeit often partially, yet exploring other domains, and listening to other academics, or reading their work, sometimes lead me to wonder whether they and I were on different planets. It soon became significantly apparent that what the academics and I considered to be knowledge, in regards to entrepreneurship, differed substantively. Therefore this dissertation firstly looks at what constitutes knowledge and secondly how such knowledge, as it pertains to entrepreneurship, is approached academically.

1.2.03 This structure of this chapter is firstly a discussion on different types of knowledge, particularly *savoir* and *connaissance* knowledges. This leads into a analysis of the relevance of the *episteme* as a strategic apparatus for the acceptance of knowledge per se as *connaissance* knowledge. The final section in this chapter discusses the concept of an epistemic analysis that focuses on an analysis of an *episteme* rather than, as the name might imply, an analysis of an epistemology.

1.2.1 Knowledges

1.2.1.00 In the English language knowledge is simply knowledge. Therefore epistemology, being the theory of knowledge, has, in English, a relatively singular approach to knowledge. The online reference American Heritage Dictionary defines knowledge as 'the state or fact of knowing'. However in other European languages knowledge has plural meanings. In Spanish we find '*conocer*' and '*saber*', in French '*connaître*' and '*savoir*', and in German '*kennen*' and '*wissen*.' This section develops, based upon the works of Foucault, the dual approaches to knowledge that seem to be more prevalent in European philosophy.

1.2.1.01 That is not to say that knowledge, in the English language, does not have its dialectical aspects. Terms such as *a priori* and *a posteori* (leading into rational and empirical schools of thought), analytic and synthetic distinctions, necessary and contingent aspects of knowledge, and so forth, have existed for centuries and still provide fertile grounds for on-going academic discussions. However English epistemology has, in the main, been based primarily on prepositional knowledge as in 'know–that' rather than 'know–how'. It is this distinction that is, in the other European languages, I believe to be the fundamental difference between the plural approaches to knowledge.

1.2.1.02 My own entrepreneurial experience lies within the 'know-how', yet it is the 'know-that' which is the focus of the subject matter of this dissertation. Given the limitations inherent in the English language, European approaches to epistemology, therefore, are considered to be a suitable starting point to exploring the plural meanings of knowledge. The works of Foucault and Heidegger are two of the main sources for these

epistemological approaches. While these theorists are commonly regarded as being from different schools of academic thought, I have found little dissonance in utilising both of their theories and my rationale for mixing these theoretical schools is given in section 3.2.

1.2.1.03   Foucault devoted a great deal of his College de France lecture series in 1981-1982 to a series of discussion on these two knowledges – *connaissance* knowledges and *savoir* knowledges. The high significance accorded these knowledges by Foucault is apparent in the final paragraph of 'The hermeneutics of the subject' (the book that presents that lecture series), where he describes understanding the relationship between the two knowledges as the "root of the challenge of Western thought to philosophy as discourse and tradition" [Foucault, 2005, p487].

1.2.1.04   A further written, but unspoken final question in the lecture was the phrase "And if the task left by the Aufklarung (from Hegel's [2003] 'Phenomenology of Mind') is to ask on what our system of objective knowledge rests, it is also to ask on what the modality of the experience of the self rests" [Foucault, 2005, footnote, p487]. It is this issue that is an underlying crux to this dissertation – the basis of the 'system of objective knowledge' (as in *connaissance* knowledges) and 'the experience of the self' (as in *savoir* knowledges) in the development of the particular discipline of entrepreneurship.

1.2.1.05   Sheridan Smith, the editor of Foucault's 'The archaeology of knowledge', relates *connaissance* knowledges to disciplines. "*Connaissances* refers here to a particular corpus of knowledge, a particular discipline – biology or economics, for example. *Savoir*, which is usually defined as knowledge in general, the totality of *connaissances*, is used by Foucault in an underlying, rather than an overall way" [Foucault, 2004, footnote pp16-17].

1.2.1.06   Foucault offers a further elaboration: "By *connaissances* I mean the relation of the subject to the object and the formal rules that govern it. *Savoir* refers to he conditions that are necessary in a particular period for this or that object to be given *connaissance* and for that enunciation to be formulated" [Foucault, 2004, p16].

1.2.1.07   In this dissertation I am taking the meanings to be that *connaissance* relates more towards particular disciplines and *savoir* is used in a broader sense, without the constraints of those disciplines. To use slang etymology, *savoir* could be seen as the 'savvy' of the entrepreneur, as compared to the formalized knowledge of the discipline of entrepreneurship that purports to underpin and explain what it is that entrepreneurs do. It is interesting that Wikipedia mentions that epistemology as being solely applicable to *connaissance* knowledge in English. This position in some ways provides an initial clue to delineating between the understandings of, or approaches to, knowledge. It also provides a possible line of differentiation between a discourse and a discipline. This differentiation is elaborated on in more detail in the next section on *episteme*.

1.2.2 *Episteme*

1.2.2.00   This section defines the term e*pisteme*, its relationship to *connaissance* knowledges and delineates its difference from the term epistemology. Bonjour's [1998] term epistemic justification is introduced as the means by which *connaissance* knowledge is permitted into the discipline.

1.2.2.01   Epistemology, as a theory of knowledge, requires mechanics for application of such theory, Foucault [1980] provides such an apparatus through his use of the term *episteme*.

> I would define the *episteme* retrospectively as the strategic apparatus which permits of separating out from among all the statements which are possible those that will be acceptable within, I won't say a scientific theory, but a field of scientificity, and which it is possible to say are true or false. The *episteme* is the 'apparatus' which makes possible the separation, not of the true from the false, but of what may from what may not be characterised as scientific [p197].

1.2.2.02   It could be said that the *episteme* creates or defines the outline of *connaissances*, as 'history of knowledges' as to what is acceptable within that history. The term epistemic justification [Bonjour, 1998] is used to define what is eligible for inclusion

or exclusion is more clearly defined in the next chapter. Gadamer's concept of prejudice is significant as part of this exclusionary process.

1.2.2.03 In 'Society must be defended' Foucault [2003b, p183], dedicates time to discussing the evolution of disciplines from the 18th century and the demise of the amateur scholar (presumably with their *savoir* knowledges....) as part of the increasing 'disciplinization of knowledges'. Accordingly I consider it significant to look at the evolution of the discipline of entrepreneurship over time and history and view the enhanced role of *episteme* within this 'disciplinization' of knowledge. It is important still to bear in mind that not all knowledge is within the discipline; there is some like the *savoir* knowledges that are external. The *episteme* functions as the apparatus used to 'separate out' those statements that are acceptable, as part of this disciplinization process, from those which are not.

1.2.2.04 While, under accepted academic terminology this study could well be termed a discourse analysis, a more appropriate terminology could be an analysis of an *episteme*. A discourse is greater than an *episteme*. It could be said, using the model that I will develop over the next chapters, that many *episteme* can make a discipline, and many *episteme* and many disciplines, or parts of disciplines, can contribute to a discourse. The concept of an epistemic analysis is a somewhat innovative approach and represents a continuation of the lineage of Heidegger, Foucault and others in their propagation of social theories that differ to the Cartesian and Kantian lineages that have long been significant in European schools of thought.

1.2.3 Epistemic analysis

1.2.3.00 The Greek term *logos* has traditionally been thought of in Cartesian and Kantian logic as being reason / speech. Hence, Descartes' famous expression 'I think therefore I am' places reason as the essence of *logos*. In this section I will introduce the suggestion that the essence of *logos* could also be discourse.

1.2.3.01   Taking an alternative interpretation from that of Descartes who interprets *logos* as being speech, Foucault [2005], Schmidt [2006] and Heidegger [1993] define *logos* as discourse:

> *logos*, not to be understood derivatively as reason or speech, but to be thought as the power to gather and preserve things that are manifest in their Being. [Heidegger, 1993, p19]

> *logos* acquires the meaning of a relationship with and relating to something. [Heidegger, 1993, p80]

1.2.3.02   Therefore I assume that the discourse of entrepreneurship includes all things related to the subject of entrepreneurship, such that they are manifest as part of the 'being' of entrepreneurship. In short, I refer to the sum of *connaissance* and *savoir* knowledge – the academic and the applied.

1.2.3.03   Simple logistics prevents me from analysing the entire discourse of entrepreneurship. However it is possible to analyse, using Foucault's archaeological approach, an *episteme* of the *connaissance* knowledges of entrepreneurship, i.e. that included within the academic disciple as part of the discourse. The 'an' is underscored to emphasize that the *episteme* selected (in this case being from the Web of Science database) is one of many possible *episteme* of entrepreneurship, but one that is hoped is representational of the discipline of entrepreneurship.

1.2.3.04   This analysis of an *episteme* from the Web of Science database illustrates the development of the *episteme* over time, and identifies and highlights the critical points. Its locus of analysis is academic articles on the subject of entrepreneurship with a primary focus on those with the most *gravitas*, that mark its disciplinary development. The analysis also illustrates the respective roles played by *connaissance* and *savoir* knowledges, if any, in that development. While the Web of Science *episteme* has been selected because of its propensity towards *connaissance* knowledge, being the objective knowledge referred to by Foucault [2005], I argue that *savoir* knowledge is still important to the development of the

discipline (especially in regards to Foucault's triangle as discussed later) and I am interested to see what role it has played in this particular *episteme*.

1.2.3.05   I also attempt to address the manner in which, through the *episteme*, the discipline may be perceived to have been constructed. I focus on the propensity of the discipline towards *connaissance* knowledge with the exclusion of *savoir* knowledge. However, there is also the question of whether the *connaissance* knowledge itself is an accurate representation of the discourse on, or the practice of entrepreneurship, or whether this *connaissance* knowledge is influenced by academic prejudice. This question is discussed further in the next section on Positionality, in particular sections 1.3.6 and 1.3.7. This discussion is included in those sections because it relates to the sense of detachment I, as a practitioner *au fait* with *savoir* knowledge, feel when I read some of the academic articles on entrepreneurship.

1.2.3.07   Baudrillard [1994] has raised the question of academic work creating either simulations or simulcrae of reality. A simulation is an accurate representation whereas a simulcrae is a less than accurate representation but which is not recognised as such and becomes a 'being' in its own right with and increasing separation from reality. Whether the discipline of entrepreneurship, as perceived through the *episteme*, is a simulation or a simulcrae is discussed as part of the outcome of the epistemic analysis.

1.2.3.08   Whether the status as being a simulation or a simulcrae is an accurate measure of Foucault's concept of the dubious discipline is also addressed along with other issues that could affect disciplinic dubiety. These include the acceptance of *savoir* knowledge into the discipline, something that is of particular interest to me given my own positionality.

1.3 Positionality

1.3.00   By conducting this investigation into the way the discipline of entrepreneurship has evolved, while having had, and currently having an active involvement in the very subject which the discipline purports to explain places me in a somewhat unique position. I draw an analogy in that I am like a laboratory rat in a white coat examining researchers who are examining other lab rats. In this chapter I explain my own position in this investigation.

1.3.01   Being entrepreneurial, having established and developed businesses over the last twenty five years in New Zealand, Malaysia, Indonesia, Philippines and Vietnam as well as doing business with, and in, other nations, I felt dissatisfied when reading academic literature on entrepreneurship. While chuffed by the various traits, especially those heroic, that have been developed, I can only evince a vague sense of connection to the concepts of entrepreneurial processes, entrepreneurial orientation, corporate entrepreneurship, etc., and the like that have been developed, but these are usually insufficiently specific to my own entrepreneurial circumstances to feel a real connection, aside from that part of me that is an aspiring academic.

1.3.02   I feel a sense of detachment. One of the most significant lacks in the research is the approach to problem solving. Entrepreneurs face problems just like every business or management person; however given the nature of entrepreneurship that makes it distinctly separate to the non-entrepreneurial and/or management function, it could well be expected that not only the problems faced by entrepreneurs, but also the approaches taken by entrepreneurs to solving these problems, have a degree of uniqueness.

1.3.03   While academics have a penchant for offering research based analyses, promoting methodologies and theories, the simple everyday matter of solving problems, or developing approaches to solving problems is under-addressed. This situation may help explain the stated preference [Pfeffer and Fong cited in McKelvey, 2004] for business people to prefer listening to consultants rather than academics.

1.3.04   This is not to say that I am anti academic; but I am anti the exclusion of the 'know-how' against the 'know-that'. I am also anti the construction of the discipline based mostly on *connaissance* knowledge with the exclusion of *savoir* knowledge. I am trying to come to terms with that sense of detachment between what I perceive as *savoir* knowledge with the *connaissance* knowledge found in the discipline. It is not my intent to challenge the power of the discipline but to look at its development and better understand the 'how and why' of its history, and the 'system of thought' by which it has evolved.

1.3.05   Foucault in his position as the 'Chair of the History of Systems of Thought' has a specialist's position in this endeavour. As Rabinow [1991, p12] offers "rather, once again, it was the effective operations of these disciplines – how and around what concepts they formed, how they were used, where they developed – that was Foucault's prey".

1.3.06   According to Rabinow [1991], Foucault was also aware of something akin to the sense of detachment I have described.

> It is not by studying human nature that linguists discovered the laws of consonant mutation, or Freud the principles of the analysis of dreams, or cultural anthropologists the structure of myths. In the history of knowledge the notion of human nature seems to me to have mainly to have played the role of … designating certain types of discourse in relation to or in opposition to theology, biology or history. ……. [p4].

Rabinow [1991] explains further: "Foucault asserts that knowledge did not slowly detach itself from its empirical roots, the initial needs from which it arose, to become pure speculation subject only to the demands of reason ….." [p7]. The concept of the discipline being a construction was introduced in 1.2.3.06. I would assume that it is possible that the sense of detachment increases as a greater level of construction of *connaissance* knowledge means that this knowledge becomes further removed from *savoir* knowledge.

1.3.07   Whereas "Foucault never took these discourses from the inside" [Rabinow, 1991, p4], my investigation goes deeper than examining a discourse from the inside to the examination of the discipline from the inside. "For Foucault, knowledge of all sorts is thoroughly enmeshed in the clash of petty dominations, as well as the larger battles which

dominate our world" [Rabinow, 1991, p6]. This quotation resonates with the comments expressed by the various critics of the discipline of entrepreneurship as outlined briefly in section 1.1.1.07.

1.3.08   In a sense I am wearing two hats, one as an aspiring academic working with *connaissance* knowledge, while on the other hand I wear the hat of one who has been entrepreneurial and who does not necessarily have that detachment between the two knowledges. I do not feel that maintaining that sense of detachment is of benefit in this investigation and so will from time to time insert comments from a *savoir* perspective into this work.

1.3.09   In particular I wish to question the title of 'the entrepreneur'. Connaissance knowledge has, since the times of Cantillon, Smith, Sombart and Schumpeter, assumed 'the entrepreneur' to have certain recognisable traits and behaviours. This assumption has long grounded the discipline of entrepreneurship. On such *connaissance* knowledge the discipline of entrepreneurship has, from its early days, been constructed. Whether these are solid foundations is something I seek to illustrate.

1.3.10   As a non-academic I reiterate that I have been in a position, at times in my life, where I have been entrepreneurial. However I deny myself the title of entrepreneur as my own personal *savoir* knowledge leads me to believe that such a title is not accurate. People can engage in entrepreneurial behaviour at particular times in their lives; however such behaviour is often of a temporary nature. This is not to say that the same thought has not been expressed within the discipline. Barth [1963] in one of the earliest articles as part of the emergent discipline claims "that an entrepreneur should not be treated as a status or a role, but rather as 'an aspect of a role: it relates to actions and activities, and not rights and duties" [cited in Jannicke, 2008]. However the later construction of the discipline largely ignored Barthes comments until Gardner's 1989 article where he specifically stated that it was not important 'who is an entrepreneur' and stressed a focus on an entrepreneurial orientation or process.

1.3.11 While later developments in the discipline move away from the idea of 'the entrepreneur' towards an orientation focusing more on entrepreneurial behaviour [Gardner, 1989], the question can be asked, as per Foucault's [2005] system of objective knowledge, as to how has the discipline developed. This question is significant with regards to the earlier cited comments by Gardner [1989] and by Low and McMillan [1988] that call into question the objectivity of the work produced by the discipline in the late 1980s, and also querying 10 years later whether there had been any changes towards greater objectivity, in the intervening period. The concept of a discipline being, in part, an overt construction by those in the discipline comes through as part of this investigation.

1.4 Structure of this dissertation

1.4.00   This chapter outlines the structure of this dissertation. The dissertation is in five parts. In section 1.0.04 I outlined the structure of Part One. To aid in the mapping of this work at the beginning of each Part and each Chapter I include a brief index for ease of reference and navigation. There are five Parts to this work, each divided into chapters and sections. Chapters are identified as *.*, (this chapter is 1.4 for example), with sections and sub sections being respectively *.*.** and *.*.*.** (this section is 1.4.00 for example). Each part, chapter and sections have introductory paragraphs with a *.0 or *.00 suffix.

1.4.01   Part Two outlines the theoretical framework for this investigation, in particular taking the taxonomy used and creating a model from this. These models developed are then applied to the discipline of entrepreneurship.

1.4.02   Part Three focuses on the methodology I use in this dissertation along with the data collection methods. An opening position statement provides justification for using both mixed methodologies and mixed data collection processes.

1.4.03   Part Four deals with the empirics of this investigation. This part follows the flow I experienced in conducting this investigation, firstly with interpreting the data collected, then describing the process taken in identifying the ontologies within the discipline of entrepreneurship that could be used as a frame of reference for the data analysis process.

1.4.04   Part Five covers the conclusions reached in this investigation, and reviews the question as to whether the discipline of entrepreneurship can be considered dubious or not. It outlines the actual contributions of this investigation.

 1.4.05   Appendix One lists the high *gravitas* articles in chronological sequence extracted from the Web of Science *episteme* that formed the basis of the research.

Part Two: Theoretical framework for this investigation

2.0.00   Based upon the lineage of philosophical thought outlined in Part One, specifically the works of Foucault and Heidegger, Part Two outlines the theoretical framework for this investigation, in particular taking the taxonomy used and creating a working model. This model is developed to better illustrate the entity of 'the discipline' and how this entity interacts and nests with other entities of knowledge such as discourses and ontic states. The roles of academic gatekeepers are detailed together with the *episteme* that are created through the interaction of exclusions, citations, and the other elements that are part and parcel of the discipline. The exercise of power, as in *gravitas*, between the elements of the discipline and the *savoir* knowledge of the practitioner, is applied using Foucault's Triangle, which also includes observations on the role of third parties such as intellectuals.

2.0.01   The models being developed in this dissertation are considered dynamic and the effects of discontinuities on the model are illustrated. Hypotheses are offered on the possibility of the effect of a rift between *savoir* and *connaissance* knowledges that may

arise if the construction of the discipline becomes too distant from the reality experienced by practitioners resulting in a possible movement of practitioners and or intellectuals, to identify with other disciplines.

2.0.02 These models developed are then applied to the discipline of entrepreneurship. The discipline is analysed based upon the rules of formation suggested by Foucault which I have interpreted as being the emergence of the discipline, the development of *episteme* by gatekeepers and the associated development of ontologies. While Foucault does not include epistemologies in his rules of formation I include a section on this topic, and end up discussing why ontologies are the preferred basis of this investigation.

2.1 Developing a model of discourses and disciplines

2.1.00   This chapter focuses on the development of a model to illustrate the differences between ontic states, discourses (discursive states) and disciplines (epistemic states), based on the varying degree of conceptualisation or contextualisation of knowledge. The taxonomy used in this dissertation and more particularly the inter-relationship between the elements of the taxonomy is illustrated graphically. A model of the nesting of knowledge is developed where disciplines are nested within discourses which in turn are nested within ontic states. What is stressed is that epistemology is the contextualisation of ontological domains within the discipline, whereas in the discourse there is 'an account of' by way of a '-logy' of the relationships that manifest themselves in the discourse. The ontic state is a larger less-defined mass that can conceivably contain lost knowledge as well as knowledge that has not yet been accounted nor included in a '-logy'.

2.1.1 Ontic states, ontic knowledge, ontologies and disciplines.

2.1.1.00   This section clarifies the difference between ontic states and ontology and uses the entity of the ontic state to work towards defining the entity of the discipline, as an epistemic state.

2.1.1.01   Heidegger uses the terms "logical, ontological and ontical" [Heidegger, 2002, p162] in order to try to define the various entities of knowledge. However, while he ties logic to truth and takes it out of the metaphysical realm of ontology, he fails to clearly define the difference between ontical and ontological.

2.1.1.02   For a better idea of what is ontical, I refer to Primas' discussion on ontic states.

Ontic states describe all properties of a physical system exhaustively. ("Exhaustive" in this context means that an ontic state is "precisely the way it is",

without any reference to epistemic knowledge or ignorance.) Ontic states are the referents of individual descriptions, the properties of the system are treated as intrinsic properties. Their temporal evolution (dynamics) is reversible and follows universal, deterministic laws. As a rule, ontic states in this sense are empirically inaccessible.

Epistemic states describe our (usually non-exhaustive) knowledge of the properties of a physical system, i.e. based on a finite partition of the relevant phase space. The referents of statistical descriptions are epistemic states, the properties of the system are treated as contextual properties. Their temporal evolution (dynamics) typically follows phenomenological, irreversible laws. Epistemic states are, at least in principle, empirically accessible [cited by Atmanspacher, 2001, pp50-51].

2.1.1.03 Three points are worth noting in this description. The first is the lack of reference in an ontic state to any epistemology. The second is the infinitude knowledge of ontic states when compared to epistemic states (which brings in Heidegger's concept of the finitude of knowledge). And the third point is the use of 'contextual' with reference to epistemic states.

2.1.1.04 Clearly, as per Primas, there is a difference between an ontic state and an epistemic state. It can readily be assumed that an ontic state is greater than an epistemic state, simply due to the infinitude of knowledge, lack of need for contextual properties and without the constraints of epistemology. Therefore in the model being developed here, ontic knowledge, being all that is possibly contained within an ontic state, is shown as all that included within the outer circle of Model A as shown in Graphic 2a. I have also assumed that an ontic state does not have the constraints of time so ontic knowledge can feasibly include future directions of knowledge and forgotten, or lost, past knowledge.

2.1.1.05 It could be asked, based on Primas' distinction between an ontic state and an epistemic state, whether ontology exists only in an epistemic state when an epistemology, with its contextual properties and finitude of knowledge, is applied to an ontic state? Such an existence for ontology is possible, if an ontic state and ontology are perceived dialectically, however it seems less than likely. For a start, in the model being developed, ontic states and ontology are considered as two different elements, as in states and domains, that also happen to be complementary and coincide when the domains of

ontology are conceptually applied to ontic knowledge inside the ontic state. Furthermore it seems necessary to have an intermediate state between the ontic state and the epistemic state. In my model the epistemic state is outlined as the discipline(s), while the intermediate states are the discourse(s). It is within the discipline(s) that the contextual constraints and epistemology along with the finitude of knowledge, of Primas' epistemic states, apply.

Graphic 2a   *Model A - Nested knowledge between the entities of ontic states, discourse and disciplines.*

Ontic States - containing
Ontic Knowledge

Discourses

Disciplines as
Epistemic
states

Practitioners
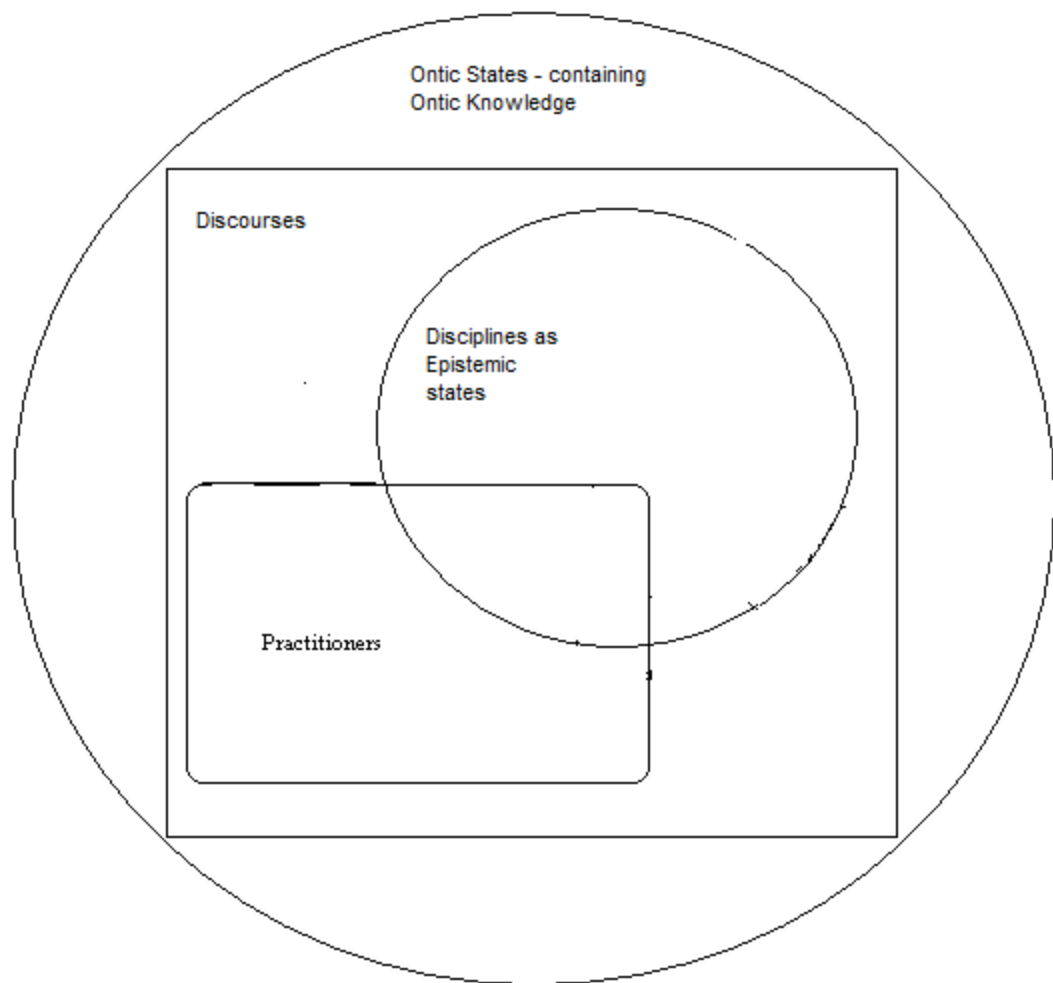
2.1.1.06   The difference between an ontic state and a discourse is that with a discourse as per Foucault [2005, p326, p341], Schmidt [2006, p52], and Heidegger [1993, p80], there has been a '-logy' (an account of) whereas with an ontic state there is no 'account of', it is, as per Primas, 'precisely the way it is', without any interpretation or positioning as to its relationship with other knowledge. (The word 'entreprenology' [Filion, 1997] is not an attractive word and is used only once, here, as a -logy term that describes the discourse of entrepreneurship.) An ontic state, without the -logy restriction, is greater than a discourse, as per Primas above, 'ontic states in this sense are empirically inaccessible.'

2.1.1.07   The elements of domains, being ontology, apply across the three states; the ontic state, the discourse, as well as the discipline. Ontologies, as domains, are discussed further along with graphic representation in section 2.4. However for this section it suffices that I assume that within the discipline the ontology is approached differently to the ontic and discursive states. This difference relates to Primas' use of the term 'contextual' with reference to epistemic states. I treat the term contextualisation as being dialectically different to the term conceptualisation. Concepts, as per Leibniz [1991, p30], are those expressions 'we conceive or form'. Context places a greater stringency of acceptability on those concepts.

2.1.1.08   What makes the ontology of a discipline different? Bonjour [1998] uses the term 'epistemic justification'.

> In order for a person's belief to constitute knowledge it is necessary (though not sufficient) that it be justified or warranted or rationally grounded, that the person have an adequate reason for accepting it. Moreover this justifying reason must be of the right sort: though one might accept a belief for moral reasons or pragmatic reasons or religious reasons or reasons of some further sort and thereby in a sense be justified, such reasons cannot satisfy the requirements for knowledge, no matter how powerful, in their own distinctive ways, they may happen to be. Knowledge requires instead that the belief in question be justified or rational in a way that is internally connected to the defining goal of the cognitive enterprise, that is, there be a reason that enhances, to an appropriate degree, the chances that the belief is true. Justification of this distinctive, truth conducive sort will be here referred to as epistemic justification [p1].

I assume that the ontology within a discipline is 'justified' by epistemology which renders it different to ontology external to the discipline, which does not necessarily have the same stringency of epistemic, or other, justification. This epistemic justification calls for a process of contextualisation where the knowledge that we 'conceive or form', as a concept, (or as per Bonjour [1998] – a belief) is required to be placed in context, by analysis, of what constitutes knowledge. Contextualisation, of ideas, is a defining feature of a discipline that separates it from the discourse and the ontic state. (Epistemic justification will be discussed further in section 2.4 as to the types of epistemologies that are available for use; however the term is used in this section in a generic sense to describe a process.)

2.1.1.09   Look at the conceptualisation of the ontic state within the discourse of entrepreneurship for example. Ontically and discursively everyone has a concept of what is entrepreneurship, from the 'quickly eliminated' American Idol contestant who claimed the status of being an entrepreneur (even though he had trouble pronouncing the word), to the PR executive using the word on a roadside hoarding to promote a new office building in the heart of Jakarta, to the organizations that give out awards for entrepreneurial 'success'. What is significant is what is conceptually associated with the word - entrepreneurship. The word has conceptual meaning, in some form or another, to all that hear or use it. The difference between this conceptual ontology in an ontic state compared to a discursive state, is that in the former there is no 'account of' and in the later there is an 'account of'.

2.1.1.10   Whether the conceptual meaning is correct or accurate (i.e. it qualifies epistemically as knowledge) is totally irrelevant in the ontic state, and is less relevant in the discursive state. Its correctness or accuracy only has relevancy when an epistemic justification is applied to its context, i.e. when someone evaluates it in relation to some standard of knowledge. This is where the conceptualisation of the ontic and the discursive states is replaced by contextualisation. The contextualisation of Primas' epistemic state is the application of epistemic justification to the ontology within the epistemic state, or the discipline, if one exists.

2.1.1.11 Smith [2003], comments that such conceptualizations, as those that I attach to the ontic state and discourse, are generally tacit.

> Such conceptualizations are often tacit; that is, they are often not thematized in any systematic way. But tools can be developed to specify and to clarify the concepts involved and to establish their logical structure, and in this way we are able to render explicit the underlying taxonomy. We get very close to the use of the term 'ontology' in Gruber's sense if we define an ontology as the result of such clarification – as, precisely, the specification of a conceptualization in the intuitive sense described in the above [p7].

2.1.1.12 In developing my model, I assume that Smith's tacit conceptualisations are more likely to be found in the ontic and discursive states. While Smith's cites Gruber's rendition of the term ontology it does seem that the process of clarification mentioned by Smith is more the epistemic process of justification associated with the increasing contextualisation rather than the conceptualisation process of ontology, discussed above. As mentioned by Gruber himself epistemology and ontology are often confused. "It (ontology) is also often confused with epistemology, which is about knowledge and knowing" [Gruber, 1995, p907]. The difference between ontology and epistemology is covered in more detail in section 2.4.

2.1.1.13 If I follow Heidegger [1993, 2002] and look at ontology as the collective domains that are used to define 'being' then ontology is not so much about methodology nor epistemology, as in realist or relativist but is about the perceived domains that are used as frameworks for such defining of 'being'. Within the ontic state and discursive state of entrepreneurship there are domains of the 'nature of reality' as to what, in this particular investigation, is conceptually perceived as entrepreneurship.

2.1.1.14 Gruber [1995] offers a definition of ontology that pertains to the conceptualisation discussed above.

> In the context of knowledge sharing, I use the term ontology to mean a specification of a conceptualization. That is, an ontology is a description (like a formal specification of a program) of the concepts and relationships that can exist

for an agent or a community of agents. This definition is consistent with the usage of ontology as set-of-concept-definitions, but more general [p907].

This idea of ontology as a conceptualisation is discussed further in the next section with reference to the entity of the discourse.

2.1.2 Discourse - the intermediate states

2.1.2.00 This section examines the entity of the discourse, as it is in Model A in Graphic 2a, being *logos*. The Foucauldian concepts of discourse are then discussed and there is an emphasis on the way Foucault's concept of a discourse changes over the times from 1963 to 1981-82 with his College de France lecture series.

2.1.2.01 Foucault [2005, p322], Schmidt [2006, p52], and Heidegger [1993, p80, also in Mulhall, 2005, p24], all comment on the term '*logos*' in that from the time of Descartes *logos* has been translated as being reason, sometimes as speech. However, these three differ from the Cartesian translation of the term and suggest that *logos* is 'an account of' everything that has a 'relationship with or to' [Heidegger, 1993, p80] something else. Krell offers the definition of discourse as "as the power to gather and preserve things that are manifest in their being" [in Heidegger, 1993, p19]. Given this differing translation, Descartes' objectivist expression 'I think, therefore I am' could be subjectively interpreted as: 'We discourse, therefore we are'. The ability to perceive the manifest relationships and to give an account of these relationships is seen as a viable alternative over the ability to simply think. Watson [1998, p196] discusses a similar concept when 'thinking and thinker are put in relation – discursively or logically.'

2.1.2.02 The infinitude of knowledge of the ontic state, as discussed in 2.1.1, is quantified within discourse by this concept of *logos*. The discursive requirement that there be 'an account of' the manifest relationships defines this quantification. Discourse, however, does not have the same justified finitude of knowledge as the discipline.

2.1.2.03 Husserl used the term 'immanence' which is defined by Guignon [2006, p111] as "the inclusion or inherence of one thing inside another. It describes a relation among things, but says nothing about what kinds of things they are. It describes entities in relation to one another, but not in their mode of being as such, not as entities". Such immanence could be inherent inside a discourse.

2.1.2.04 Husserl also "appeals explicitly to Descartes' definition of substance as that which depends on no other for its own existence" [Guignon, 2006, p111], which begs the question whether a discourse (or discipline) has such substance and depends on no other for its existence. This independence of existence calls for an epistemological perspective and as Mills comments "he (Foucault) tried to move away from the notion of the Cartesian subject, the subject whose existence depends on its ability to see itself as unique and as self contained, distinct from others …" [Mills, 2004, p30]. As can be seen, in later sections, the discipline of entrepreneurship has evolved in part from other disciplines and still has significant levels of interdisciplinary interaction with other disciplines, suggesting that Foucault was right in moving away from that which is 'unique and self contained'.

2.1.2.05 Also from an epistemological perspective, Heidegger [1993] commented on ontology as being "ensnared by tradition" [p65] and also, like Foucault, sought to escape the tradition imposed by Descartes which he described as a process whereby "the categorical content of traditional ontology is transferred to these beings with corresponding formalizations and purely negative restrictions, or else dialectic is called upon to help with an ontological interpretation of the substantiality of the subject" [p66].

2.1.2.06 As indicated in the introduction, the epistemology followed in this dissertation tends towards works of Foucault and Heidegger who present a more subjectivist – relativist approach when compared to Descartes and Kant. Accordingly in my model, the definition of discourse (as included within the square in Model A, refer Graphic 2a) is that which is contained in the '-logy' or *logos*, being that which currently 'has a relationship to'. The discourse is smaller that the ontic state yet larger than the discipline, and it is possible,

even though the model in Graphic 2a shows only one discipline, that many disciplines may contribute to a discourse.

2.1.2.07 The Foucauldian concept of discourse is not clear and could be said to have multiple definitions. Mills [2004] citing Foucault [2004] from 'The archaeology of knowledge' summarises these definitions as:

i.   the general domain of all statements - that is, all utterances or texts which have meaning and which have some effect in the real world, count as discourse.
ii.   an individualizable group of statements – is one which is used more often by Foucault when he is discussing the particular structures within discourse.
iii.   a regulated practice which accounts for a number of statements – he is interested less in the actual utterances/texts that are produced than in the rules and structures which produce particular utterances and texts [p6].

2.1.2.08 Foucault [2004] himself in 'The archaeology of knowledge' first published in 1969 describes his definitions of discourse as indicative of "the rather fluctuating meaning of the word 'discourse" [cited in Mills, 2004, p6].

2.1.2.09 Looking at Foucault's work, I can see a trend over his lifetime in his definitions of discourse. 'In death and the labyrinth; The world of Raymond Roussel', first published in 1963 the discourse is a text, being the book written by Roussel [Foucault, 1986, p1]. It is possible that the field of critical discourse analysis derives from such analyses of textual / linguistic discourse.

2.1.2.10 In 'The order of things', first published in 1966, and 'The archaeology of knowledge', first published in 1969, we start to see the three definitions, summarized by Mills, emerging, even, as Foucault's [2004] admits, they are subject to fluctuating meanings.

2.1.2.11 Guignon has commented that 'The archaeology of knowledge' was "Foucault's most structuralist text" [Guignon, 1994, p29], but in the context of looking for the archive of the discourse rather than looking for the origin [Guignon, 1994, p94]. Foucault also began to see discourses as the 'unities of function' [Guignon, 1994, p263].

2.1.2.12   However I believe that it was not until the College de France lecture series of 1981-82, first published in English in 2001 as 'The hermeneutics of the subject', that Foucault started to have a less fluctuating meaning to discourse and introduces the term 'true discourse' [Foucault, 2005, p243]. He also starts to make the connection to *logos* as described above. It goes beyond the textual, to the relationships, to the ability for preparedness for events. I believe that this later lecture series presents a deeper and more comprehensive understanding of discourse, than the earlier Foucault texts, that were more trepiditious in outlook.

2.1.2.13   It is this enlarged Foucauldian definition of discourse that is included in Model A in Graphic 2a. I have generally ignored the concepts of power within this definition of discourse because I tend towards the idea that the exercise of power is more significant to the contextualisation of knowledge in the discipline as discussed in the next section; however this is not to say that power is not also exercised in the discourse.

2.1.3 Disciplines – power of the right

2.1.3.00   This section discusses the discipline and the Foucauldian power exercised, that defines its boundaries with the discourse. The triangular nature of the power relationship between power, right and truth effects is discussed and depicted graphically as 'Foucault's Triangle'. As in the previous section, greater detail is given to the differences in Foucault's thinking between 1971 and 1976, this time as pertaining to disciplines.

2.1.3.01   The discipline, as the circle inside the rectangle of discourse in Model A in Graphic 2a, is a subset of discourse(s).

2.1.3.02   I have defined discipline as that part of the discourse where epistemology justifies, as in 'epistemic justification' [Bonjour, 1998], the ontology. The epistemic stringencies of the discipline separate it from the discursive state. I have also assumed in Model A in Graphic 2a that the epistemic states referred to by Primas [1990, cited in

Atmanspacher, 2001] are the same as disciplines. In addition to the epistemic justification of the ontology within the discipline, that takes conceptualisation of ontological themes into the realm of contextualisation to determine what could constitute knowledge, Primas also provides the aspect of the relative finitude of knowledge. Ontic knowledge is considered infinite whereas the knowledge in the discipline is finite, constrained by epistemology as to what is contextually acceptable knowledge.

2.1.3.03 What has not been included in the model to date is the concept of power within the discipline and the effect this power has on the discourse. Foucauldian studies intrinsically relate to power. While I have, in 2.1.3.01, described the discipline as a subset of discourse this description does not do justice to the relationship which is more dynamic (the dynamics of the model are discussed in 2.3.1). It could be said that the line dividing the discipline from the discourse has a propensity to move as a result of the dynamic interaction between the components of the discourses and the components of the discipline as the discipline attempts to influence and regulate parts of the discourses through the exercise of power.

2.1.3.04 In a lecture on the 14 January 1976, Foucault [1980] described the relationship between power, right and truth as a triangle. The relationship between the three is described by Foucault as having two limits; firstly the "rules of right provide a formal delineation of power and; secondly the effects of truth that this power produces and transmits, and which in turn reproduce this power" [Foucault, 1980, p93]. 'Foucault's triangle' is shown graphically in Graphic 2b.

2.1.3.05 What interested Foucault was not the geometric arrangement but the 'how of power' as it flowed from one corner of the triangle to the other.

> What I have been looking at since 1970-1971 is the "how" of power. Studying the "how of power'" or in other words trying to understand its mechanism by establishing two markers, or limits; on the one hand the rules of the right that formally delineate power, and on the other hand, at the opposite extreme, the other limit might be the truth effects that power produces, that this power conducts and which, in their turn, reproduces that power. So we have the triangle: power, right,

truth. ….. My problem is roughly this: What are the rules of right that power implements to produces discourses of truth? Or: What type of power is it that is capable of producing discourses of truth that have, in a society like ours, such powerful effects? [Foucault, 2003, p24].

From a Foucauldian perspective, disciplines are invariably associated with power of the right. The right are established by the exercise of power and the endeavour to exercise power to ascertain truth effects.

2.1.3.06   How does Foucault's Triangle in Graphic 2b relate to the disciplines and discourses outlined in Model A in Graphic 2a in the previous section? Figuratively I would imagine a metal pendulum on a string with its fulcrum at power and range of swing between the markers of 'Truth Effects' and 'Right'. 'Truth Effects' being the 'discourses of truth' and 'Right' being the discipline. Movements between these markers caused by changes relating to the acceptability of knowledge (described in section 2.2.3 below), and the exercise of power, relating to such acceptability, cause the pendulum to be pulled in either direction. (the influences on, and the movement of, the pendulum, will be discussed in more detail in 2.3.2.) A pencil attached to the pendulum could mark the defining line between the discipline and the discourse: between that knowledge, from the discourse, which is acceptably included in the discipline and that which is excluded.

2.1.3.07   Foucault discusses the nature of these exclusions at two different time periods, 1971 and 1976. While the general principles of exclusion are the same there is a subtle shift in the role of the discipline in Foucault's ideas. In 1971 the discipline was included as an exclusion internal to a discourse, while in 1976 the discipline has taken on a greater identity (similar to the discipline in Model A) where it regulates knowledge.

| **Graphic 2b** | *Foucault's Triangle – from the 14 January 1976 College de France lecture series.* |

POWER

TRUTH
EFFECTS

RIGHT
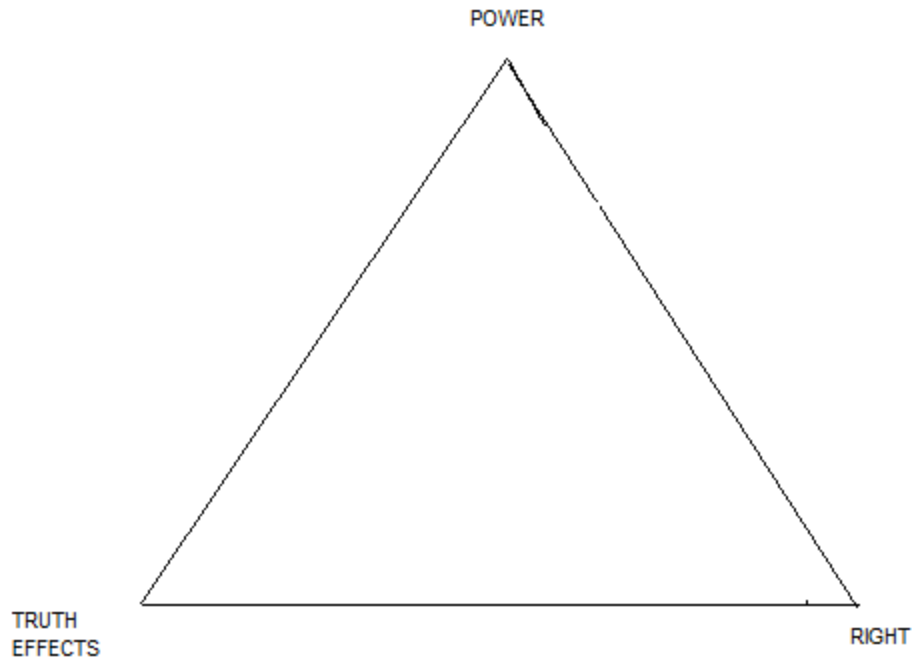
2.1.3.08   In 'The order of discourse', first published in 1971, Foucault described the process of exclusion as having three external exclusions and four internal procedures of exclusion. The three external exclusions are:

i.   taboo subjects;
ii.   the distinction between insane and rational people as credible sources;
iii.   and, the division between true and false [in Mills, 2004, p57 and Mills, 2005, p57].

Mills [2004] describes the relationship between positions of power and acceptability of knowledge as being true or false, as per the third external exclusion, as:

The division between true and false is the third exclusionary practice described by Foucault; those in positions of authority who are seen to be 'expert' are those who can speak the truth. Those who make statements who are not in positions of power will be considered to be not speaking the truth [p58].

Whether Foucault considers 'those in positions of authority' are members of the discipline 'of the right' and can exercise the flow of power towards truth effects, is unclear in 1971.

2.1.3.09   The four internal procedures of exclusion from 1971 are all "concerned with classifying, distributing and ordering discourse and their function is ultimately to distinguish between those who are authorised to speak and those who are not – those discourses which are authorised and those which are not" [Mills, 2004, p58-9]. Foucault's focus in 1971 is on the discourse. The four procedures, internal to the discourse are:

i.   commentary – a commentary on a text is indicative of the richness of the text, the more commentary that a text receives keeps it in circulation, in some ways this could be a measure of the text's quality;
ii.   author – as separate to the text;
iii.   discipline – whether the text and the author fall within an authorised disciplinary boundary, relates to the third external exclusion;
iv.   rarefaction of the subject – the restraints of propriety with regards to who can address the subject, where and when [Mills, 2004, p58-9].

2.1.3.10   The discipline is seen as having a minor regulatory role in 1971, the discourse takes precedent. In the 1976 College de France lecture series, Foucault discusses the emergence of the Napoleonic university at the end of the eighteenth and beginning of the nineteenth centuries along with the parallel demise of the amateur scholar. "That the amateur scholar ceased to exist in the eighteenth and nineteenth centuries is a well known fact" [Foucault, 2003a, p183].

> The university has a selective role; it selects knowledges. Its role is to distinguish between qualitative and quantitative levels of knowledge, and to distribute knowledges accordingly. Its role is to teach, which means respecting the barriers that exist between the different floors of the university apparatus. Its role is to homogenize knowledges by establishing a sort of scientific community with a recognized status; its role is to organize a consensus. Its role is, finally, to use, either directly or indirectly, State apparatuses to centralize knowledge. We can now understand why something resembling a university, with its ill-defined extensions

and frontiers, should have emerged at the beginning of the nineteenth century, or in other words at the very time when this disciplinarization of knowledges, this organization of knowledges into disciplines, was going on [Foucault, 2003a, p183].

2.1.3.11   The process of exclusion , in regards to the discipline, is more clear in 1976.

The problem is now: Who is speaking, are they qualified to speak, at what level is the statement situated, what set can it be fitted into, and how and to what extent does it conform to other forms and typologies of knowledge [Foucault, 2003a, p184].

2.1.3.12   The 1976 exclusions allows for ontological issues, i.e. 'what set can it be fitted into', and the emergence of the university-as-discipline meant that "a number of epistemological obstacles could be removed" [Foucault, 2003b, p184]. This increased epistemological range conforms to the epistemic justification being part of the discipline as discussed earlier. The non-secular 'orthodoxy' of statement that had preceded the emergence of the university moved to an "orthology" [Foucault, 2003b, p184], (as in a discourse i.e. -logy) and increasingly to a "form of control that is now exercised on a disciplinary basis" [Foucault, 2003b, p184]. The discipline has taken a role as displayed in Model A, shown in Graphic 2a.

2.1.3.13   The 1976 question on qualification posed by Foucault [2003b] of: 'Who is speaking, are they qualified to speak….?' relates to the third external exclusion and the first two internal exclusions expressed by Foucault in 1971. Truth is relative to the perceived expertise of the origin of the statement. A measure of this perceived expertise is the citation and the development of citation indexes to quantify this measure. The role of the discipline, and the acceptability of knowledge within the discipline, will now be viewed with regards to citations, practitioners and intellectuals and how these fit into the Model A and into Foucault's Triangle.

2.1.4 Citations and good form - citation indexes.

2.1.4.00   This section discusses the notion of the citation, as being good form, the evolution, the uses and abuses, and the manner in which citations and citation indexing

have become a tool used in the exercise of power by gatekeepers involved in the discipline. The concept of *gravitas* is discussed in reference to citations.

2.1.4.01   Within a discipline the question of qualification and rarefaction (as in Foucault's fourth internal exclusion) raises a hierarchy, a virtual pecking order, of eligibility to participate and acceptability of what knowledge is provided by such participation. There is a strong emphasis within most academic disciplines on publication, not only on numbers of articles and the quality of the journal in which the publication occurs, but also the number of times the article, or the ideas (as distinct from the notion of concepts, in that ideas are not necessarily conceived by the individual, but by others [Leibniz, 1991, p31]) expressed therein, are referenced by citation in subsequent publications.

> When an article is cited, it generally suggests that it has contributed significantly to the literature on which the citing article builds, and so the number of citations that an article receives is a commonly-used indication of its quality [Azar and Brock, 2007, p3].

2.1.4.02   While Foucault discussed the emergence of the discipline he did not specifically discuss the role of citations. It was Rabbinow who raises the issue of "individualization of the notion of an author in the history of ideas, knowledge, literature, philosophy and the sciences" [Rabinow, 1991, p101]. With such individualization a "system of ownership of texts came into being" [Rabinow, 1991, p109]. Ideas became intellectual property requiring acknowledgement of such authorship as a matter of good form, or courtesy, for use of such property. Such acknowledgement comes by way of the citation. I suggest that in order to explain the significance of the author and their work in relationship to knowledge, the citation has emerged as a mechanism for recognition of such 'individualization' that meet the propriety for intellectual property on academic ideas. Citations become signifiers, part of a mechanistic process of attribution of 'signified content' [Rabinow, 1991, p102] integral to the discipline.

2.1.4.03   The use of citations has created the citation index which has become a standard by which academic performance is measured. However such a standard may not necessarily be an accurate measure and the simplistic use of citation as a measure of

quality as expressed by Azar and Brock [2007] mentioned above becomes more complicated.

> According to the rational, *universalistic* view of science, an article or other publication should be accepted for publication and cited when it (1) offers original contributions to science and (2) is designed and executed to high quality standards, regardless of its author's reputation or placement in the academic stratification system (Cole & Cole, 1973; Merton, 1973). According to a universalistic perspective, scientific progress and its corresponding citations should be open to all and should not be reserved for a few "elite" individuals who secure jobs at visible, prestigious institutions (Cole & Cole, 1972). From this perspective, it is irrelevant who wrote a paper—what matters is that the paper makes an original, high-quality contribution to science. Merton's concept of universalism is essential to effective, meritocratic publication and dissemination of research findings. However, critics of the publication and stratification system in science have counter-proposed a *particularistic,* or *social constructivist* (Baldi, 1998) perspective, suggesting that citations may be based on the *source* of a scientific contribution (e.g., a scientist's status and background) rather than its substance or merits (Cole & Cole, 1973). Illustrative of the particularistic perspective is the "Matthew effect," defined as "the accruing of greater increments of recognition for particular scientific contributions to scientists of considerable repute and the withholding of such recognition from scientists who have not yet made their mark" (Merton, 1968: 58). From a particularistic perspective, publication decisions and citations are focused on the personal status of a writer, not the quality and contribution of the research per se. [Judge, Cable, Colbert and Rynes, 2007, p492].

2.1.4.04 The complex mesh of publications, publication avenues and citation counts integral to the discipline can be considered to relate to power within the discipline. While it is inconsistent, under a Foucauldian epistemology, to claim that recognised authors hold power, or that a highly cited article, text or commentary holds power, or that a high number of citations accorded to one article, provides power, it can be claimed that these can hold *gravitas.* The concept of *gravitas* implies seriousness or weight rather than power. As will be discussed later in 2.4.3.09, with regards to Leibniz [1991], *gravitas* is more than weight, it implies a force that can attract or repel. However, like power, *gravitas* can be exercised, it can be shared and this, along with conformity to good form, is one of the underlying fundamentals of the process of citation. Citations function such that we can say that texts and authorship can exercise power, for example.

2.1.4.05 Conformity to form is a integral part the exclusions Foucault discussed in 1976. An effort I made to initially write this dissertation in the form of a Barthesian deconstructive style was less than well received by my supervisors, until I started to conform with a more acceptable form and the increased use of citations. Barthes, [1983] as a form, simply did not have sufficient *gravitas* for acceptability of that particular style.

2.1.4.06 Conformity to good form, as in showing good manners, is a scholastic requirement to acknowledge sources in an appropriate manner, e.g. APA or Harvard citation standard. The citation of references is a relatively new aspect of disciplines. A look at Coase's 1937 article, 'The nature of the firm' shows that references were made but lack citations, except through footnotes. Similar style scan be seen with the much older texts of Adam Smith, Jean Baptiste Say and, to a degree, Marshall. Even Schumpeter was somewhat limited in his referencing style, such that, had proper referencing been done, could have led to greater *gravitas* being accorded to Sombart [Loader, 2001]. It would be a rare case that such articles, with limited citations, no matter the *gravitas* of the author, were accepted for publication, within the discipline, nowadays where APA and other citations standards hold sway. The exception to this lies with the intellectual, whose role is discussed in 2.2.2.

2.1.4.07 Citations, as a requirement to conform to the exclusivity of the discipline, are a curious phenomenon that in addition to actually acknowledging the source can also be considered to have other functions. Coase described his 1937 article on 'The nature of the firm' as "much cited and little used" [cited in Williamson, 2002, p182] . Apparently the act of citing Coase's article provided some '*gravitas* by association' to the subsequent articles that referenced Coase. Le Fevre [2007] in his work on citations of the Yerks Dodson Law actually found that what the law was supposed to have referred to by the citing articles actually did not refer to that at all in the original text. Somehow citing the original Yerks Dodson Law from the referenced article, even in a less than accurate context, provided *gravitas* to the referencing article.

2.1.4.08   Anecdotes are heard, in the realms of academia, of journal editors / reviewers insisting on citations to earlier articles published in their journals, or even citations to their own articles, before articles are accepted for publication. Some texts and journals contain references that bear marginal relevancy to the subject, suggesting a tendency to 'pad' the reference list or appease possible reviewers and readers.

2.1.4.09   A brief list of the functions of citations could well include:

i.   References to texts and / or authors that are actually useful and relevant.
ii.   Citations as matter of good form.
iii.   References that are included for image, or the absence of which is considered would reduce the *gravitas* of the citing article.
iv.   References that are included to aid in publication.
v.   Self citation of marginally relevant articles for greater author *gravitas*.
vi.   Citation of articles by colleagues, supervisors, seniors, etc., to aid in promoting an academic career.
vii.   A prevalence of citations of articles from journals which are considered to have better 'journal quality' [Shane, 1997], whether relevant or not.

2.1.4.10   Citations are a mechanism to support the continuity or 'path dependency' [Fuller, 2005, p84] of a discipline. Once an idea has been initially accepted into a discipline, that idea becomes a stepping stone, a link, for subsequent ideas that may, or may not, have connection to the initial idea. Such initial acceptance cannot be undone; however it can be modified by acceptance of ideas at variance to the initial idea. It is probably for this reason that the exclusions of the discipline, as described by Foucault, exist. Academic gatekeepers [Fuller, 2005, p156] include the editors of the various journals that are associated with the discipline, reviewers, the organisers of academic seminars, and so forth. Their role is significant in regulating the acceptance of knowledge into the discipline. Such knowledge, once accepted, becomes *connaissance* knowledge, and the role of the gatekeepers is, supposedly, to maintain the quality of such *connaissance* knowledges by the establishment of parameters. There is an exercise of power by those

rejecting or accepting articles for publication. However, the question arises that if the parameters be too stringent, or the gatekeepers themselves (or influenced by those with high *gravitas*) start to overtly construct the discipline to their own particular bent, then the ability of the discipline to accept knowledge or discontinuities may be limited. What happens if the level of overt construction by those with high *gravitas* or those gatekeepers who regulate access, becomes at a great variance to the *savoir* knowledge of the practitioners?

2.1.4.11 While the gatekeepers can attempt to regulate the parameters of the discipline by processes of exclusion, the power they exercise may be limited by the natural evolution of the discipline. Perkins [2007, p120] talks about the primary task of epistemology being about analysis not construction, so it is possible to infer from this that ontology is about construction – maybe about what has been constructed by the discipline through its natural genesis and evolution, as much as about what has been attempted to be overtly constructed by those within the discipline. The interplay of gatekeeper parameters, author and text *gravitas,* internal to the discipline, on one hand, and the acceptance of discontinuities from practitioners, intellectuals and other elements external to the discipline but inside the discourse, on the other hand, while being constrained by the discipline's process of exclusion, may contribute to this natural genesis and evolution of the discipline. In other words, in my model it is possible that, if the disciplinary gatekeepers have too stringent an exercise of power, then the disciplinary publications avenues become less receptive to the discourses external to the discipline. New journals may emerge from particular and wider sources of dissatisfaction, novel contributions may be sought, and discontinuities may become more eligible for participation. This matter is discussed further in sections 2.3.3.08 to 2.3.3.09.

2.1.4.12 The parameters of 'eligibility to participate and acceptability of knowledge' are discussed in the next three sections on practitioners and intellectuals, with regards to 'eligibility to participate', and *episteme*, with regards to 'acceptability of what knowledge.'

2.2 The role of practitioners, intellectuals and academic gatekeepers in the model

2.2.1 Practitioners as the subject of research
2.2.2 Intellectuals as third paths
2.2.3 The *episteme* - academics as gatekeepers

2.2.0   The following three sections discuss the role of the practitioners, intellectuals and academic gatekeepers influencing, by way of the *episteme*, the 'eligibility to participate and acceptability of knowledge' into the discipline.

2.2.1 Practitioners as the subject of research

2.2.1.00   This section looks at the role of the practitioner. Going back to my positionality of being a laboratory rat: Does a lab rat have an opinion on the experiments being conducted on them? Do my 25 years of being entrepreneurial have value in *connaissance* knowledge or does it account for naught in the discipline? Do practitioners have an eligibility to participate in the discipline? This section discusses some of the issues including positioning the practitioner in 'Foucault's Triangle'.

2.2.1.01   Practitioners (included in the rounded rectangle in Graphic 2a) are those people that practise within the discourse and are possibly external to the discipline. It is assumed that a discipline is attached to a discourse or to several discourses with each discourse having its practitioners. The question of the practitioner's 'eligibility to participate' in the discipline relates to the discipline's willingness to accept any *savoir* knowledge available to the practitioner, that may not be available to the participants of the discipline.

2.2.1.02   With regards to Foucault's triangle it can also be assumed that, in addition to having one limit being the right of the discipline, there is also another limit, that of the practitioner. This is shown in Graphic 2c below.

Graphic 2c	*Foucault's Triangle – modified to include aspects of Erklaren / Explanation and Verstehan / Understanding and the respective positions of practitioners and academic disciplines.*

POWER

TRUTH
EFFECTS

Savoir
knowledge

Practitioners

Verstehan
Understanding

RIGHT

Connaissance
knowledge

Academic
disciplines

Erklaren
Explanation
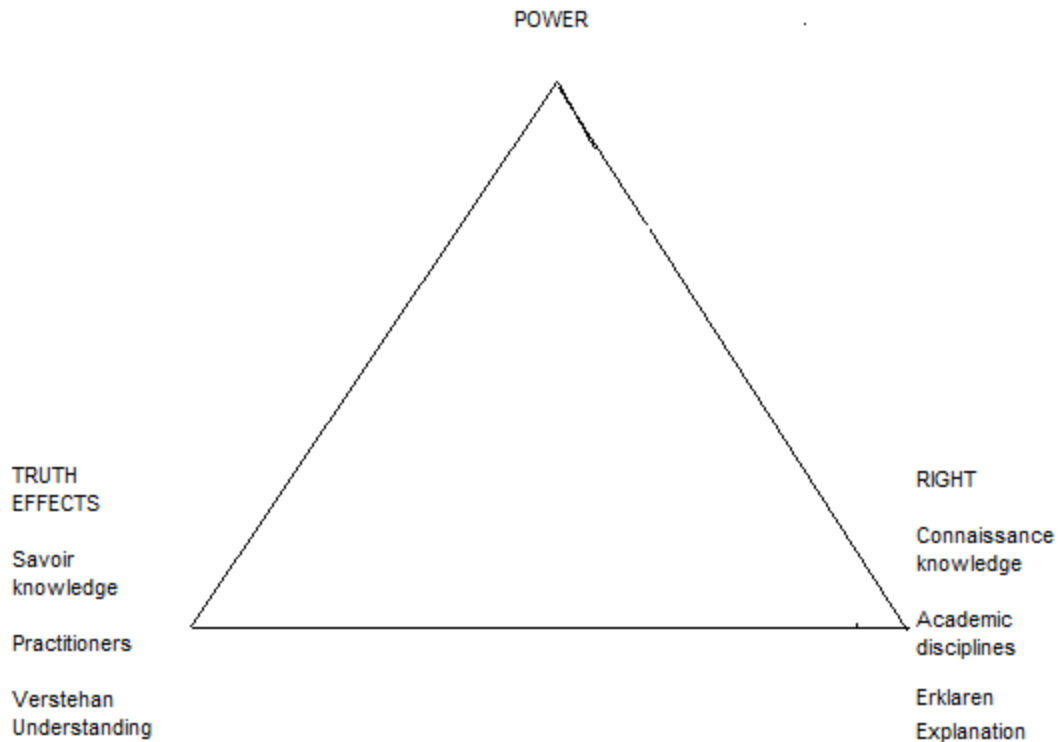
2.2.1.03   My earlier definition of disciplines defined epistemic justification of knowledge as an attribute of the discipline. If we assign *connaissance* knowledges into the discipline it is assumed that *connaissance* knowledges are those that are acceptable to the discipline under the various epistemic justifications available for its use. *Savoir* knowledges are external to the discipline and may also be external to the epistemic justifications. This externality does tend to limit the acceptability of the *savoir* knowledges of the practitioner into the realm of *connaissance* knowledges to only that which can be observed and interpreted based upon the limits of epistemic justification.

2.2.1.04   Foucault's definitions of *savoir* knowledges and *connaissance* knowledges is extended by Schmidt [2006], who borrowed from Dilthey the German terms *Verstehen* and *Erklaren* (understanding and explanation). On one side of the triangle, shown in Graphic 2c, I have practitioners, in this case the entrepreneurs who have an understanding (as in their 'savvy' or *savoir*) of entrepreneurship in their ability to practise it, but who may not be able to explain it in academic terms. On another side of the triangle, I have the discipline of entrepreneurship where the academics attempt, within the constraints of epistemology, to explain entrepreneurship, admittedly without necessarily understanding the elephant they are describing. Discursively, the practitioners do not need to explain to the satisfaction of anyone, a concept suffices. However in the discipline the academics need to offer an explanation, via the contextualisation of epistemic justification, in a manner acceptable to others in the discipline.

2.2.1.05   The power of right of this discipline of entrepreneurship may have come into effect when, in 1987, the Academy of Management accorded division status to entrepreneurship [Shane, 1997], in a similar manner to the establishment of the strategic management discipline.

> It was only after the Academy of Management's establishment of a strategy division in the early 1970s and the birth of the Strategic Management Society in the early 1980s that the strategy field was able to proclaim its independence as a legitimate academic discipline [Azar and Brock, 2007, p2].

As per Dery and Toulouse [1996], the discipline developed an 'epistemology specific to the field of entrepreneurship'. However the discourse on entrepreneurship predated this event by a few centuries and the practice of entrepreneurship has probably considerably predated the discourse, even though it may have gone under other names.

2.2.1.06   Essentially, in my dissertation, I am looking at the power of right side of the triangle. This is the discipline of entrepreneurship. However the role of the practitioner should not be under-estimated. As mentioned by Foucault [1980] it is the truth effects corner of the triangle that replenishes the power from which the right derives its power

[Foucault, 1980, p93]. If for some reason there is an incompatibility of the *savoir* and *connaissance* knowledges, then it is feasible that the flow of power clockwise around Foucault's Triangle may be blocked, cease or flow elsewhere to other disciplines. However given the inherent difficulty, as discussed in section 2.2.1.04, of having *savoir* knowledges accepted as *connaissance* knowledges due to the demands of epistemic justification, maintaining the flow of power may be difficult.

2.2.1.07 The flow of power around the triangle may be perceived as being bi-directional. As mentioned above the flow of power clockwise around the triangle sources from the *savoir* knowledge which replenishes the *connaissance* knowledge, assuming that academics are receptive to such knowledge and do not simply attempt to 'preserve their patch'. It is feasible that there is another flow of empowerment anticlockwise around the triangle where the *connaissance* knowledge forms the basis of teaching, or other impartation of knowledge such as seminars, workshops etc, in the direction of the *savoir* knowledge. However there does seem to be a corollary to this bi-directional flow of information in that if the *connaissance* knowledge being transmitted back into the realm of the *savoir* is perceived to be inappropriate to the eventual requirements of the nascent entrepreneurs then there will possibly be a reduction in the clockwise flow of power.

2.2.1.08 Probably this flow of empowerment around Foucault's Triangle is, to a degree, situation specific dependent on the discipline involved, it is likely that in some disciplines such as engineering or medicine, practitioners may have greater eligibility to participate in the discipline and contribute to the *connaissance* knowledge. Whether this is in itself a measure of entrepreneurship being a dubious discipline is a moot point. However it is feasible that in such dubious disciplines third parties such as intellectuals play a role that could be more significant than in the less dubious disciplines.

2.2.2 Intellectuals as third paths

2.2.2.0 This section introduces the role of the intellectual to my model as a possible mediating influence.

2.2.2.01   The intellectual has been described as a 'somewhat elusive figure' [Fuller, 2005, p2]. Long an historical figure from the times of Plato's Sophists [Fuller, 2005] the intellectual offers a discursive counterpoint to the discipline that may not be provided by the practitioner.

> Academics have a long and tortured relationship with intellectuals. Although they should be on the same side, if not the same people, academics and intellectuals usually regard each other with mutual suspicion. Each treats the other as an interloper who floods the market with inferior products. Most of what passes for 'criticism' in academia strikes the true intellectual as little more than comfort thinking; whereby criticism is cloaked in esoteric jargon that amuses one colleagues but goes over the head of its putative target and hence merely succeeds in comforting the converted [Fuller, 2005, p136].

2.2.2.02   The question arises as to whether intellectuals fall under the category of *savoir* or *connaissance* knowledges. Foucault [2004] talks about *savoir* and *connaissance* knowledges but is less than specific, and ambivalent. Sheridan Smith, the editor of Foucault's 'The archaeology of knowledge' comments:

> *Connaissance* refers to a particular corpus of knowledge, a particular discipline – biology or economics, for example. *Savoir*, which is usually defined as knowledge in general, the totality of *connaissance*, is used by Foucault in an underlying, rather than overall, way [in Foucault, 2004, p 16].

The general rule seems to be that *savoir* is a broader definition of knowledge, knowledge of self (even with a spiritual content), whereas *connaissance* relates to bodies of knowledge, intellectual knowledge and to where knowledge is a component of access to truth [Foucault, 2005]. Intellectuals would, under the definition of intellectual knowledge, fall into the classification of *connaissance* knowledges, yet they do not have the epistemic justification with regards knowledge as a component of access to truth. Their knowledge is also broader based than that available under the epistemological constraints in the discipline. Accordingly I have, without any undue dissonance, created a third category of discursive knowledge that places intellectuals in a middle position in my model. Some intellectuals may be academics, but not all academics are intellectuals.

2.2.2.03 External to both the discipline and the practitioner, but part of the discourse, intellectuals have the freedom to present ideas in a format unacceptable (citations not included) to the discipline, yet somehow they have attained status under the second of Foucault's 1971 exclusions – as an author. It is seemingly possible for intellectuals to acquire a *gravitas* that enables them to be part of the discursive knowledge yet also acceptable to the discipline, despite the lack of epistemic justification in their work. In the discourse of entrepreneurship Drucker is an example of an intellectual. He does not , in my opinion, qualify to have been a practitioner of entrepreneurship, nor do all his writings conform to accepted expectations of *connaissance* knowledges. Yet, as shown later during the data collection process, the level of *gravitas* is evident in the number of citations he receives from the discipline.

2.2.2.04 Unconstrained by the path dependency intellectuals have a greater scope to possibly offer discontinuities. Given the difficulties of acceptance of *savoir* knowledge by the discipline through the gatekeepers use of the *episteme*, as will be discussed in the next section, the intellectual offers a third way to influence the flow of power in Foucault's triangle.

2.2.3 The *episteme* – the gatekeeper's apparatus

2.2.3.00 In a similar manner to Foucault's evolving understanding of the taxonomy of discourse and disciplines his use of the term *episteme* also evolved. These various metamorphoses are outlined in this section and the final form they take is incorporated into my model with a selection of possible cases where *episteme* could be applied.

2.2.3.01 The question of 'acceptability of what knowledge' was raised in section 2.1.4.01. The term *episteme* has been used by Foucault [1980] as the 'strategic apparatus' that is used to separate what may be acceptable, from that which is not acceptable, within a 'field of scientificity'. However, the term went through several metamorphoses before Foucault arrived at this meaning. In 'The archaeology of knowledge', first published in 1969, what

Dreyfus and Rabinow have described as a "celebrated, but short lived notion" [Dreyfus and Rabinow, 1983, p18], Foucault defined *episteme* in a macro sense.

> By *episteme*, we mean … the total set of relations that unite, at a given period, the discursive practices that give rise to epistemological figures, sciences, and possibly formalized systems …. The *episteme* is not a form of knowledge (*connaissance*) or type of rationality which, crossing the boundaries of the most varied sciences, manifests the sovereign unity of a subject, a spirit, or a period; it is the totality of relations that can be discovered, for a given period, between the sciences when one analyses than at the level of discursive regularities [from Foucault, 2004, p211, this abbreviated version cited in Dreyfus and Rabinow, 1983, p18].

2.2.3.02   This macro sense was followed by Mills [2004].

> *Episteme* consists of the sum total of the discursive structures which comes about as a result of the interaction of the range of discourses circulating and authorised at that particular time [p51].

2.2.3.03   However in 1977, Foucault presented another definition that narrowed the range of what was included under the term *episteme* to that of an apparatus that could be used in a more micro sense.

> I would define the *episteme* retrospectively as the strategic apparatus which permits of separating out from among all the statements which are possible those that will be acceptable within, I won't say a scientific theory, but a field of scientificity, and which it is possible to say are true or false. The *episteme* is the 'apparatus' which makes possible the separation, not of the true from the false, but of what may from what may not be characterised as scientific [Foucault, 1980, p197].

2.2.3.04   Again as with the range of discursive exclusions discussed in section 2.1.3 there is a subtle shift in Foucault's focus from the 1969 discursive practices and discursive regularities to his 1977 definition. As Grosrichard comments in the 1977 interview with Foucault:

> In 'The order of things' and in 'The archaeology of knowledge', you talked of *episteme*, knowledge and discursive formations. Now you are more inclined to talk about 'apparatuses' and 'disciplines' [Foucault, 1980, p196].

Foucault's eventual reply to Grosrichard's question was as cited in 2.2.3.03. Foucault's *episteme* has moved from relating only to the discourse to include the discipline.

2.2.3.05 However the *episteme*, as an apparatus, is not the same as epistemic justification. *Episteme* relates to the acceptability of knowledge within the discipline; with regards to its acceptability or exclusion (as per Foucault's 1971 and 1976 exclusions) by academic gatekeepers, other disciplinary participants, as well as the acceptability of knowledge from intellectuals and practitioners; rather than the justification that knowledge is believed to be true, or correct or accurate, as in epistemic justification, as per section 2.1.1.10.

2.2.3.06 *Episteme*, therefore, relate more to the ontological, in that the extent of the ontological domain is constrained by the *episteme*, rather than the epistemological issue of whether the knowledge is correct and accurate. Knowledge within the *episteme* is presumed knowledge in that its epistemic justification and the selected ontological domain, given the constraints of the *episteme*, may not be representational of the full knowledge available. *Episteme* knowledge is finite.

2.2.3.07 I illustrate the role of the *episteme* graphically using the four *episteme* outlined in the Model B shown in Graphic 2d. These four are examples only and not considered definitive:

    i.   In *Episteme One,* the presumed knowledge is taken solely from within the discipline, all references and citations are to articles and texts that have already been previously cited within the discipline, and only that discipline. No input is taken directly from practitioners, even that already accepted by the discipline, nor from intellectuals. Under such *episteme* there is no possibility of discontinuities from sources external to the discipline.

    ii.   In *Episteme Two,* the presumed knowledge is taken both from within the discipline, as in *Episteme* One, and also from the discourse, but not from the practitioners, possibly from another discipline, that shows some

compatibility to this discipline. The possibilities of discontinuities are limited to any new presumed knowledge sourcing from the other discipline.

iii.   In *Episteme Three,* the presumed knowledge is taken from four sources: a) within the discipline only, b) from the practitioner *savoir* knowledge acceptable to the discipline, which may now be considered *connaissance* knowledge, c) from the practitioner *savoir* knowledge 'on the margins' of the discipline, and d) from the discourse external to the practitioner, such as intellectuals, media, etc. This *episteme* is most likely to have the lowest possibility of acceptance by the discipline, unless the author of the article / text using this *episteme* has a high level of *gravitas*. However the possibility of this article / text presenting discontinuities are relatively high compared to the other three examples of *episteme*.

iv.   In *Episteme Four,* the presumed knowledge is taken from within the discipline and includes what has been already accepted by the discipline from the practitioners, i.e. as mentioned in regards to *Episteme* Three the *savoir* knowledge is now *connaissance* knowledge. But no presumed knowledge is a accepted from another discipline.

2.2.3.08   Given the different scenarios, exemplified by the four *episteme* above, of the acceptability of knowledge into the discipline, it can be expected that the discipline shows a degree of dynamism. The movement of the boundaries of the discipline as discussed in section 2.1.3.06, due to the flow of power around Foucault's Triangle, can be influenced to expand or change direction by novel contributions, discontinuities or by construction by those with high *gravitas* and/or gatekeepers. There are implications for the discipline in that, as discussed in sections 2.1.4.10 and 2.1.4.11, once there has been initial acceptance of knowledge into the discipline it cannot be undone, but can be later refuted, or ignored. The aspects of this dynamism and the possibility of dubious disciplines emerging is discussed in the next chapter.

Graphic 2d *Model B – Depicting four examples of episteme drawing on different courses of acceptable knowledge.*

Ontic States - containing Ontic Knowledge

Discourses

Disciplines as Epistemic states

Episteme One

Episteme Two

Episteme Four

Practitioners

Episteme Three
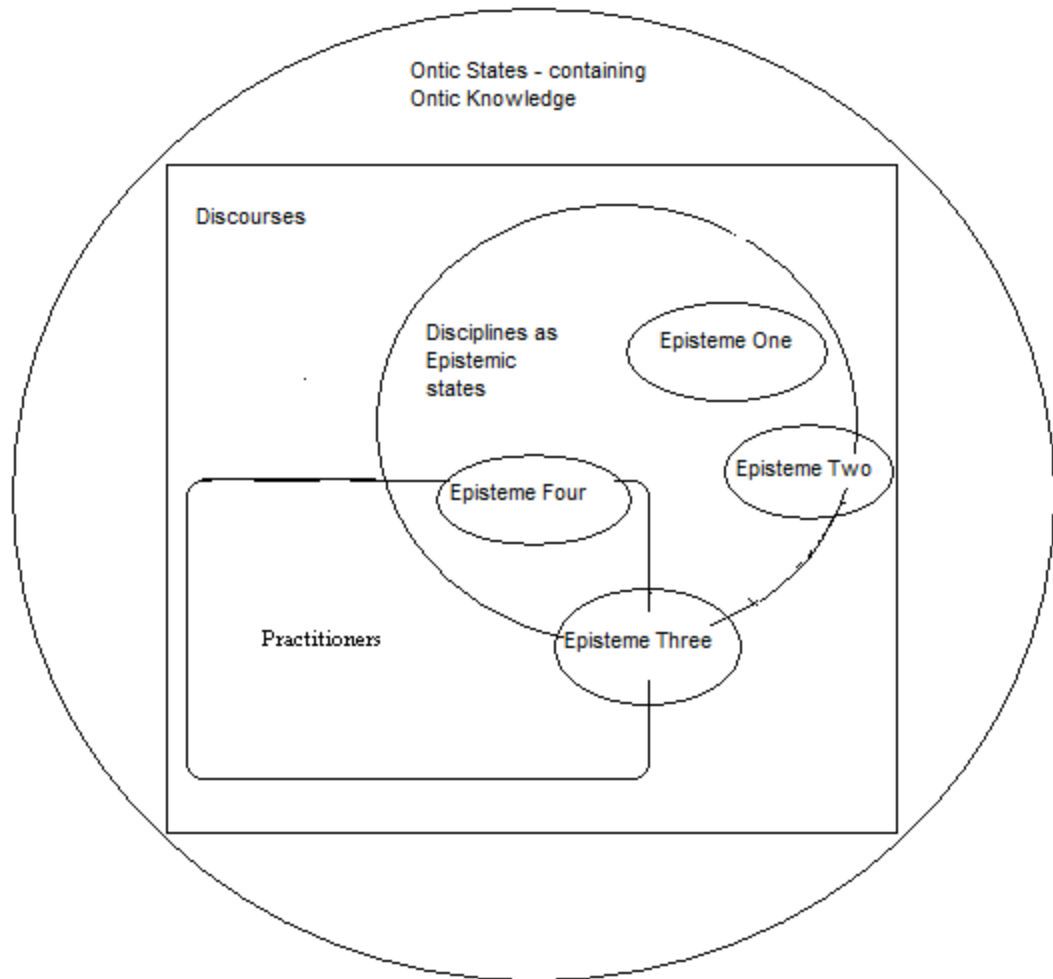
2.3 Dynamic aspects of disciplines, discontinuities and dubious disciplines

2.3.1 Dynamic aspects of disciplines
2.3.2 Discontinuities
2.3.3 Dubious disciplines – some scenarios

2.3.0   The next three sections discuss the dynamic aspects of disciplines and show how it can be included in my models. The concept of discontinuities is covered as a relevant aspect of this dynamism. Finally, following Foucault's notion of dubious disciplines I present some scenarios as to how these could be modeled and outline some research features that could be followed in this investigation.

2.3.1 Dynamic aspects of disciplines.

2.3.1.00   This section looks at the dynamic aspects of disciplines firstly introducing the aspect of change in acceptance of knowledge into the discipline and the role of the governing regime. The work of 17th century thinker Leibniz is introduced to explain the movement of disciplines as being similar to that of planets.

2.3.1.01   As Foucault [1980] points out in certain 'orders of knowledge' changes, sometimes sudden, do take place in (the aspects of these discontinuities are discussed further in section 2.3.2).

> How is it that at certain moments and in certain orders of knowledge, there are these sudden take-offs, these hastenings of evolution, these transformations which fail to correspond to the calm, continuist image that is normally accredited. But the important thing here is not that such changes can be rapid and extensive, or rather it is that this extent and rapidity are only the signs of something else; a modification in the rules of formation of statements which are accepted as scientifically true. Thus it is not a change of content (refutation of old ideas, recovery of old truths) nor is it a change of theoretical form (renewal of a paradigm, modification of systematic ensembles) [p112].

He associates this with the governing regime of the orders.

> It is a question of what governs statements, and the way in which they govern each other so as to constitute a set of propositions which are scientifically acceptable…..

In short, there is a problem of the regime, the politics of the scientific statement [p112].

The governing regime of the discipline, or the gatekeepers, restrict *episteme* and the acceptability of knowledge into the disciplines; Foucault sees such restriction as an issue where discontinuities arise. It is possible that the restrictions placed upon the *episteme* by the gatekeepers keep out knowledge that 'should' be part the discipline. Somehow when this knowledge is eventually accepted it causes a sudden change in the discipline – something akin to Schumpeter's 'clusters' of innovations.

2.3.1.02   In section 2.2.3.07 the issue was raised of an author having a high level of *gravitas* being able to have articles accepted by the discipline. The implication was that this acceptance was due to the high level of *gravitas* and that a similar submission by an author with lesser *gravitas* might not have had their work accepted. This was also mentioned by Judge et al [2007], cited in section 2.1.4.03 above. In section 2.1.3.06 the metal pendulum was used to describe the possible movement between Right and Truth Effects that could delineate the boundary between discourse and discipline. The two ideas are connected in that the acceptance by the discipline of this, previously unaccepted, knowledge moves the pendulum and accordingly the boundary between discipline and discourse expands outwards, enlargening the discipline. This movement is due to the force of the *gravitas* magnetically pulling on the pendulum, thus figuratively expanding the boundary of the discipline. Exclusionary resistance, from the gatekeepers, is a countering force.

2.3.1.03   It was the work of Leibniz in the seventeenth century who applied the emerging laws of physics to laws of metaphysics.

> The distinction between force and quantity of motion, is rather important, not only in physics and mechanics, in order to find the true laws of nature and rules of motion ….. , but also in metaphysics, in order to understand the principles better [Leibniz, 1991, p 20].

2.3.1.04 As much as the physical laws control the motion of planetary bodies and the flow of tides, the same, according to Leibniz, can be said of metaphysical principles of ideas and knowledge. Whether it is the force of the *gravitas* that has moved the discipline into acceptance or the attraction of the *gravitas* has made the knowledge more acceptable to the discipline and by including the previously unaccepted knowledge the discipline seeks to enlarge its own *gravitas*, is a moot point. Whether the exclusionary forces of the academic gatekeepers are greater than the *gravitas* of the author offering the unaccepted knowledge is another consideration. What would happen if the unaccepted knowledge did not acquire the patronage of an author with sufficient *gravitas* to make it become acceptable? Would the unaccepted knowledge eventually find its way into the discipline or would it, due to the exclusionary resistance experienced, find its way into another discipline? As discussed in section 2.1.4.10, the question of who decides the parameters of acceptability maybe about what has been constructed by the discipline through its natural genesis and evolution, as about what has been attempted to be constructed by those in the discipline. The interplay of *gravitas* and exclusionary forces may be the deciding aspect.

2.3.1.05 It is possible to visualise disciplines along the same lines as planetary bodies, or magnetized bodies, each with their powers to attract or reject, to move, subject to forces acting on them. Model B, in Graphic 2e, shows the possible influence of other disciplines on the Model A. Discipline B is a discipline that shows some compatibility with the original discipline. For example, the discipline of economics has some compatibility with entrepreneurship as does the discipline of sociology. This compatibility does tend to discount the relevancy of the Cartesian definition of substance (as discussed in 2.1.2.04) as that 'which depends on no other for its own existence' to a discipline. It is unlikely that a discipline has sufficient measure of substance to stand by itself. However, as per Leibniz, it is not necessary for something to have substance to have force.

Ontic States - containing Ontic Knowledge

Discourses

Discipline A

Disciplines as Epistemic states

Episteme One

Episteme Two
iii

Episteme Four

Discipline B

Practitioners

Episteme Three
i   ii
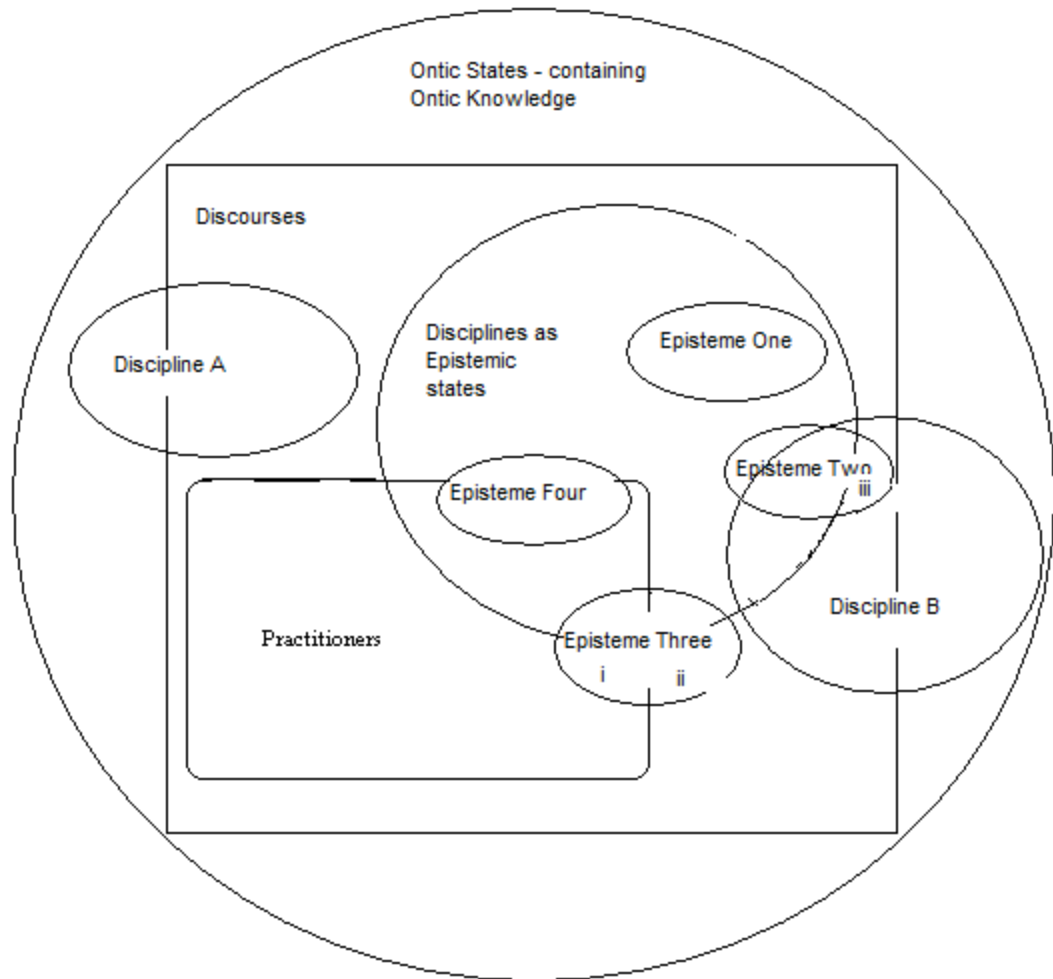
2.3.1.06   The potential for movement subject to forces means that what is currently accepted within the discipline could change over time, providing dynamism to the model. For example from Model B in Graphic 2e 'Discipline A' could become more compatible to the discipline and therefore take a similar position to 'Discipline B'. The relationship between practitioners and the discipline can also change, as the overlap between the two fields varies e.g. if there is a increasing predominance of '*Episteme One*', rather than '*Episteme Three*' or '*Episteme Four*', then the overlap could reduce in size. This adjustment could feasibly have an impact on the flow of power around Foucault's Triangle. The impact of this adjustment on the flow of power is discussed further in section

2.3.3 under dubious disciplines. Part of the dynamism of the model sources from the discontinuities that will be discussed in the next section.

2.3.2 Discontinuities

2.3.2.0 This section places the aspects of discontinuities into my models. The Foucauldian concept of discontinuities introduced in section 2.3.1.01 above is expanded

2.3.2.01 The models that I have developed in this chapter are dynamic in nature. The Foucauldian term 'discontinuities' are the potential directions of movement or growth of the discipline. These may also be considered to be Kuhn's 'paradigm shifts' [Kuhn, 1996] or Grove's 'specific inflection points' [Grove, 1999]. Mulhall, in a commentary on Heidegger, provides a definition of discontinuities as being a state of crisis.

> However such theory building itself depends upon taking for granted certain basic ways in which the given discipline demarcates and structures its own area of study; and those foundations tend to remain unthematized by the discipline itself, until it finds itself is a state of crisis. Relativity theory precipitated such a crisis in physics; in biology, similar turmoil was caused by Darwinian theories of natural selection; and in literary studies, theoretical attacks upon prevailing notions of the author, text and language have recently performed an analogous function [Mulhall, 2005, p4].

2.3.2.02 Foucault's work on discontinuities is significant. I assume in my model that, apart from practitioners, other disciplines, and other elements from the discourse such as intellectuals or media have the potential to provide discontinuities to the *connaissance* knowledges of the discipline. Without these discontinuities the path dependency [Fuller, 2005] of the academics' *connaissance* knowledges maintains its "continuist image" [Foucault, 1980, p112] that may, or may not necessarily, have compatibility with either the *savoir* knowledges of the practitioner, *connaissance* knowledge of other disciplines, or discursive knowledge of elements of the discourse. As discussed in section 2.2.2 the role of the intellectual [Fuller, 2005; Said, 1996] is feasibly a 'third way' mediating effect that allows for the introduction of discontinuities into the discipline.

2.3.2.03   In Model B in Graphic 2e three areas of discontinuities are marked as 'i', 'ii' and 'iii'. These are again not definitive and correspond as follows:

i.   Discontinuity 'i' is where the presumed knowledge is currently external to the discipline but included in the *savoir* knowledge of the practitioner.

ii.   Discontinuity 'ii' is where the presumed knowledge is currently external to both the discipline and the *savoir* knowledge of the practitioner but included in the discourse. E.g. popular culture, media, non-practising intellectuals (e.g. Peter Drucker in the case of entrepreneurship).

iii.   Discontinuity 'iii' is where the presumed knowledge is sourced from another discipline, having some compatibility with the discourse to which the original discipline is attached.

The reaction of the discipline to discontinuities, as to whether they are accepted as knowledge through the various *episteme,* is one possibility that may contribute to a discipline being described as being dubious. The concept of dubious disciplines is discussed in the next section.

2.3.3 Dubious disciplines – some scenarios

2.3.3.00   This section discusses the concept of dubious disciplines and looks at some ramifications of disciplines being dubious.

2.3.3.01   According to Foucault [in Dreyfus and Rabinow, 1983] there are disciplines that have passed the threshold of scientificity and there are others that are on the threshold and there are others that may not yet have passed this threshold. Seemingly not all disciplines are necessarily created equal, nor maintain this equality; some are more equal than others.

2.3.3.02   In a 1977 interview, Foucault used the term 'dubious' to describe a form of *savoir* knowledge like psychiatry "since the epistemological profile of psychiatry is a low

one" [Foucault, 1980, p109, also in Chomsky and Foucault, 2006, p140]. The fact that Foucault uses the term *savoir,* rather than *connaissance,* is indicative of the view in which he holds the discipline of psychiatry. Gutting [1994, p113] has said that Foucault "wrote extensively about the interconnected disciplines of psychiatry, criminology, pedagogy, and clinical medicine, but was reluctant to extend his arguments beyond what he called these "dubious" disciplines". The term has acquired some attraction with Wallerstein [2004, p166], an intellectual, titling one of the chapters in 'The uncertainties of knowledge' as "Anthropology, Sociology and other dubious disciplines". While there is no citation to Foucault a number of the 'concepts' expressed by Wallerstein bear resemblance to Foucault's ideas.

2.3.3.03   Dreyfus and Rabinow [1983, p xxiv] introduce Foucault's dubious disciplines. They further describe that there are

> …two distinct categories: on one hand, the relatively stable practices and objects of those disciplines that Kuhn calls normal sciences and Foucault calls sciences which have passed the threshold of scientificity, and, on the other hand, the shifting practices and objects of the sciences which have not crossed this threshold [Dreyfus and Rabinow, 1983, p116].

2.3.3.04   Foucault [2004, p209] does, on the other hand, describe three (not two as mentioned by Dreyfus and Rabinow above) categories. The first are constituted sciences that have crossed their threshold of formalization, such as mathematics, which has never had a history of not being mathematics. The analysis of the history of such science is only possible by recurrent analysis. Second are those at the actual threshold of scientificity but for which there are still questions as to their crossing the threshold. Third are those pseudosciences that move the epistemological threshold point to claim the status of scientificity. What such disciplines considers *connaissance* knowledges may, in Foucauldian terms, still be *savoir* knowledges.

> If it is established that a particular discursive formation has not succeeded in crossing the threshold of epistemologization, then archaeology has freed us to shift to the question of what role this pseudoscience, this doubtful science, plays in the larger context [Dreyfus and Rabinow, 1983, p117].

While Foucault [2004] does, in The archaeology of knowledge', relate this third category to his 1969 version of *episteme*; it can be assumed that the 1977 version is also appropriate as the third method o f analysis.

2.3.3.05 As cited by Dreyfus and Rabinow [1983, p10], the dubious disciplines like psychiatry have "contributed little objective knowledge but have attained great importance and power". Is the discipline of entrepreneurship in the same category? Has it passed that epistemological threshold of scientificity? Or has it, as per Foucault's third category described in 2.3.3.04 above, moved the epistemological threshold point to claim scientificity?

2.3.3.06 It is a moot point to ask: Who is qualified to answer these question and what basis is used for justifying answers to such a question? To date no references are available for such justification. In this investigation I look at two perspectives where disciplines could possibly be considered dubious:

2.3.3.07 First from a power perspective, Dreyfus and Rabinow [1983, p119] discuss aspects of negative power when compared to "productive aspects of power" [p119]. They raise two scenarios:

a) Where power and truth are not connected [p204]. I assume that this relates to Foucault's Triangle where there is an issue of representationality where through a disjunction of *savoir* and *connaissance* knowledges, the discipline is no longer considered representational of the practitioners (if indeed it ever was). A discipline with no practitioners may not be able to exist. Hence the practitioners give not only legitimacy of power, but also existence, to the discipline. However the discipline needs to maintain representativeness. As discussed in section 2.3.1.06 where, using Foucault's Triangle, the lack of compatibility between the *savoir* knowledge of the practitioner and the *connaissance* knowledge of the discipline could results in the flow of power to the discipline being affected. In the 'more constituted' disciplines of engineering and mathematics there could be considered to be a close relationship

between academics and practitioners, with the later having some strong degree of involvement with the work of the former - even if only having access to, or reading, published output. Does the same apply in the field of entrepreneurship? Some scenarios resulting from this disjunction are discussed in section 2.3.3.09 below.

b) Where negative power and truth are external to each other [p130]. While Dreyfus and Rabinow do not use this term in such context, their term 'tyranny of the referent' is a useful analogy. I assume that this is where ontological construction, ignored discontinuities and misplaced *gravitas* create a simulcrae rather than a simulation of entrepreneurship, where a supposed elephant becomes a heffalump. (From Baudrillard [1994] simulation and simulcrae respectively are either an accurate representation of reality or a less than accurate representation.)

2.3.3.08 The second perspective relates, to a degree, to the second power scenario above, from an ontological perspective - as per Heidegger's ontological test.

> All ontology, no matter how rich and tightly knit a system of categories it has at its disposal, remains fundamentally blind and perverts its most proper intent if it has not previously clarified the meaning of Being sufficiently and grasped this clarification as its fundamental task [Heidegger, 1993, p 53].

As per Foucault [in Dreyfus and Rabinow, 1983, p61] discursive practices create objects. However the question is, as per Heidegger whether here has been sufficient 'clarification of the meaning of being.'? Have the created objects of Foucault been sufficiently understood so that their being is clear? This question is discussed further in section 2.4.3.

2.3.3.09 To expand further on the scenario in 2.3.3.07 a) on the disjunction of *savoir* and *connaissance* knowledges Model D in Graphic 2f shows a 'worst case scenario' of Foucault's triangle where in the area marked 'b' the *savoir* knowledges of the practitioner is divorced from the *connaissance* knowledges of the discipline. The discontinuities 'i' available in 'a' become lost to the original discipline and *Episteme Four* becomes *Episteme One*. *Episteme Three* becomes the viewpoint of the discipline with discursive knowledge from the discourse, but without the *savoir* knowledge of the practitioner.

2.3.3.10   Given Leibniz's ideas on applying the use of laws of physics on non-physical items such as ideas, disciplines etc we can look at disciplines following physical laws; laws of motion, laws of gravity, attraction and so forth. *Gravitas* gains similar properties to gravity. The practitioners could be 'drawn' (as in a physical attraction) to another discipline that more readily accepts the discontinuous experienced by the practitioner. It is this 'drawing' that is significant. Entrepreneurs, or nascent entrepreneurs, are not tied to the discipline of entrepreneurship and if the discipline is not representational of the work of the practitioners there is nothing to stop practitioners finding that alternative disciplines display more representationality and compatibility.

2.3.3.11   It is possible that practitioners more attracted by another discipline as in Model D in Graphic 2f where 'Discipline C' becomes representational of Practitioners 'b'. 'Discipline C' may be an emergent discipline or may be a relocation of other disciplines such as 'Discipline A' or 'Discipline B'. Somehow the *savoir* knowledges of the practitioner and *connaissance* knowledges of the alternative discipline show a better compatibility? Whether the lack of acceptances of discontinuities within the original discipline have resulted in this movement is a moot question.

2.3.3.12   This investigation will focus on the representationality of the discipline and the acceptability of knowledge into the *episteme* that collectively constitute the discipline. When Foucault [in Dreyfus and Rabinow, 1983, p117] talks about crossing the 'threshold of epistemologization' I assume in this perspective that this relates to *episteme* rather than epistemology and, therefore, should not be mistaken for epistemic justification. The locus remains with the *episteme*. A clarification of epistemic justification and the separation of ontology and epistemology is elaborated in the next section 2.4.

Model D – Showing disjunction of practitioner from the discipline and the influence of other disciplines

2.4 Ontologies

2.4.00 As discussed in 2.1.1.12 epistemology and ontology are often confused. "It (ontology) is also often confused with epistemology, which is about knowledge and knowing" [Gruber, 1995]. Furthermore, in section 2 above, I have introduced *episteme* as a strategic apparatus (to utilise a Foucauldian term) being separate to epistemic justification. In this chapter I will attempt to clarify the differences between these concepts / ideas viz, epistemology, ontology, *episteme* and epistemic justification, and relate them to the model developed in the preceding sections.

2.4.1 Ontologies as constructions

2.4.1.0 In this section, I firstly use Watson's [1998] model of Cartesian epistemology and ontology in order to define the separation of the two. I have done so because I perceive that the separation is unclear and needs such delineation. I then continue to discuss the concept of ontologies as constructed domains

2.4.1.01 An example of a definitive separation of epistemology and ontology is provided by Watson [1998] in 'The breakdown of Cartesian metaphysics.' Watson separates and defines the five epistemological principles and the five ontological principles of Cartesian metaphysics.

The five Cartesian epistemological principles are:
- Ideas represent objects external to the mind;
- Sensations do not represent objects external to the mind;
- There must be an essential likeness between an idea and its object;
- Direct acquaintance is necessary for knowledge; and
- Objects external to the mind are known only mediately by way of representative ideas [Watson, 1998, p52].

The five ontological principles are:

- God is an uncreated substance;
- There is a dualism of two created substances that differ in essence, mind is thinking, matter is extension;
- Volitions, passions, sensations, and ideas are the (only) properties, that is, modifications of mind;
- Size, shape, and motion and rest are the (only) properties, that is modifications of matter; and
- There is an all inclusive ontological type - distinction between substance and property; substance is essentially independent; properties, that is, modifications, are dependent upon substance [Watson, 1998, p51].

2.4.1..02   As per Watson's categories, epistemology relates to the process of what is considered (even to the sequential orders – first order, second order, etc.) knowledge. In Cartesian epistemology, there is the primary necessity of 'direct acquaintance'; however this is specific to the context of this particular epistemology. On the other hand, ontology conceptualizes the domains of reality in that the elements of taxonomy are defined and the relationship between these elements is outlined. As can be seen by Watson's definition of the five ontological principles there is less concern with establishing the process of what constitutes knowledge but more concern with the conceptualisation of taxonomic domains and what are the defining features of those domains.

2.4.1.03   Re-citing Perkins [2007, p120] "the primary epistemological task is not construction, but analysis", I would argue would seem plausible that ontology is therefore about construction. Perkins does state (in an attempt to epistemologically differentiate between Leibniz and Locke) that for Locke the "fundamental epistemological issue centers on construction" [Perkins, 2007, p120]; however I believe that Perkins does face Gruber's stated problem in that ontology and epistemology are being confused and the construction Perkins refers to relates to ontology, not epistemology. Epistemologically Locke and Leibniz differ as an empiricist and a rationalist respectively. Construction is more of an ontological issue; inasmuch as engineers separate the design process from the analysis process, I use the same separation to suggest that ontology relates more to design and epistemology to analysis. While this aspect of construction may not be so apparent in regards to the Cartesian model it should be noted that the Cartesian ontology is a simple dualism with a high level of mutual exclusivity between 'substances.' In more complex

ontologies, without such a simplistic dualism, the aspect of construction may be more apparent.

2.4.1.04   The question that comes to mind initially is 'construction of what?' If we follow Gruber [1993] the 'what' is a 'set-of-concept-definitions available to a community of agents.' Following the issue of ontology as discussed in 2.1.1.13, with reference to Heidegger, the 'what' is the construction of 'perceived domains that are used as frameworks for such defining of being.' Both Mulhall [2005, p4] and Smith [2003, p7] use the terms 'themes', (albeit in relationship to the unthematized that will be discussed next) so the 'what' could also be considered to be the construction of themes.

2.4.1.05   However the more appropriate question is 'whether there is an actual construction of anything?' Two previously citations are significant here, first Smith [2003, p7] in section 2.1.1.11 and the second by Mulhall [2005, p4].

2.4.1.06   There could well be an unwillingness to construct anything simply because, **as** pointed out by Mulhall [2005, p91], "making an assertion about an object restricts our openness to it in just the way that interpretation restricts our pre-interpretive understanding". The 'ontological commitment' [Gruber, 1995] in any discipline may be an issue because the ontology, or part of it, may not have been constructed, clarified or defined in any manner. Such commitment may be to something that lacks construction. It could only be, as per Smith [2003] and Mulhall [2005], when discontinuities are presented to the discipline, by way of a 'state of crisis' that such construction becomes necessary. Whether such discontinuities are presented and the resultant construction has occurred, or not, could be a measure of a discipline's status as being dubious or not. The other aspect of ontological construction is whether the construction is part of a natural process of the development of knowledge or it is perceived to be overtly undertaken, and influenced, by those with high *gravitas*.

2.4.1.07   Ironically, while I separate epistemology and ontology, it would seem that they are also co-dependent, in that the possibility of ontological construction is dependent upon

the type of epistemic justification, or epistemology, selected. The same parallel can be seen in engineering between design and analysis, there is a similar co-dependency. Above in section 2.4.1.03 I raised the issue of the ease of mutual exclusivity between the dual substances of Cartesian ontology of mind and matter. The ease of this mutual exclusivity is enabled by the empirically orientated Cartesian objectivist epistemology.

2.4.1.08 It can therefore be assumed that in a subjectivist epistemology, such mutual exclusivity is more difficult. Krell [in Heidegger, 1993, p12] has described the "epistemological labyrinth of modern subjectivist philosophy." The possibility of construction becomes more difficult (maybe common in the human sciences) and, until prompted by discontinuities, it is possible that ontologies, in such subjective epistemologies, are simply not constructed. They remain, as per Smith [2003], tacit.

2.4.1.09 The relationship of this tacit nature and the influence of *gravitas* on the ontological construction is an interesting question. Does *gravitas* contribute to construction of ontological domains or does it become a means, by default, to continue the tacit conceptualisation of a discipline, that has yet to pass Foucault's [in Dreyfus and Rabbinow, 1983] point of epistemologization? By default, in dubious disciplines, are commitments made to *gravitas* rather than ontologies? This point is discussed further below in section 2.4.3.10. Prior to that discussion, the aspects of epistemic justification on ontologies are discussed in the following sections.

2.4.2. Epistemic justification

2.4.2.00 In this section I discuss the concept of epistemic justification and depict how this could be modeled graphically.

2.4.2.01 I have assumed in earlier sections that the ontology within a discipline is 'justified' by epistemology which renders it different to ontology external to the discipline. Part of this process is the change from conceptualisation to contextualisation as, ideally, ontologies are justified, in the discipline, based upon the 'standards' [O'Brien, 2006, p108]

of the epistemology followed, e.g. whether it tends towards the objectivist or the subjectivist, if this is the particular epistemological dialectic used.

2.4.2.02 Bonjour's [1998] idea of epistemic justification has been outlined in section 2.1.1.08. How can this epistemic justification be shown in my model? In order to better depict the relationship between ontology and epistemology I have treated the discipline in Model A in Graphic 2a to be a sphere. Rotating this sphere 90 degrees on a vertical axis makes it possible to visualize the aspects of ontology (assuming the domains have been constructed), and epistemic justification.

2.4.2.03 In model H, shown in Graphic 2g, there are four examples of epistemic justifications; number '1' is an objective epistemic justification of an ontological domain, numbers '2' and '3' are respectively subjective and objective justifications of the same domain, while '4' is a less subjective justification bridging two ontological domains.

2.4.2.04 In Model H in Graphic 2g, the subjective / objective epistemological axis may be considered to be one of many possible axes. As per O'Brien [2006] here are numerous ways of looking at the 'hows' of epistemic justification: externalism-internalism, contextualisation, empirical-rational (*a priori-a posteori* distinctions), foundationalism, coherentism, scepticism, and so forth. Some of these are 'source' [O'Brien, 2006] based for example on *a priori - a posteori* distinctions, others are based upon relationships between ideas. It is feasible that the particular process of epistemic justification used may have a conjunct influence on the ontology. O'Brien's work shows the wide diversity of what are acceptable standards in the process of determining what is knowledge. Some standards are obviously dialectic, others are developed in dialectic opposition to an existing idea. Which dialectic is inserted as the axis is dependent upon the epistemology selected for the justification and this, feasibly, has an influence on the ontological construction.

Graphic 2g   *Model H - Depicting the relationship between ontologies, epistemologies and epistemic justification as it relates to the discipline*

1,2,3 & 4 as areas of epistemic justification

Ontological themes

Discipline

Objective

Subjective
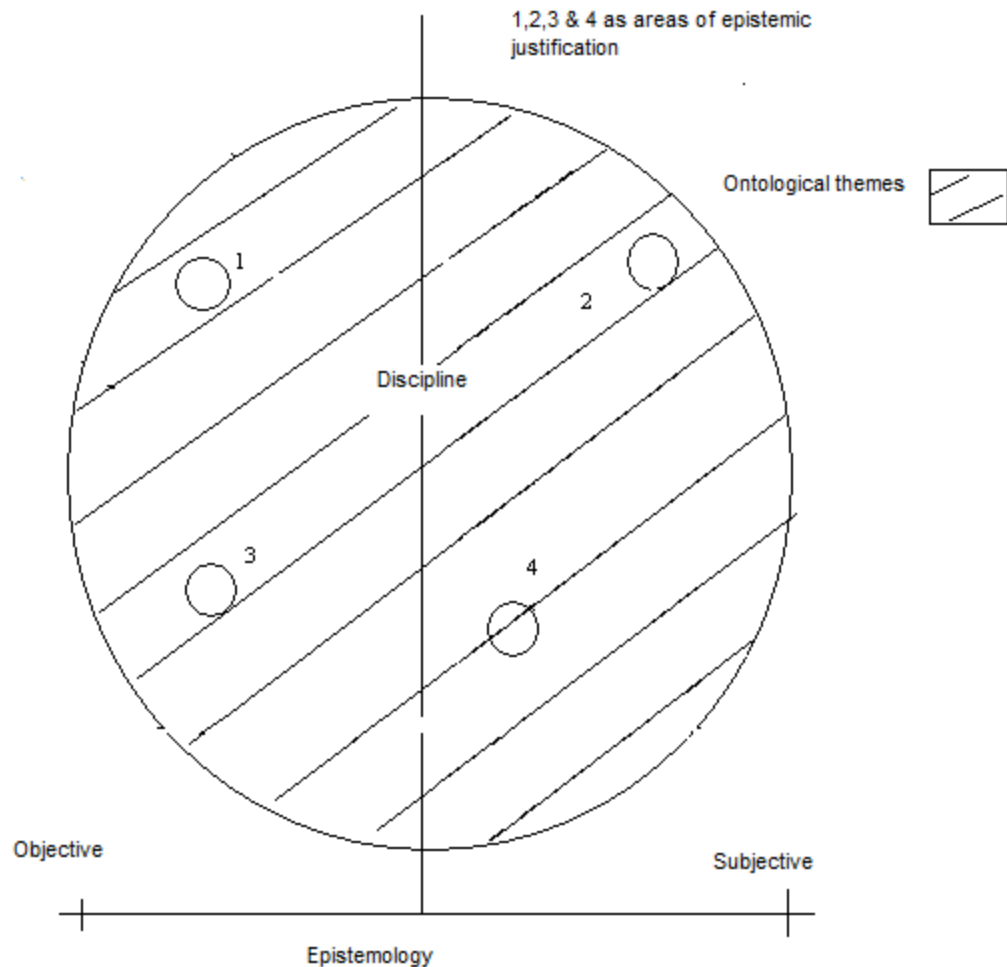
Epistemology

2.4.2.05 Accordingly, the ontological domains are depicted in Model H in Graphic 2g as diagonals. This is based on the assumption of some conjunct association between ontology and epistemology, in that certain ontologies may lend themselves to a certain epistemological justification. For example, the domains in the upper left quadrant of Model H in Graphic 2g may lend themselves to a more objective epistemology rather than a subjective one - vice versa for the themes in the bottom right quadrant. This may relate to a realist / relativist dialectic; however my assumption is that ontological domains are more of

thematic conceptualisation, or as per Heidegger a system of categories. It is possible, as per Rorty [1979] that the realist / relativist dialectic is more related to epistemic justification and may be another possible axis to this model.

2.4.2.06 In Model H2, shown in Graphic 2h, a second axis of 'realist-relativist' for epistemic justification has been included into the model. In this model the degree 'x' is inversely variable dependent upon the perception of the possibility (the belief) that a subjective-realist or a relativist-objectivist epistemological justification being feasible. (as would be indicated by x=90 degrees). It could be possible in the model to have all of the dialectic epistemological parameters, from the subjectivist-objectivist and relativist-realist dialectics already shown, to the source orientated rationalist-empiricist (*a priori- a posteori*) dialectic and whatever other analytical dialectic used in epistemology to be depicted, as axes, in a similar manner. Again the value of 'x' between each of the axes is inversely proportional to the probability of any conjunctive status between opposing ends of each compared axis.

2.4.2.07 The aspects of ontological construction as discussed in section 2.4.1.08 above can be graphically shown in Model H3, see Graphic 2i, in that on the objectivist side of the circle the lines demarcating the ontological domains are clear and defined through the mutual exclusivity of the domains. As the domains move towards the subjectivist it is possible that the lines separating the domains are less clear and, even, may not exist.

2.4.2.08 In order to relate this model to the Model A used in section 2, in Model H3 in Graphic 2i the rounded rectangle of the Practitioners A has been included, allowing for both subjective and objective epistemic justification, by the discipline theorising on the work of the practitioner, that is accepted (through the strategic apparatus of an *episteme*) into the discipline. The outer line of the discipline is the defining line of what is accepted into the discipline from the area of the practitioner. An example of *Episteme Two* is shown as an objective epistemic justification drawing on the 'Discipline of mathematics'.

**Graphic
2h**

*Model H2 – Showing the different epistemological axis
that could be used.*

1,2,3 & 4 as areas of epistemic
justification

Ontological themes

Discipline

1

2

3

4

Realist

Objective

Subjective

x

Epistemology

Relativist

As a bird's eye view

Subjective

Realist

X

Objective

Relativist
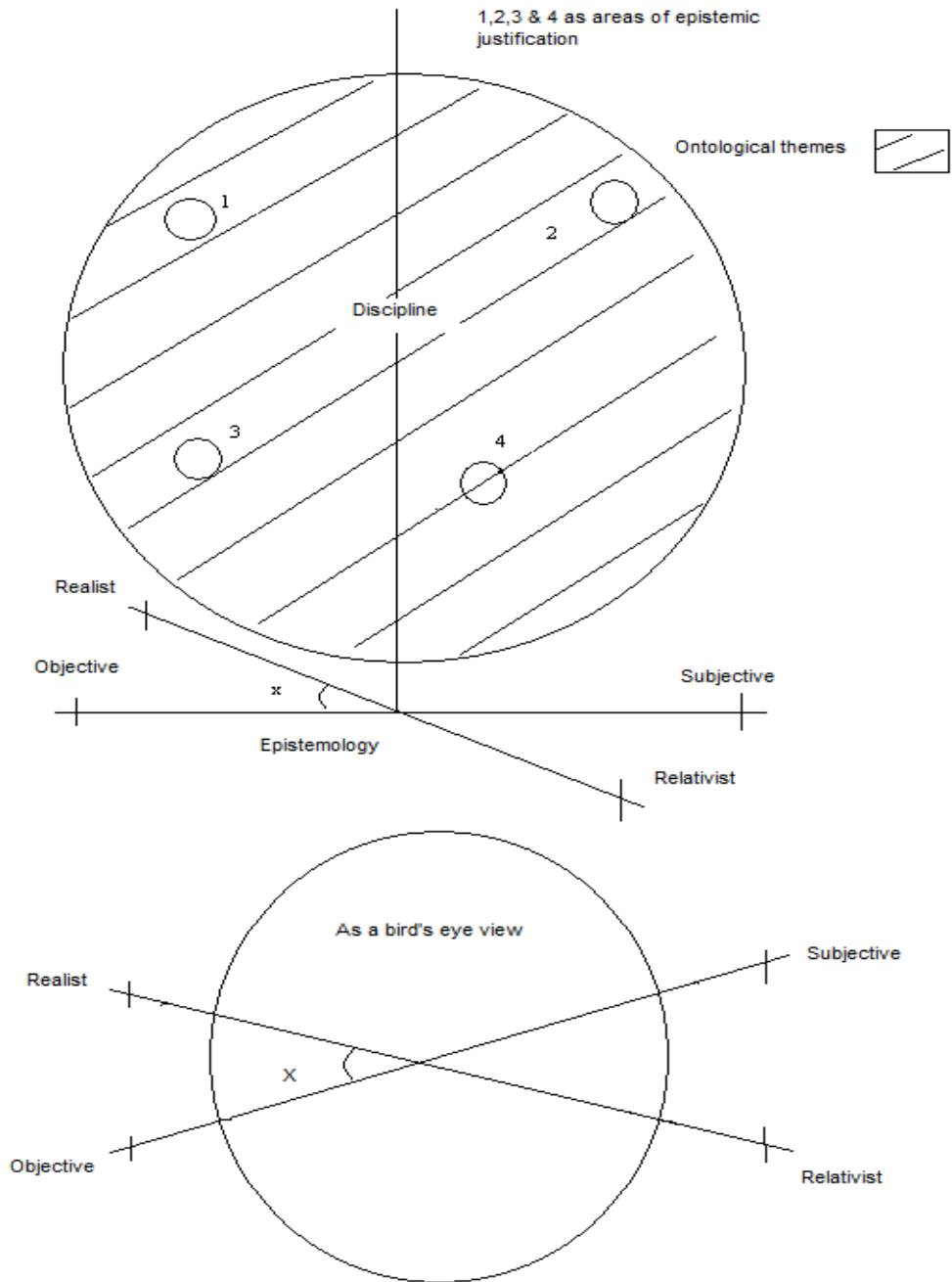
Graphic 2i   *Model H3 – Showing the less defined nature of the ontological themes as the epistemology becomes more subjective.*
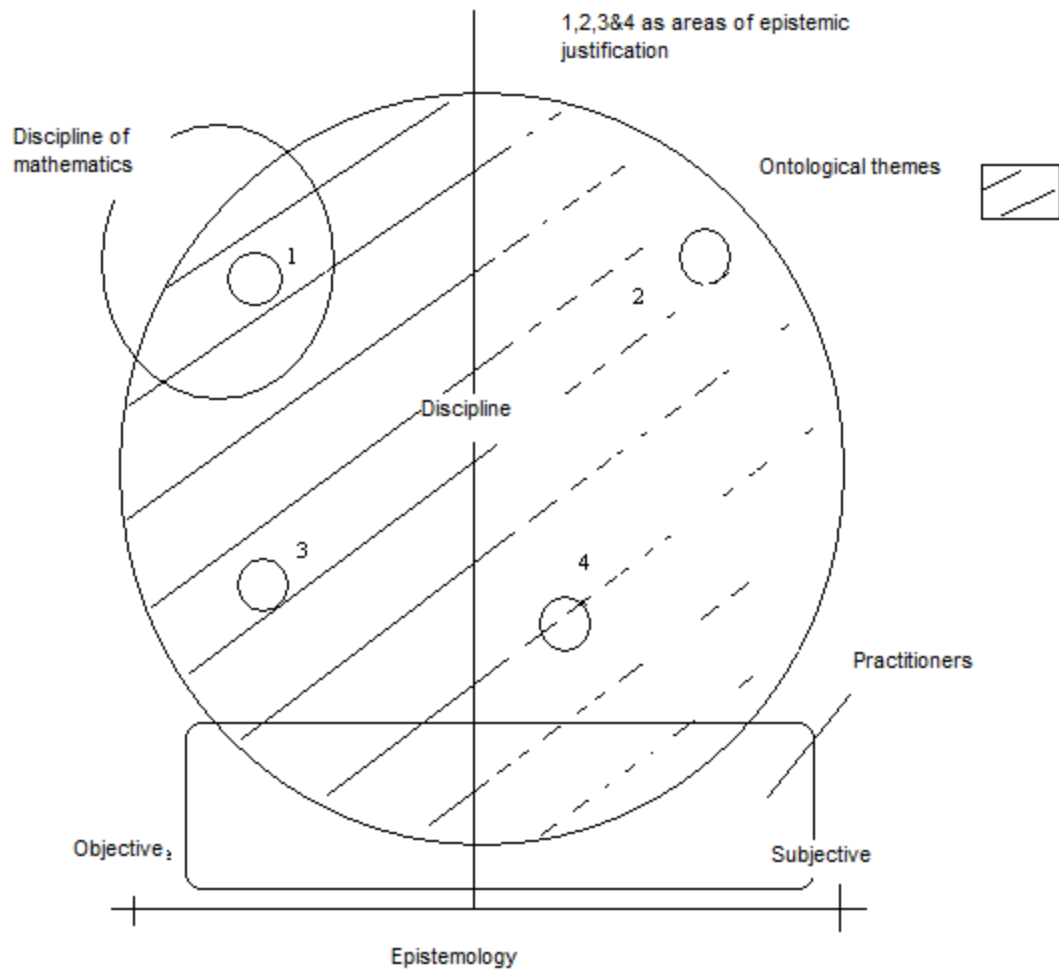
2.4.2.09   It can be seen from the various model presented in the graphics in Part Two to date that an *episteme* is the process of determining the acceptability of knowledge into the discipline, whereas epistemic justification is a generic term to describe the process of determining what qualifies as knowledge, dependent of which epistemology is selected, to

the knowledge that is deemed acceptable to the discipline (via the *episteme*). However, whether it is accepted into the discipline is probably only the first step in this process. The second part is how it is accepted into the discipline and into what ontological domain it is placed. As will be discussed in the next section on 'Heidegger's ontological test' the importance of ontological placement is significant in fully understanding the 'being' of entrepreneurship.

2.4.3. Heidegger's ontological test

2.4.3.00   The following sections address some of the issues and difficulties in determining whether, as per Heidegger, the ontological task of clarifying the meaning of 'being' has been accomplished.

2.4.3.01   In section 2.3.3.08 above I introduced Heidegger's [1993, p 53] ontological test as being a possible perspective on determining whether a discipline could be considered dubious. It is necessary to ask what is the 'being' of entrepreneurship? Has it been clarified properly within the discipline? If it is not clearly defined then all ontologies, as per Heidegger, remain 'blind and perverted'. Can this ontological test be used as a measure of whether a discipline, like that of entrepreneurship, can be considered to be dubious?

2.4.3.02   How to clarify 'being', I assume as from Heidegger and from Watson's reference to the basic Cartesian ontological separation of mind and matter in that 'their essences are their being', that 'being' is associated with ontology.

> Mind is unextended active thinking. Matter is unthinking passive extension. The two created substances (finite mind and finite matter) differ in essence, and because their essences are their being as existents, they differ ontologically. There is no real difference between a substance and its essence." [Watson, 1998, p48].

2.4.3.03   If the meaning of being is the essence of the substance then under Cartesian ontology it could be assumed that the meaning of the 'being as in essence' is clearly defined. The Cartesian dualism and the mutual exclusivity that exists between the two basic ontological categories makes the 'being' clear and relatively easy. Watson [1998]

does discuss the various failings of the Cartesian ontologies from Foucher and so forth; however it could be assumed that a number of these failings relate to the first ontological category of the existence of God and the subsequent issues of trans-substantiation and so forth. This could be considered a failing contemporaneous to that period of time when a renunciation of God would have had some rather severe penalties.

2.4.3.04 Coming back to Heidegger's ontological test with reference to the discipline of entrepreneurship. Has the meaning of the being of entrepreneurship been sufficiently clarified and has the discipline grasped this clarification as its fundamental task? The basic problem that arises here is that, unlike the dualism of Cartesian ontology the ontology of entrepreneurship, simply by being a human science, with a tendency towards the subjective side of the epistemological dialectic used in Models H and H3, shown respectively in Graphics 2g and 2i, firstly does not have the simple ontological dualism of Descartes and secondly may not have the mutual exclusivity between its ontological domains.

2.4.3.05 It could be said that the ontology of the discipline of entrepreneurship does have a wide range of ontological domains. Whether these are 'rich and tightly knit' [Heidegger, 1993, p 53] is a moot point. Heffalumps [Kilby, 1971], elephants [Gartner, 2001] etc., have all being used to describe the discipline and there are frequent comments [Carton, Hofer and Meeks, 1998; Gartner, 1988; Montayne, 2006; Murphy, Liao and Welsch, 2005; Thornton, 1999; Virtanen, 1996] on its diverse range of definitions.

2.4.3.06 However does this diversity of definitions mean that the 'being' of entrepreneurship has not been clarified? An elephant is still, generally speaking, an elephant despite its wide range of ontological thematic conceptualisations. Some of these conceptualisations e.g. 'tusks' and 'trunk' are more significant than are other conceptualisations such as 'round feet' and a 'quirty tail', which incidentally also describes hippopotami. So having a wide range of thematic conceptualisations as ontologies is not necessarily a measure of Heidegger's ontological test. Some conceptualisations, e.g. tusks and trunk, may be more exclusive to the 'being' however those that lack such exclusivity

should not imply any lesser status in contributing to the 'being.' They still contribute to the 'richness' of the ontology.

2.4.3.07   The 'tight knitted-ness' of the ontology, mentioned by Heidegger [1993], should also not necessarily contribute to a lack of clarification of 'being'. Mutual exclusivity between ontological domains while, as per Model H3 in Graphic 2i, maybe easier to implement under a more objectivist epistemology, should not necessarily imply a lack of clarification of being in the more subjective epistemologies. Descartes has mutual exclusivity between his two created substances: mind and matter – a simple 'either or' categorisation. Such simplicity may not be so easy to implement under the 'labyrinth' of subjective epistemologies; however again this should not preclude such epistemologies from being able to clarify 'being'.

2.4.3.08   Within a discourse, the distinction is probably not significant; however it becomes significant within a discipline as an epistemological issue on what constitutes knowledge. With regards to the justification of such pachydermic ontology an empiricist would probably need to see or touch the trunk as part of the contextual process of their epistemic justification, whereas a rationalist would probably need to be assured of the *a priori* possibility of what is 'round' and what is a 'foot' as part of their own process of epistemic justification. Acceptance of the conceptualisations is dependent on the context of what is considered knowledge.

2.4.3.09   It is within the mechanics of the discipline and the interplay between *episteme* and epistemic justification and the concept of *gravitas*, that I believe that Heidegger's ontological test can be applied. In 2.4.3.02 above the ontological essences of being, as cited by Watson, were used as a benchmark for 'being'. However as described in the previous paragraphs the richness of ontologies and the mutual exclusivity of the ontological domains do not seem able to be used, across a range of epistemological axes, as a benchmark for clarification of being. Watson [1998] introduces the notion of force, firstly from Leibniz "Leibniz's notion that force is the essence of substance" [Watson, 1998, p118] and from Locke "So Locke introduces a third power that combinations of

primary power have, a tertiary power to rearrange the primary qualities of other bodies"
[Watson, 1998, p120]. I interpret this force as being *gravitas*.

2.4.3.10 Leibniz's notion is that the natural laws of motion, force and quantity also apply to the realm of ideas and metaphysics. This expands from the Cartesian notion that the essence of the substance is its being, to a notion that the concept of being is associated with force. Epistemologically, for this dissertation, this concept provides compatibility with Foucauldian concepts of power. In section 2.1.4.04 I introduced the concept of *gravitas* in disciplines as an influence on acceptability of knowledge, as in *episteme*, into the discipline. In section 2.4.1.09 I raised the question of whether such *gravitas* becomes, by default, a means to continue the tacit ontological conceptualisation as discussed by Smith [2003] of a discipline that has yet to pass Foucault's [Dreyfus and Rabbinow, 1983] point of epistemologization. It becomes feasible that *gravitas*, and the way this is approached by the discipline, in constructing its ontological domains, could provide a measure of Heidegger's ontological test.

2.4.3.11 I believe that firstly the issue of 'ontological commitment' [Gruber, 1995] and the separation of epistemic elements from ontological elements within the articles that have the most *gravitas* will help illustrate whether the discipline of entrepreneurship passes Heidegger's ontological test. Atmanspacher and Primas [2003] offer a measure

> A crucial issue of any interpretational approach with respect to a scientific theory is the relation between elements of the theory on the one hand and elements of the domain of reality, for which the theory is designed on the other [p4].

2.4.3.12 However, when compared to the Cartesian ontological principles outlined by Watson [1998] (see section 2.4.1.01), the possibility of outlining the ontological principles of entrepreneurship is a much more difficult task. The Cartesians had it easy in that their fundamental ontological rift is a dualism of mind and matter. It could be said that there is no such simplistic dualism within entrepreneurship, which may present a much more complex ontology than that of the Cartesians.

2.4.3.13   The elements of the theory [Atmanspacher and Primas, 2003, p4] of entrepreneurship alone are daunting as Montayne [2006] points out:

> An overarching economic theory of entrepreneurship clearly must do more than describe the behavior of economic actors within the business enterprise. It must encompass innovative behavior in all its significant forms, from technology development and public administration to clever lawyering and lobbying, begging, and grifting. It must encompass individual behavior across the full range of private-sector and public-sector institutions, and it must explain the movement of entrepreneurs between these venues. It must account for institutional change and economic evolution, as well as economic growth and development. And it must explain entrepreneurial reward in all of its many forms: pecuniary and nonpecuniary, tangible and intangible. Economic theory has resolved many of these separate issues, as the preceding summary illustrates. However, it has not yet joined the disparate segments into a single, comprehensive theory of entrepreneurship [p560].

2.4.3.14   To compare these disparate elements of the theory on one hand with, what could well be, a complex ontology depicting the domains of reality of entrepreneurship may not be so easy. However in taking a subjective – relativist epistemological approach, which may blur the lines of absolute knowing and the margins of mutual exclusivity, may be a solution. It will be applied in the next section where the theoretical discussions to date are applied to the discipline of entrepreneurship.

2.5. Analysing the Discipline of Entrepreneurship

2.5.0   The following sections look at Foucault's three broad 'rules of formation' and applies these to the discipline of entrepreneurship. Section 2.5.1 looks at these rules in the context of avoiding a structuralist approach. I also outline my rationale for not offering a definition of entrepreneurship. Sections 2.5.2, 2.5.3 and 2.5.4 respectively address the three broad rules of formation offered by Foucault. An additional section 2.5.5 looks at refining the issues under discussion before introducing the methodology in the following Part Three.

2.5.1 Applying Foucault

2.5.1.01   In 'The archaeology of knowledge' Foucault [2004] outlines three broad 'rules of formation' for analysing objects of discourse:

a) mapping the first surface of their emergence;

b) describing the authorities of delimitation; and

c) analysing the grids of specification.

2.5.1.02   Foucault [2004] admits that this outline was limited for two reasons. The first reflects his post structuralist leanings in that "it would be quite wrong to see discourse as a place where previously established objects are laid one after the other like words on a page" [p47]. Foucault was attempting to separate the process of defining the structure of an object as being distinct from structural analysis, something he refers to as planes of differentiation.

> My aim is to uncover the principles and consequences of a autochthonous transformation that is taking place in the field of historical knowledge. It may well be that this transformation, the problems that it raises, the tools that it uses, the concepts that emerge from it, and the results that it obtains are not entirely foreign to what is called structural analysis. But this kind of analysis is not specifically used [Foucault, 2004, p17].

While in this dissertation, I am creating an archaeological *aliran* based upon an *episteme* on entrepreneurship, it should be kept in mind that this is a process of defining the structure of an object. It should not be taken as being a form of structuralist analysis that can necessarily be applied external to the *episteme*.

2.5.1.03   Foucault's second reason was that by describing the above mentioned 'planes of differentiation' did not necessarily display an awareness of the relationship between them. As with the conjunct relationship between ontology and epistemology discussed above it can also be expected that similar conjunct relationships exist between the 'planes of differentiation'.

2.5.1.04   I have, in section 2.1.3.07, discussed the chronological changes in Foucault's thinking to 1976 where disciplines began taking a greater identity in the regulation of knowledge. As outlined in the models developed thus in Part Two, the discipline of entrepreneurship is a subset of the discourses around entrepreneurship, and has emerged from it as well as, in part, constituting it.

2.5.1.05   In a move probably less than usual in a piece of research about entrepreneurship I will not be offering any definition of entrepreneurship. To do so would possibly add to an already overcrowded field, and to the existing "contentious definitional debate in entrepreneurship (Gartner 2001; Hansemark 1998; Lindsay & Hindle 2002; Low & MacMillan 1988; Hill & McGowan 1999)" [cited in O'Connor, Cherry and Buckley, 2006, p1]. I maintain that such definition(s), assuming the discipline is truly representational of the subject matter, should derive from:

- the discipline itself:

- being apparent in the perceived structure of the discipline;

- the standards by which the *episteme* determine which knowledge is accepted into the discipline;

- the ontologies and grids of specification that develop in the evolution of the discipline or are imposed upon the discipline through the authorities of delimitation; and

- the conjunct epistemologies that have evolved specific to the discipline.

2.5.2. The Emergence

2.5.2.1 Mapping the first emergence
2.5.2.1 Adolescent *angst* and acne
2.5.2.3 Epistemologies - what Foucault missed

2.5.2.00   This section is in three parts and looks at the first of Foucault's rules of formation being 'mapping the first surface of their emergence.' This first part attempts to pinpoint the emergence of the discipline as a singular entity as opposed to being part of other disciplines or parts of the discourse on entrepreneurship. The second part looks at the adolescent angst the discipline seems to find itself mired in, while the third part looks at the developing epistemology – which seems to be something that Foucault missed.

2.5.2.1 Mapping the first emergence

2.5.2.1.00   This section looks at the first appearances of entrepreneurship as a discourse and the early years of its emergence as a discipline.

2.5.2.1.01   Discursively the conceptualisation of entrepreneurship emerged in the mid 18th century with Cantillon, through his article 'Essai sur la nature du commerce en général', being credited by Schumpeter as "being the first to offer a clear concept of the entrepreneurial function as a whole" [Filion, 1997].

2.5.2.1.02 This discursive conceptualisation continued for nearly two hundred years with high *gravitas* (based on significance in the discourse) figures such as Smith, Say, Marshall, Weber, Schumpeter and Knight contributing to, and becoming, an integral part of the discourse. However the discipline of entrepreneurship had not begun to emerge and the discourses were more closely associated with the emergent disciplines of political economy and, with Weber, sociology.

2.5.2.1.03 As political economy morphed into the discipline of economics the discourse on entrepreneurship was largely excluded. The assumptions of perfect knowledge required by the models of rational economics had no place for the entrepreneurial function, which was premised on disruption. However a fringe subjective element within the discipline, including Knight, of the early Chicago school, and what became known as the Austrian school, including Schumpeter, Hayek and Von Mises sustained the discourse on entrepreneurship.

2.5.2.1.04 Coase's 1937 article 'The nature of the firm' along with Simon, March, Hirschman and Drucker in the 1940s and 1950s channeled some of the discourse towards the emergent discipline of management. Later, in the 1960s, it was McClelland who linked part of the discourse of entrepreneurship with the discipline of psychology. "After McClelland, the behaviorists dominated the field of entrepreneurship for 20 years, until the early 1980s" [Filion, 1997].

2.5.2.1.05 As discussed in section 2.1.3.10, Foucault [2003b] links the emergence of disciplines with the emergence of the university and the subsequent 'organization of knowledges into disciplines'. O'Connor, Cherry and Buckley [2006, p1] also comments that "When Universities become a major contributor to the study of an area of activity, it is common that over time the area of study becomes considered a discipline". When the first course in entrepreneurship was offered at the Harvard Business School in 1947 [Redford and Trigo, 2007, p1], it was probably a marker of the possibility of an emergent discipline of entrepreneurship. However it can be expected that a discipline needs a certain critical

mass and it would appear that it was not until the 1970s and 1980s that something approaching this critical mass was achieved.

2.5.2.1.06   Steps taken to morph from various discourses on entrepreneurship to an emergent discipline were initiated in the early 1970s when "Vesper organized a special entrepreneurship interest group of the Academy of Management's Business Policy Division in 1974. Entrepreneurship research progressively moved from the study of the individual traits to the features of the entrepreneurial organization, conceiving entrepreneurship as a managerial style" [Morris and Kuratko, 2002, cited in Sciascia and De Vita, 2004, p14].

2.5.2.1.07   In the next decade, the growth and formalisation of the emergent discipline of entrepreneurship, within the discourses on entrepreneurship, continued.

> In the 1980s, the field of entrepreneurship exploded and spilled over into almost all the soft sciences and management sciences. The transition was marked by two events: the publication of the first-ever encyclopedia containing the state of the art in the field (Kent, Sexton et al, 1982), and the first major annual conference (the Babson conference) dedicated to research in the new field [Filion, 1997].

2.5.2.1.08   In 1987, the emergent discipline achieved another significant milestone when the Academy of Management accorded division status to entrepreneurship [Shane, 1997], with the following charter:

> The Entrepreneurship Division's domain is the creation and management of new businesses, small businesses and family firms, as well as the characteristics and special problems of entrepreneurs. The Division's major topic areas include:
>
> - New venture ideas and strategies,
> - Ecological influences on venture creation and demise,
> - The acquisition and management of venture capital and venture teams,
> - Self-employment,
> - The owner-manager,
> - Management succession,
> - Corporate venturing, and the
> - Relationship between entrepreneurship and economic development [taken from the Academy of Management website].

However the emergence of a discipline cannot be expected to be smooth and in the next section I detail some of the problems being faced by the emergent discipline.

2.5.2.2 Adolescent *angst* and acne

2.5.2.2.00   This section continues the process of 'mapping the first surface of their emergence' and describes some of the problems being faced by the discipline of entrepreneurship and also outlines efforts by some to bypass the epistemic justification that I have used, to partly define the knowledge accepted into the discipline, by post-disciplinic assumptions.

2.5.2.2.01   The focus of the emergent discipline has come under criticism for many reasons. In 1988, one year after the establishment of the division status by the AMA, Gartner [1988] lists 32 different definitions of what is an entrepreneur. As commented by Carton, Hofer and Meeks [2004], the list of criticisms is 'daunting':

(1) that many (and often vague) definitions of the entrepreneur have been used (in many studies the entrepreneur is never defined);
(2) that there are few studies that employ the same definition;
(3) that lack of basic agreement as to "who an entrepreneur is" has led to the selection of samples of "entrepreneurs" that are hardly homogeneous …… ; and
(4) that a startling number of traits and characteristics have been attributed to the entrepreneur, and a "psychological profile" of the entrepreneur assembled from these studies would portray someone larger than life, full of contradictions, and, conversely, someone so full of traits that (s)he would have to be a sort of generic `Everyman' [Gartner, 1988, p48, p57].

2.5.2.2.02   Also in 1988, Low and MacMillan published a review of developments in entrepreneurship that included the following critiques:

- Specification of purpose – little clarity, descriptive, lack of unity;
- Specification of theoretical perspective – weak theory development, implicitly assuming strategic choice;
- Specification of focus – focus on personality or cultural determinants;
- Specification of level of analysis – primarily single level of analysis;
- Specification of time frame – narrow time frame; and
- Specification of methodology – case studies, cross sectional surveys, single method, descriptive [Low and MacMillan, 1988].

Later in 2001, Low suggested the emergent discipline was in its adolescence.

2.5.2.2.03   Since 1988, the growth in the discipline of entrepreneurship has been phenomenal. Murphy, Liao and Welsch [2006] describes the growth since the beginning of this century:

> Over the last five years the Academy of Management's Entrepreneurship Division has "dramatically outpaced the growth of every other division" by 77 percent (Shaver, 2004). No less than 1,600 universities offer 2,200 entrepreneurship courses. There are at least 277 endowed faculty positions and 44 refereed entrepreneurship journals (Katz, 2003). There are over 100 established and funded entrepreneurship centers offering resources, consulting, and guidance to entrepreneurs, with pedagogical opportunities for students [pp1-2].

While the growth of the discipline has been dramatic, it could be cynically suggested that the emergent discipline has offered a new avenue of career choice to academics who, finding the traditional disciplines limited as far as advancement and limited availability of tenured positions, have found such advancement in the emergent discipline. Whereas traditional disciplines had, over time, supposedly developed standards, these may have not evolved, to date, in the emergent discipline. The development of the structure of the emergent discipline may have, due to the lack of constraints of standards, been prone to rapid growth without the benefit of a strong theoretical, and paradigmatic, base.

2.5.2.2.04   Despite this growth, the criticism of the emergent discipline remains. Echoing Gartner's [1988], and Low and McMillan's [1988] comments, Murphy, Liao and Welsch [2006] write:

> The field of entrepreneurship generates many theories and frameworks. However, the developing field has been duly criticized for having an ill-defined paradigm (Shane and Venkataraman, 2000), too many stakeholders with conflicting agendas and interests (Curran and Blackburn, 2001), and a scarceness of stable researchers (Landstrom et al., 2001). A balance has not been struck between theory emergence and a paradigmatic foundation (Bygrave and Hofer, 1991; Gartner, 2001; Low and MacMillan, 1988); the miscellany of entrepreneurship theories does not rest on a distinctive and defensible theory base (Bull and Willard, 1993). Further, there has been little interpretive and explanatory work on this issue (Hebert and Link, 1988); most historical analyses focus on entrepreneurship education, the empires of

successful entrepreneurs, or the changing nature of economics frameworks or capitalism (Formaini, 2006) [p13].

Thornton [1999] offers similar criticism:

> Along with the increase in entrepreneurship has come growth in the number of endowed chairs in business schools; positions in research institutions, foundations, professional organizations; and journals in the field of entrepreneurship (Katz 1991, Robinson & Hayes 1991, Sandberg & Gatewood 1991). Yet in spite of these developments, entrepreneurship researchers complain that the field lacks a distinct professional identity, one defined by a unified body of knowledge based on generally accepted social science theories (Bull & Willard 1993). Surveys describe the field as organised by camps, where the lack of cross-level and cross-disciplinary interaction tends to obscure the overall picture of what gives rise to entrepreneurship (Wortman 1987, Herron et al 1992, Gartner & Shane 1995). Many commentaries on the field have called for an increase in the quality, interdisciplinary nature and development of unifying schemes to integrate diverse pieces of research on entrepreneurship (Bygrave & Hofer 1991) [p19].

As noted earlier Montayne [2006] simply sums up such criticism as "The theory of entrepreneurship is one of the weakest links in modern economics" [Montayne, 2006, p549].

2.5.2.2.05 However, in the face of such criticism, there are some bullish voices.

> Entrepreneurship's broad base of disciplines attracts researchers who have a passion for the subject matter itself, rather than for a static paradigm. The interaction with other academics from such diverse fields as psychology and finance keeps research fresh, relevant, and stimulating [Low, 2001, p4].

O'Connor, Cherry and Buckley [2006] suggest that entrepreneurship is a 'complex domain of human practice' for which there maybe 'few enduring rules or solutions' and that such 'complexity defies simple or reductionist framing.' The issue of complexity is taken further by Sciascia and De Vita [2004] who suggests "the variety of definitions is due on one hand to the complex nature of the phenomenon, and on the other hand to the fact that they have been provided by researchers operating in heterogeneous fields (economics, sociology, finance, history, psychology, anthropology) with divergent terms of reference and purposes" [p23].

2.5.2.2.06 O'Connor, Cherry and Buckley [2006] go on to suggest, citing Oliver, that the framework of disciplines is insufficient and that "some complex areas of activity however, such as biotechnology, are better considered in a postmodern social construction whereby the area of practice is not framed as cross-disciplinary or even multi-disciplinary but rather post-disciplinary (Oliver, 2000)" [p1]. Whether entrepreneurship, as a discipline, is complex enough to be considered post-disciplinary is doubtful. Based on the criticisms outlined above, the discipline is more akin to a wilful teenager, rather than having attained the level of sophistication to be considered post disciplinary. In the model I have developed it is epistemology that differentiates the discipline from the discourse. Being post-disciplinary therefore suggests going beyond the need for epistemology, whereas, as suggested by Dery and Toulouse [1996] (discussed further in 2.5.3.10), the discipline has not even arrived at the stage where its epistemology is fully thought through. Offering the alternative of post disciplinary status to a discipline that has epistemological issues could be asking it to run before it can walk.

2.5.2.2.07 Cooke's [2004] analysis of developments in the biotechnology industry indicates that "Changes in epistemology in biosciences are generating important spatial effects" [p1], suggesting that epistemology is still part of the 'complex' discipline of biotechnology, but is approached differently. This difference in approach may be a viable alternative, to the post disciplinary or post epistemic status, as suggested by Oliver. The range of paradigms used by the discipline – as in "differences of ontology and epistemology" [O'Connor, Cherry and Buckley, 2006, p1] - may not be fully, or appropriately, developed in the emergent discipline of entrepreneurship and this is a limiting factor on the theories developed within those paradigms.

> Fabian (2000) alerts us to the controversy embodied in this sort of debate through her examination of the field of management. Different ways of viewing a field – whether by design or not – tend to impose different structures to deal with such a state of affairs. Fabian suggests that the way the representatives of the management discipline have responded has been to urge one of three options: a unified paradigm (solidarity); a selected few paradigms (integration); or avoidance of dominant paradigms (segregation). Fabian points out that there are many who see the debate as either calling in to question the whole idea of discipline or rejecting it as

unhelpful to practice. Much of this debate is not unlike that which is occurring in the entrepreneurship field as is epitomised by Low (2001) in his claim of entrepreneurship as an adolescent field [O'Connor, Cherry and Buckley, 2006, p1].

Low's [2001] claim is supported by Sadler [2001] who refers to the "taxonomical research by Wortman and Birkenholz (1991) and Hebert and Link (1989) which revealed that the discipline remains preparadigmatic" [Sadler, 2001, p3]. This preparadigmatic status suggests that the ontology and epistemology of entrepreneurship are still in the process of development. This possibility seems more feasible than the option of entrepreneurship, with its roots in modernism and capitalism, having already attained the post modern status of being post disciplinary, and beyond the need for epistemology. However this is not to say that post modern ontological and epistemological developments should not be considered in the evolution of the discipline, if not to find a unified paradigm, at least to get a better integration or differentiation of some of the common ontologies, and use of more appropriate epistemologies.

2.5.2.3 Epistemologies - what Foucault missed

2.5.2.3.00   This section places epistemologies into the context of Foucault's rules of formation, something that Foucault seemed to miss.

2.5.2.3.01   As ontology relates to the third of Foucault's rules of formation of `grids of specification', it will be discussed in 2.5.4. *Episteme*, the strategic apparatuses, discussed in 2.2.3.01. as the process used by the 'authorities of delimitation' will be discussed in 2.5.3. Foucault's outline does not really reserve a place for a discussion on epistemology. The conjunct status with ontology could suggest that it be included in 2.5.4. However in order to keep them distinct, and according to Dery and Toulouse [1996], an epistemology develops with the emergence of the discipline, it is considered appropriate to include this discussion on epistemology in the emerging discipline in this section.

2.5.2.3.02   In a study of 237 articles published in the Journal of Business Venturing between 1986 and 1993, Dery and Toulouse [1996, p286] found that "the emerging epistemology of entrepreneurship research displays several distinctive features when

compared with overall trends structuring contemporary epistemological reflection. (Piaget, 1967; Whitley, 1984c)". Similar views by Dery and Toulouse [1996] are previously cited in section 1.1.1.08. While Dery and Toulouse [1996] acknowledge the wide variety of disciplines involved with entrepreneurship, they suggest that there is a process of disciplinary introversion. Entrepreneurship is introvertedly nested within the discipline of business studies, which in turn is nested within the social sciences, which in turn is nested within natural sciences. This nesting, rather than enlargening the scope of access to other disciplines, has the opposite effect. Instead of being broadened the paradigmatic variety of knowledge is limited by this introversion and the 'social relationships' [Dery and Toulouse, 1996] and 'camps' [Thornton, 1999] that have evolved within the emergent discipline. Dery and Toulouse [1996] see the unity of a common paradigm as the 'epistemological ideal'. However, they comment on the tensions between the various individuals, groups, and institutions involved in entrepreneurial research and their 'race to gain control' over the very 'definition of validity' of entrepreneurship. This struggle for control of entrepreneurship research will be discussed further in section 2.5.3.

2.5.2.3.03   McKelvey [2004] also criticizes current epistemology in entrepreneurship, promoting instead agent based models utilising complexity science concepts of order creation. McKelvey [2004] argues;

> that the study of entrepreneurial start-ups is off the track without an epistemology that incorporates all four Aristotelian causes and heterogeneous, agent-based modeling. Here is another syllogism:
> - Entrepreneurial research requires theories drawing on all four Aristotelian causes: (material, formal, final, and efficient).
> - Traditional model-centered science draws only on efficient cause.
> - Math models and modern empirical methods focus mainly, if not only, on efficient cause.
> - Therefore, current epistemology is ill suited to the study of entrepreneurship. [p316]

McKelvey [2004], and Dery and Toulouse [1996] seem to indicate that common and current epistemological practices in the emergent discipline may be an inhibiting factor in the evolution of the discipline. While, Low and McMillan [1988] described the emergent

discipline as adolescent in 1988, there is little to persuade me that it has emerged from that status, despite the intervening 20 years.

2.5.2.3.04 This prolonged period of adolescence may be questioned when "figures of expansion in education and research are brought as an all-too convincing-to-be-contested evidence" [Steyaert, 2005, p1]. However, as commented earlier, even back in 1988 Sexton raised the question of whether the emergent discipline was 'growing or simply getting bigger?' [cited in Steyaert, 2005, p2]. If the emergent discipline is simply increasing in size, without evolving ontologically and epistemologically, then the effects may be significant, with regards to funding and representationality as discussed next.

2.5.2.3.05 One of the functions of the discipline could well be to provide policy makers with information for planning purposes.

> Good science has to begin with good definitions (Bygrave & Hofer, 1991). How can policymakers be expected to provide programs to encourage and support entrepreneurship if they do not know what an entrepreneur is or what types of firms are entrepreneurial? [Carton, Hofer and Meeks, 2004, p2].

As pointed out by Kearins, Luke and Comer [2004], even the measure of what is considered to be entrepreneurial success is poorly defined. If the discipline continues to provide a plethora of definitions, with internecine battles over the 'definition of validity' of entrepreneurship, and even fail to objectively define 'success' then the function of providing information for planning is not achieved. Policy makers also decide on funding and if the discipline fails to meet their requirements, due to a lack of general cohesion, then the possibility of funding being curtailed is ever present. The relevancy and representationality of the discipline becomes an issue.

2.5.2.3.06 In Part Two, I discussed the function of representationality of the discipline for its practitioners. O'Connor, Cherry and Buckley [2006] presents a similar scenario.

> Traditionally it would appear that the 'discipline' status has served as bridge between the two parallel dynamic worlds of the scholar and practitioner each dependent on the other in the exchange of ideas and knowledge. The resource base

for each has also been dependent upon the existence of a structured discipline each serving the other whereby the discipline status attracts teaching revenue and research funds [p9].

While O'Connor, Cherry and Buckley [2006] go on to propose a postmodern frame of reference with a 'domain of engagement' between practitioner and academic, the co-dependent relationship between practitioner and academic remains, either in traditional sense of discipline / practitioner or some less structured postmodern framework. What researchers, such as O'Connor, Cherry and Buckley [2006], fail to ask is whether disciplines and post modernity are necessarily exclusive. There seems to be nothing apparent that assumes that postmodern paradigms of ontology and epistemology, along with associated methodologies, are incompatible with the concept of a discipline. This compatibility is a function of the *episteme* allowing relevant research into the discipline.

2.5.2.3.07   Is the emergent discipline of entrepreneurship showing signs that it is fulfilling this function of representationality? As Swedberg [2000] notes, "The various attempts that have been made to theoretically integrate entrepreneurship into mainstream economic theory are of little practical interest to the entrepreneur-to-be" [cited in Bennett, 2008, p8]. "Pfeffer and Fong (2002) find that executives pay little attention to research by academics, preferring instead to listen to consultants" [cited in McKelvey, 2004, p1].

2.5.2.3.08   As discussed in the sections on positionality, one of the most significant lacks in the research is the approach to problem solving. Entrepreneurs face problems just like every business or management person; however given the nature of entrepreneurship that makes it distinctly separate to the non-entrepreneurial and/or management function, it could well be expected that not only the problems faced by entrepreneurs, but also the approaches taken by entrepreneurs to solving these problems, have a degree of uniqueness.

2.5.2.3.09   From a 'supply side' [Thornton, 1999] approach it could be said that successful entrepreneurs have a better set of traits to solving problems, both normal management problems and those unique to their specific entrepreneurial environment, than do the less successful entrepreneurs.   From a 'demand side' [Thornton, 1999] perspective

the processes developed by the individual, or the firm, and which becomes part of their entrepreneurial resources, enables them not only to solve the problems, both usual and unique, that arise, but also, to a degree, foresee such problems and have contingencies in place for such eventualities. It is these traits and processes that I find lacking in the entrepreneurship literature, however this may not solely a issue specific to entrepreneurship. I suspect that most management academic literature faces a similar dearth.

2.5.2.3.10 This criticism is more of an ontological issue than epistemological; however it is an interesting perspective on the various epistemic practices that delimit the accepted knowledge, and accepted processes of what is to be accepted within the discipline that this ontological specification has not been included as part of the discipline.

2.5.3 The authorities of delimitations – epistemic practices

2.5.3.00 This section looks at the some of the issues regarding the role of the gate keepers and *episteme* in acceptability of knowledge into the discipline of entrepreneurship.

2.5.3.01 While the emergent discipline of entrepreneurship has, in the past, been fostered by the disciplines of sociology, psychology, management, and (non-rational) economics, it is only in the last 30 plus years that it has increasingly attempted to forge its own identity. The previously cited references to the rapid expansion of the discipline in terms of university courses, refereed journals, seminars, and conferences, present 'all-too convincing-to-be-contested evidence' [Steyaert, 2005] of significant quantitative growth.

2.5.3.02 However, in light of the criticisms of the discipline, as outlined in the previous section, it could be argued that the discipline is facing growing pains. Of Fabian's three paradigmic options of: a unified paradigm (solidarity), a selected few paradigms (integration), or avoidance of dominant paradigms (segregation), it would seem that the discipline has not achieved solidarity, its continual search for new definitions precludes any sense of integration. Yet it could also be questioned whether it has achieved any form

of clear segregation or differentiation that could indicate there is an awareness of the ontological issues as per Heidegger and his ontological test.

2.5.3.03   It could be assumed, based on my model, that qualitative growth within a discipline comes as appropriate epistemologies are contextually applied to the discursive ontologies to achieve a better degree of either solidarity, integration or segregation.

2.5.3.04   The discursive concepts of entrepreneurship usually do not need an accurate definition. "Sandberg (1992) in a play on the famous quote from Justice Stewart wrote 'I don't know what entrepreneurship is, but I will recognize it when I see it'." [cited in Carton, Hofer and Meeks, 2004, p1]. This line could well frame the conceptualisation of entrepreneurship. Like the conceptualisation of an elephant [Gartner, 1988] a limited definition or limited list of commonly-held, or known, specifications suffices. Even a child could recognise the subject matter after hearing a few of the common specifications of: trunk, large size, tusks, big floppy ears, round feet, quirty tail, etc. While it may be beyond a child, a partial list of specifications of entrepreneurship, such as: new ventures, innovative ideas, new opportunities, fast growth, risk taking, success, etc., could also draw a response that identifies entrepreneurs or entrepreneurship.

2.5.3.05   However, such conceptualisation is probably inadequate for the discipline of entrepreneurship. As per the model developed in Part Two, there is a process of contextualisation as the conceptualisation of entrepreneurship is epistemically justified based on what is considered acceptable as knowledge. Jolley [2005, p48], in a commentary on Leibniz, has described the search for truth consisting of "a relation of containment between concepts". As per the elephant example, a biologist would be able to specify, and explain, in greater detail, the differences between African, Indian and Sumatran elephants, between males and females, between adolescent and adult elephants, and so forth. This information, on physical and behavioural differences, derives from a collective knowledge built up over time, such knowledge being contextually assessed for its acceptability as to the source of knowledge and methodology by which it was gained. The discursive concepts of the being of elephant-ness have been contextualised by epistemic justification.

2.5.3.06   Given the criticism leveled at entrepreneurship, as discussed in 2.5.2, such contextualisation could be a problem for the discipline. The criticisms of the epistemology of the discipline as summarised by Dery and Toulouse [1996] and McKelvey [2004], (see section 2.5.2.3.02) could well lead to questions as to whether this contextualisation has taken place, or whether the discipline is still focused on the conceptualisation of what is, or who is, entrepreneurship, without the benefit of solid epistemic justification.

2.5.3.07   Bennett [2008] raises the two issues of entrepreneurship, being definition and differentiation, and comments on what can be taken as a lack of common epistemological foundations in such issues.

> It is easy to see the implications of these twin issues of definition and differentiation for the study of entrepreneurship: how can studies of entrepreneurship be comparable, and beneficially contribute to the existing literature if any two studies may have (indeed, are likely to have) completely separate starting points regarding the very nature of the subject they are studying. If no clear boundaries can be established, the task of gaining a clear understanding of entrepreneurship will always be a difficult one [p7].

A similar lack has been expressed by Sciascia and De Vita [2004]

> Despite a strong common attention in entrepreneurship, the academic legitimacy of the field is still modest (Low, 2001). This could be due first of all to a lack of a clear and unique definition of the term entrepreneurship itself. Several analyses of the entrepreneurship literature reveal that researchers have too often developed their own definition of the concept without building on the work of the others, so that "entrepreneurship" became a wide label under which broad array of research efforts are housed (Shane and Venkataraman, 2000). The term has been used for more than two centuries, but scholars continue to extend, reinterpret and revise the definition. (Bull and Willard, 1993; 1995) [p23].

These comments raise methodological issues as well as the paradigmatic philosophical issues being discussed. The need for standard measures become problematic if different definitions are continually being developed. Furthermore, creating new definitions, prior to conducting research based upon that definition, must call into question the independent measure of that research.

2.5.3.08 Sciascia and De Vita [2004] also comment that the wide variety of definitions is due to the complex nature of entrepreneurship and the heterogeneity of the researchers in the field from other disciplines. However the question needs to be asked as to whether which one is really a contributing factor, or whether it is simply the lack of solid epistemic foundations. Haas [1992] and Cooke [2004] discuss the concept of 'epistemic communities', the later applying it in the field of biotechnology and finds that trans-disciplinary teams of 'epistemic communities' are very efficient in resolving issues within that complex discipline. If such trans-disciplinary work within one complex discipline is effective, why is it considered to be a negative issue in the supposedly complex discipline of entrepreneurship?

2.5.3.09 Dery and Toulouse [1996] comment that disciplinary introversion tends to diffuse the effects of multi-disciplines on entrepreneurship. They also comment on the tensions between the various individuals, groups, and institutions involved in entrepreneurial research and their 'race to gain control' over the very 'definition of validity' of entrepreneurship. The definition takes centre stage in the battle for influence within the institutions in the discipline and the funding attached to those institutions [Dery and Toulouse, 1996]. Somewhere in this focus on competing definitions the epistemic objectivity becomes lost and "it is somewhat as if the mere fact of membership in a field could procure an intimate and even objective, knowledge of its epistemological foundations" [Dery and Toulouse, 1996, p286].

2.5.3.10 While Foucault [1980, p109] uses the term low epistemological profile, Sciascia and De Vita [2004] use the term 'modest' academic legitimacy'. In line with my discussion of *episteme,* I use the term 'soft *episteme'*. The concept of gatekeepers, discussed in section 2.2.3, that are supposed to determine what is acceptable as knowledge and determine its accessibility into the discipline, may be permitting entry to research that is not necessarily supported by appropriate epistemologies. If the epistemological foundations, being *episteme* and appropriate epistemologies, of the discipline were solid (rather than soft) then it should theoretically be possible to better define and differentiate

entrepreneurship, even at Fabian's different paradigmatic options. If the participants in the various *episteme* associated with the discipline are more engaged in an internecine struggle for controlling the future direction of the discipline and less concerned with the epistemic objectivity, then this could be a reason for the soft epistemic status of the discipline of entrepreneurship.

2.5.3.11   An example of *episteme* in action in attempting to create and influence the course of the discipline can be found in an 2005 editorial article of the Academy of Management Journal (AMJ). This editorial article reviewed the AMJ's past history in publishing articles on entrepreneurship. In their summary, the editors and board members suggested three avenues of future direction for articles published in the AMJ issue on entrepreneurship. These are described below:

> a) based upon the past publications in the AMJ, the editors determined that scholars appear to be increasingly interested in studying questions regarding new ventures, international entrepreneurship, and initial public offerings (IPOs).
>
> b) In addition to these possible topics, entrepreneurship scholars will, of course, choose to empirically examine other relevant and interesting topics— topics that *AMJ* would want to consider for publication purposes (e.g., the nexus of entrepreneurs and opportunities [Shane and Venkataraman, 2000]). It also seems likely that geographic and skill diversity among entrepreneurship scholars will continue to influence the forming of teams of authors.
>
> c) Consistent with continuing developments in other areas of management scholarship, we anticipate that in the future, greater attention will be paid to assessing statistical power (Hitt, Boyd, & Li, 2004), validating how constructs were measured (Boyd, Gove, & Hitt, 2005), and reporting and interpreting effect sizes (Ireland et al., 2005), among other issues. Finally, we anticipate that the desire among entrepreneurship scholars to form longitudinal or panel samples and then to use appropriate methods for testing purposes will continue to increase (Hitt, Gimeno & Hoskisson, 1998; Schwartz & Teach, 2000) [Ireland, Reutzel and Webb, 2005, p562].

In (a) above, the authors assume that past articles, that have been through the particular *episteme* of the editorial review process of the AMJ, are indicative of future trends in entrepreneurial research in general. However, it is possible that these are only indicative of trends in the particular AMJ *episteme* that has developed. In (c) above, the editors cite

articles that show a predominance of authorship by either current or past editors or board members of the AMJ. Again, it is questionable whether these are indicative of real future trends in entrepreneurship or simply, extensions of the particular AMJ *episteme*'s 'wish list' as to that direction. However one could assume that not following such a 'wish list' and conforming to the *episteme*, could probably, unless the authors had high *gravitas*, curtail the chances of publication in the AMJ. The interface between 'playing politics' in order to get published and conducting solid research, the results of which justify being published, is a fuzzy area. However, it is significant to the development of the discipline.

2.5.3.12 The AMJ *episteme* is only one of the *episteme* that can be included within the discipline of entrepreneurship. The collective *episteme* that can be found within the discipline may depict a complex interplay of power as, like Leibniz's bodies, the forces they represent influence the substance, the very being, of the discipline. Currently, it may be that, this interplay of power manifests itself, as per Dery and Toulouse [1996], in the battle for the validity of definition of entrepreneurship. The flow of power around Foucault's triangle cannot help but be influenced by these *episteme* and the individual or collective sets of delimitations they impose upon the discipline. The greater *gravitas* of the *episteme*, or of the articles produced by that *episteme*, could conceivably influence that flow of power. Just as planetary bodies can bend light so can epistemic bodies influence the flow of thinking about entrepreneurship and accordingly its representationality. As one of the more highly-ranked journals in academic circles, the delimitations as to the future directions of research acceptable to the AMJ *episteme*, may, due to the particular *gravitas* of the AMJ, (if indeed such *gravitas* is justified) be significant as to future directions of the discipline. Whether the *episteme*'s delimitations are representational of the current practice, or their predictions reflect accurate prescience of the evolution of the practice of entrepreneurship, is something that only time will tell.

2.5.4 Analysing the grids of specification – ontology and prejudice

2.5.4.00 This section looks at the concepts of prejudice and the development of ontologies with the discipline of entrepreneurship.

2.5.4.01 As discussed above, the current lack of solid epistemological foundations, (as in both soft *episteme* and inappropriate epistemologies) and an over-riding focus on the on-going process of ontological conceptualisation, of what / who / where / how / why is entrepreneurship, without the solid epistemic base, may explain why the discipline is considered to be adolescent. The adolescent '*angst* and acne' of entrepreneurship is apparent in the evolving ontologies of the discipline.

2.5.4.02 Each new definition of entrepreneurship that is developed, along with its associated taxonomy, possibly creates a new ontology. The complexity, imagined or otherwise, of the ontology of the discipline (as discussed in sections 2.4) probably does reflect, not the actual state of the practice, but the state of the discipline. The emergent discipline appears to have a peer group dependency on past and current associations with other disciplines. The association with management discipline has lead to management type ontologies becoming increasingly predominant when compared to the behaviourist ontologies of the earlier associations with disciplines of sociology and psychology. However old ontologies do not seem to pass away but are retained within the discipline.

2.5.4.03 Gadamer [2006] uses the term 'prejudice' in a dual sense in relationship to knowledge. Prejudice is usually negatively associated with bias, however Gadamer 'rehabilitated' the term to give a more positive spin to the term in that prejudices can provide an anticipatory structure that opens one up to understanding. This dual notion of prejudice can also apply to *episteme*. While epistemic prejudice on one hand can be seen as delimiting forces, they can also be perceived, if viewed in relation to the grids of specification, as providing an anticipatory structure to understanding.

2.5.4.04 For example, a management ontology on entrepreneurship differs to say a marketing ontology on entrepreneurship and these would differ to the ontology used by an economist like Schumpeter. The management prejudice, in a negative sense, delimits the scope and range of understanding of the subject; however in the positive sense it provides a

structure to the *episteme* of management by which it can relate to the subject and gain better understanding, in reference to their specific position on the grids of specification.

2.5.4.05 To compare the Academy of Management ontology as detailed in section 2.5.2.1.08 with that of the American Marketing Association. The American Marketing Association's Marketing and Entrepreneurship Special Interest Group focuses more on 'new ideas, innovativeness and entrepreneurial risk-taking.' Its role as per their mission statement is to serve;

> members who are interested in the interface between marketing and entrepreneurship. This can cover quite a range of interests from the creation of new businesses and markets to the application of the principles of innovativeness, risk-taking, pro-activeness, and competitiveness to conventional marketing thought [taken from the American Marketing Association website].

2.5.4.06 The domains of innovation and risk-taking are not mentioned in the Academy of Management Entrepreneurship Division's ontology, (see section 2.5.2.1.08) but are present in the American Marketing Association Marketing and Entrepreneurship Special Interest Group ontology. The Academy's Entrepreneurship Division's *episteme*'s prejudice exclusion of innovation is a political decision with innovation falling under the Technology and Innovation Management Division, rather than the Entrepreneurship Division. This does explain innovation's exclusion from the Entrepreneurship Division ontology, but the absence of risk is, in my opinion, an unusual exclusion from the management prejudice on entrepreneurship, but then my own prejudice is that I am a business-person, accustomed to dealing with risk, not a manager. It could be expected that the epistemic prejudices of the different *episteme* will display themselves in the contents of the academic journals associated with the *episteme*. As such, the Journal of Developmental Entrepreneurship and the Journal of Research in Marketing and Entrepreneurship, that are associated with the Association of Marketing, likely follow different content to that of the Academy of Management Journal and Academy of Management Review. Again it does need to be mentioned that this *episteme* / journal prejudice while delimiting the subject according to the *episteme*, does, positively, create the anticipatory structures that can contribute to a greater depth of understanding.

2.5.4.07 The American Marketing Association's Marketing and Entrepreneurship Special Interest Group's ontology probably is closer aligned, on the grids of specification, to; firstly Schumpeter's ontology that has entrepreneurship as the individualist starter engine of the capitalist function (Schumpeter's five forms of innovation are discussed later in section 4.3.6.00); secondly, to Knight's ontology on risk and uncertainty; and thirdly, to the Austrian school's concepts of entrepreneurship. It could be expected that the Academy of Management's Entrepreneurship Division's ontology finds closer alignment with strategy based ontologies, such as offered by Mintzberg, Ahlstrand, and Lampel's [1998].

2.5.4.08 Prejudice, negatively, creates exclusions. As per the comparison of the Academy of Management' Entrepreneurship Division and the American Marketing Association's Marketing and Entrepreneurship Special Interest Group ontologies discussed above, innovation is not an issue for entrepreneurship per se and is accordingly prejudiced. Ontologies that relate to the displacement of the immigrant, or the culture / ethnic / gender based sociological spheres also find themselves on different grids of specification of the discipline and unlikely to be included in Management's Entrepreneurship Division prejudice, probably finding themselves in a more sociological realm or human resources realm.

2.5.4.09 Prejudices, positively as per Gadamer, create anticipatory structures, that provide a frame of reference by which academics can delve deeper into the subject. However the ontologies created need to be viewed in light of these prejudices. This is not to say that the ontologies are wrong or incorrect but need to be viewed in the appropriate prejudice and the positioning of the ontologies on the grids of specification.

2.5.4.10 The discipline of entrepreneurship's ongoing struggle for 'the' definition of entrepreneurship does reflect the adolescent *angst* of the discipline. While the emergent discipline is still under the parental 'planetary influences' of other disciplines, such as management, any definition that emerges will reflect such influences.

Venkataraman (1997) argues that ...if entrepreneurship is to emerge as a legitimate social science field, it needs to carve out a distinctive domain. It needs to have a conceptual framework that explains and predicts a set of empirical phenomena not explained by other fields [Bennett, 2008, p7].

While some academics e.g. Dery and Toulouse, [1996] see a unified paradigm as sign of maturity, or as per Venkataraman 'a distinctive domain' is necessary, it could be suggested that until the discipline gains greater maturity, through a solid epistemological foundation, along with ontologies that operates more independently from those influenced by other disciplines, the prospects at best may be to seeking a better differentiation and awareness of the positioning of current ontologies on the discipline's grids of specifications, rather than a unified ontology. This process of differentiation may highlight the prejudice of the influencing bodies. While an interdisciplinary role is admirable, any successful discipline still must seek to evolve and sustain its own identity. Entrepreneurship as a discipline needs entrepreneurship as a distinct domain, for its own sake, not for the management discipline, not for other disciplines such as economics or sociology, but at the same time acknowledging the interdisciplinary support that these provide within the prejudices that these contribute.

2.5.4.11 Filion [1997] offers one set of ontologies (or topics) that does seem to be less prejudiced than the ones discussed above.

- Behavioural characteristics of entrepreneurs
- Economic and demographic characteristics of small business
- Entrepreneurship and small business in developing country
- The managerial characteristics of entrepreneurs
- The entrepreneurial process
- Venture creation
- Business development
- Risk capital and small business financing
- Business management, recovery and acquisition
- High technology firms
- Strategy and growth of the entrepreneurial company
- Strategic alliances
- Corporate entrepreneurship or intrapreneurship
- Family business
- Self-employment
- Incubators and entrepreneurship support systems
- Networks

- Factors influencing venture creation and development
- Government policies and venture creation
- Women, minorities, ethnic groups and entrepreneurship
- Entrepreneurship education
- Entrepreneurship research
- Comparative cultural studies
- Entrepreneurship and society
- Franchises [Filion, 1997]

These 25 themes do present a 'catch-all' of common subjects of entrepreneurship research. However such lists are limited in that there is no perception of *gravitas* in either: the subject, sourcing *episteme*, significant journals, influencing disciplines and the like. Differentiation is weak, grids of specification are not identified and while the list is inclusive it does little more than present a list. No distinctive domain is obvious nor is there identification of more important areas or how these subjects of research have changed over time.

2.5.4.12 The above mentioned discussion in this section focuses on ontologies. I feel it is significant to look at what knowledge is already accepted into the *episteme* and see how the ontology has developed. The exercise is not to pass judgment on why knowledge has been accepted, (i.e. epistemic justification) as this has been commented on already by Dery and Toulouse [1996], but to look at the development of the discipline and how the ontologies have been constructed.

2.5.5 Refining the issue of the investigation

2.5.5.00 Prior to the subsequent Part Three on methodology, I want to clarify why I am using ontology instead of epistemology as the basis of my investigation into the discipline of entrepreneurship.

2.5.5.01 In the model I have developed, the discipline of entrepreneurship exists within the realms of the discourse on entrepreneurship. It is possible in the space of a single conversation for academics within the discipline to move from the discipline, where what

is being discussed is epistemically justified, to the discourse, where whatever justification of knowledge there is, is not based upon epistemology, and back again.

2.5.5.02   An intellectual will tend to operate within the discourse, external to the discipline, but, bearing in mind that some, but not all, academics are intellectuals and some intellectuals also have an academic background, an intellectual may also operate on both sides of the boundary between discourse and the discipline. Epistemology creates the boundary between discipline and discourse. However, it cannot be claimed that such boundary is clearly delineated, simply because epistemology is subjective, relative to the opinion (belief) of the person determining what is considered knowledge.

2.5.5.03   To illustrate this difficulty of clearly delineating boundaries of knowledge using another elephant analogy.

> There are three people on a train going to Chiang Mai. One of them is an economist and one of them is a logician and one of them is a mathematician. They have just crossed the border into Chiang Mai province and they see a white elephant standing in a field from the window of the train (and the elephant is standing parallel to the train). The economist says, "Look, the elephants in Chiang Mai are white." The logician says, "No, there are elephants in Chiang Mai of which one, at least, is white." And the mathematician says, "No. there is at least one elephant in Chiang Mai, of which one side appears to be white" [With all due respect to the 'brown cow in Scotland tale', from Wikipedia, which this is derived].

The epistemological justification as to the colour of elephants in Chiang Mai is, in this illustration, relative to the stance taken by each of the participants, as to what they consider as qualifying as knowledge. Effectively, there could be three different boundaries between the discourse on, and the fictitious discipline of, elephant studies, as each of the participants in the illustration has a different reference point for determining the point of epistemic justification.

2.5.5.04   Foucault [Dreyfus and Rabinow, 1983, p117] refers to a point of epistemologization that 'discursive formations' (what I have taken to be disciplines) need to succeed in crossing, to be no longer considered a doubtful science or dubious discipline

(discussed in 2.3.3.04). If Foucault's point of epistemologization is based upon epistemology then such point is relative to a held personal belief as to what is considered knowledge. (Quine [in Kemp, 2006], and Fuller [2003] both discuss in further detail the concepts of beliefs as a legitimate part of academic thought.) While it could be considered legitimate that there is a range of opinions as to whether a discipline is dubious or a doubtful science, there could well be a better measure rather than one which depends on, or fluctuates based upon, held beliefs.

2.5.5.05   Epistemology, as per my model, is a marker that outlines the boundaries of an epistemic state (as different to a domain). Its relativity to held opinions and fluid condition may make it a less than effective measure of disciplinic dubiety. While positivism may offer verifiable measures that could be considered more 'scientific' the application of positivist methodologies to human behaviour and human sciences, such as entrepreneurship, may not, necessarily, be appropriate in all circumstances.

2.5.5.06   As discussed in section 2.3.3.06, I have assumed that Foucault's 'point of epistemologization' relates more to *episteme* than to epistemology. With epistemology being a marker of the boundary of the discipline, it is more the evolving structures within the discipline that determine its dubiety. The maturity (objectiveness) of the *episteme*, their contribution to the development of the discipline and its representationality; the paradigms, including ontologies, that are imposed on the disciplines by the *episteme* or that evolve as part of its evolution; acceptance of discontinuities by the *episteme*, are all significant in offering a measure of whether the point of epistemologization has been crossed or not.

2.5.5.07   As discussed in section 2.1.2.01, both Foucault and Heidegger opposed Cartesian traditions. Heidegger, in particular was critical of Cartesian knowledge-theory and "rejected epistemology's involvement in problems no longer vital to the conduct of the sciences" [Krell in Heidegger, 1993, p9]. Heidegger looked to ontology as the viable alternative to epistemology. This antitheism to Cartesian concepts of knowledge could also explain why Foucault does not have a place for epistemology in the rules of formation of

discourse-objects as discussed in section 2.5.2.15. He does however offer 'grids of specification' which I have taken to refer to ontologies.

2.5.5.08   In this research, there is accordingly less focus on epistemology as a measure of dubiety. I have commented on the state of epistemology within the discipline, as per Dery and Toulouse [1996] and McKelvey [2004]. From their work it could be possible to draw a conclusion that the epistemology used in the discipline may be inappropriate, or may reflect out-dated formats. However, as discussed above and illustrated by the 'white elephant in Chiang Mai' analogy, epistemology is relative to the stance taken by the participants in the discipline and may be less than suitable as a standard. A study of ontology and *episteme* within the discipline may, possibly, offer a more suitable standard.

2.5.5.09   However the ontologies on entrepreneurship offered earlier in this chapter, such as from Filion [1997], are considered to be either poorly specified, or their specifications are influenced by other disciplines, such as the ontologies on entrepreneurship by the *episteme* of the Academy of Management's Entrepreneurship Division or the American Association of Marketing's Special Interest Group on Marketing and Entrepreneurship. The ontological construction of the discipline, while reflecting influences from other disciplines does also need to present some form of self identity [as per Venkataraman, cited by Bennett, 2008], otherwise the need for a discipline in that field is redundant. Within the discipline there also needs to be some perception of ontological *gravitas*. Filion's [1997] ontologies lacks weight, it is a collection of thematic domains, but there is no sense of relativity between the domains. The questions: 'Which of these domains are more significant?' or 'Which domains are recognised by which *episteme*?' are difficult to answer.

2.5.5.10   There seems to be currently no 'apparatus' available to define the domains of ontology, relative to others, as part of the grids of specification. By default I suggest that *gravitas* is a possible measure.

2.5.5.11   In my model, ontology covers both discourse and discipline. Epistemology marks the boundary region. Between epistemology and ontology there is some conjunct association. So, by excluding epistemology, how do I determine what is contained in the discipline and what is contained in the discourse.? In sections 2.4.1.11 and 2.4.3.11 I have raised the issue of ontological commitment and the relationship with *gravitas*. The citations made by the participants in the discipline are a form of ontological commitment and collectively gives *gravitas* to certain articles, ideas, or ontological domains. The point is that these citations are sourced from within the discipline, where, presumably, they are covered (or should be covered) by some form of epistemological practice. As I have shown in the previous section the epistemology of the discipline of entrepreneurship has been criticised. This may call into question the presumption that epistemology has been applied. However I am assuming that the collective nature of *gravitas* provides some form of blanket legitimacy, in that the 'wisdom of crowds' [Surowiecki, 2005] addresses the issue of the application of epistemology and those articles, deemed to have less than appropriate epistemologies, are 'weeded out'.

2.5.5.12   Two basic concepts found respectively in the Western democratic system, and the English legal system in the use of juries might be useful here. Firstly the majority has some form of correctness, and secondly, this majority correctness is more relevant when such correctness is determined by one's peers. This peer approval provides a process of qualification of *gravitas* in that if a selection of disciplinic peers cite an article frequently then the *gravitas* that is attributed to that article is enhanced. Whether the citations are in support or in disagreement to the original article is probably less relevant in the measure of *gravitas*. Discontinuities that may be beneficial to the discipline may often attract negative responses initially from the status quo. The quantum, not the qualification, of the *gravitas* is the measure. The quantification of *gravitas* may be an issue particularly is regards to academic rigour, acceptability to others and having meaning; however citation analysis is one possible way to quantify *gravitas*.

2.5.5.13   Foucault's rules of formation provide a vehicle to analyse the grids of specification of the ontologies and the roles of *episteme*, as in the authorities of

delimitations. Yet Foucault also offers the opportunity to see the role of the discipline in a larger context; "archaeology has freed us to shift to the question of what role this pseudoscience, this doubtful science, plays in the larger context." [Dreyfus and Rabinow, 1983, p117]. I believe that this 'larger context' refers to the interaction between disciplines, either on a trans-disciplinary or an interdisciplinary bases, being part of Foucault's move away from the "notion of the Cartesian subject, the subject whose existence depends on its ability to see itself as unique and as self contained, distinct from others ..." [Mills, 2004, p30]. The emergent discipline needs to find a balance: between its own identity and trans-disciplinary interaction; between dubiety and credibility; between representationality and irrelevance; and so forth.

2.5.5.13   By creating an archaeological representation (*aliran*) of the discipline of entrepreneurship, using *gravitas* as a measure, it may be possible to illustrate the discipline's current status in seeking this balance. This is outlined in more detail in Part Three.

Part Three : Methodology and Methods

3.0   In the 'position statement' I outline in the first section of 3.1, I distinguish between methodology and data collection processes. In particular I find that the traditional qualitative / quantitative distinction is, to my way of thinking, not necessarily the only way, nor the preferred way, to look at methodology and data collection processes for this study. This distinction forms the basis to Part Three in that a discussion on methodology and methods that I use in this investigation forms the first section to this part. A discussion on the data collection processes I use forms the second section to this part along with the development of the *episteme* and the *aliran*. The style of presentation attempts to capture the emergent characteristic of the methodology, data collection and data analysis being used in this investigation by describing the way in which this developed during the literature search and the initial stages of the investigation.

3.1 Methodology

3.1.00   In this section I commence with a personal statement about the dissonance I perceive in academia with the prevailing qualitative / quantitative dichotomy. Under this dichotomy it could be assumed that, because I am using a Foucauldian discourse analysis, that my methodology would be qualitative. However, I am using a mixed approach and using mixed theories in my methodologies. Aspects of lineage, as discussed in Part One, link the mixed theories from Foucault and Heidegger and also provide the interlink between their theories and the concepts of phenomenology and hermeneutics. These sections end on a discussion of the aspect of time and the problem of applying dimensionality to this work.

3.1.1 Position Statement

3.1.1.00   This section outlines a personal application to methodology and data collection processes suggesting that for this investigation mixed methodologies are appropriate.

3.1.1.01   In my non academic life as a businessperson, I have found it useful, when trying to come to terms with situations, where my own views may not be in conformity with that of the majority, to write for myself a 'position statement'. This statement assists not only to clarify my own thinking but also serves as a platform to expand these views.

3.1.1.02   This dissertation can be described as having 'mixed methodologies'. Yet that term is in itself an inadequate description. I am mixing my data collection processes by using quantitative data collection with a more qualitative analysis of such data. Yet on another level I am mixing methodologies on two planes. Firstly I am using philosophical sources from two different European schools of thought associated with Foucault and

Heidegger, and secondly rather than viewing these as parts of a distinct school of thought I view them as being part of a '*continuum*' of knowledge. Pope and Mays [cited in Clark, 2000, p3] use the term *continuum* as part of a discussion on the terms qualitative and quantitative and they 'argue that the differences between 'qualitative' and quantitative' are overstated which has lead to the entrenchment of a dichotomy' [Clark, 2000, p3].

3.1.1.03   In my limited exposure to academic thinking two things have puzzled me. Firstly, is the lack of clear demarcation between methodologies and data collection processes, particularly with regards to the application of adjectival terms 'qualitative' and 'quantitative'. Secondly, is the perceived strong 'dichotomous' [Pope and Mays, cited in Clark, 2000, p3] delineation between the qualitative and the quantitative, be these in reference to either methodologies or data collection processes.

3.1.1.04   With regards to the first point, I am comfortable using the terms 'qualitative' and 'quantitative' with regards to data collection or data analysis processes relating to particular types of data. Using these two terms with regards to methodologies I perceive as being problematic. In this position statement I define methodologies as a particular theoretical framework. These methodologies are not necessarily quantitative or qualitative; however certain theoretical frameworks may have a prejudice towards either a quantitative or qualitative data collection process, or data analysis process. This prejudice may start to evolve during the development of the *research* methodology, possibly, partly as Barnes, et al [2005] describes it, being due to the researcher 'positioning oneself within a particular discipline or research tradition'. This positioning is depicted graphically in the Model H developed in section 2.4 and shown in Graphic 2g.

3.1.1.05   It could be assumed that having initially selected Foucauldian discourse analysis as a basic methodology for this dissertation, then the data collection processes would, by a sense of continuity, be more qualitative. However the emergent methodological process I undertook soon found that, because Husserl's phenomenological archaeology (discussed further in section 3.1.3), did not lend itself to a qualitative process of both data collection and data analysis. I found much less cognitive dissonance in having a quantitative data

collection process which provided a sound (verifiable) basis for a more qualitative analysis of such data, that evolved into content analysis with a discursive interpretation as part of an overall methodology that could be considered qualitative, but, by dint of my particular circumstances as a researcher, must, by Clark's [2000] definition, be considered mixed.

> In terms of epistemology, quantitative research assumes the researcher to be independent from that being researched, approaching the research process in a value-free and unbiased manner. The qualitative paradigm assumes a different epistemology, one that presumes that the researcher does interact with that being researched and that a value-free research process is untenable [p2].

As a business person, who has been entrepreneurial, studying how academics approached the subject of entrepreneurship, with my own bias and prejudices on the subject, I needed to approach the 'research process in a value-free and unbiased manner'. This was best served by having a quantitative data collection process, that could be verified to ensure any prejudices I may possess had not become integrated into that part of the process.

3.1.1.06 However, given my 25 years of being a business person, I do consider myself to have solid experience in the application of entrepreneurship. In such case my (self proclaimed) expert status qualifies me to look at the data, collected through a quantitative process and, analyse that data qualitatively. It can be assumed that, in this part of the process, 'the researcher does interact with that being researched' in as much that I am like the figurative laboratory rat mentioned earlier. However while some research looks at 'theory development and theory testing' [Mahoney, 2005, p4], my own aim is the development of the theories of knowledge as discussed in Part Two and the illustration of these theories with the application of an epistemic analysis of the Web of Science database on 'entrepreneurship'.

3.1.1.07 The second issue referred to in section 3.1.1.03 above is the 'perceived strong dichotomous delineation between the qualitative and the quantitative', be these in reference to either methodologies or data collection processes. My perception is that, in academia, there is sometimes an established sense of mutual exclusivity between the qualitative and the quantitative that offers only a simple dialectic whereas it may be possible that, without such mutual exclusivity, a range of possibilities, greater than a simple dichotomous choice,

is possible. This is not to say that mixed methodologies are not used in academia, they are, but I suggest that the underlying dichotomy generated by such mutual exclusivity may be a delimiting factor in generating alternative approaches to knowledge.

3.1.1.08   As pointed out by Clark [2000, p3] "quantitative and qualitative research paradigms rest on very different assumptions about both the nature of knowledge (epistemology) and the appropriate means of generating knowledge (methodology)". Differing approaches to these paradigms has been described by Niglas [2000, p1] as sometimes becoming 'paradigm wars' between the differing levels of advocacy as discussed below.

3.1.1.09   Niglas [2000, p1] has described three levels of advocacy as being:

a) The 'purists' with a 'strong paradigmatic view' who believe;
   that only one of those approaches is good/appropriate/scientific enough for the inquiry about the social life. They say that quantitative and qualitative research methodologies are tightly bound to different mutually exclusive epistemological positions. From here follows that there is no point even to talk about the possibility of combining or mixing of those approaches.
b) The 'situationalists' with a 'weak paradigmatic view' whose beliefs are;
   somewhat more tolerant towards different methodologies saying that both of them can be used and are useful, but as they carry with them different philosophical underpinnings they are suitable in very different situations and contexts and therefore one can not and should not mix or combine quantitative and qualitative approaches in the framework of one study.
c) The 'pragmatists' whose beliefs;
   regard quantitative and qualitative approaches both as useful and proper ways of going to study the social world. Although they see some major differences between quantitative and qualitative research they also see some important similarities between them and advocate the integrated use of different methodologies if this can advance our understanding about the phenomenon under the investigation [Niglas, 2000].

3.1.1.10   My own choice, determined in part by my experience as a business person who has found that I need to have different styles of business when dealing in different countries and that a business style I adopt in Vietnam differs to that which I use in Malaysia, that differs to that which I adopt in Indonesia or that which I follow in New Zealand, predicates that the holism of the pragmatists gives me less dissonance. I believe

in 'horses for courses' or, to put it more academically, a need to "get on with the business of attacking our problems with the widest array of conceptual and methodological tools that we possess and they demand (Trow 1957)" [cited in Niglas, 2000, p1].

3.1.1.10 The perceived academic fixation with qualitative and quantitative does limit possibilities to generate other ways of looking at knowledge. "This back and forth banter among qualitative and quantitative researchers is 'essentially unproductive' according to Miles and Huberman" [cited by Barnes et al, 2005]. "A number of authors have criticized the rigid distinctions made between quantitative and qualitative research approaches, and argue instead for scholars to think of the range of research methods as a *continuum*" [Clark, 2000, p5].

3.1.1.11 It is this concept of the *continuum* that has most compatibility with my own approaches to epistemology as well as methodology. The next section discusses the problems I faced, as an academic researcher, in using terms such as Foucauldian discourse analysis, with the subsequent section discussing the concept of a lineage of knowledge as part of the concept of a *continuum*.

3.1.2 Foucauldian discourse analysis ?

3.1.2.01 The initial methodological approach considered for this research was a Foucauldian based discourse analysis. However, as the literature review progressed the use of the term 'discourse analysis' became problematic, as indeed did the term 'Foucauldian'. The methodology became emergent, evolving as the literature review uncovered further aspects. The issues that became part of the emergent methodology are discussed as follows.

3.1.2.02 The first issues relate to the terminology of 'discourse analysis' and 'Foucauldian'. The term 'discourse analysis' rendered itself redundant with the evolving definitions as outlined in Part Two. Discourse became defined as the larger entity whereas my focus was on the discipline, which, by my definition, was a smaller entity within the discourse. To apply a form of 'discourse analysis' to the discourse as defined in Part Two

of this dissertation would have been near impossible unless some form of Borgian analysis [Baudrillard, 1994, p1] was possible, where an entity (as in this case a discourse - as I have defined it in this dissertation) could be analysed in its entirety. Therefore a more suitable term to describe the type of analysis, as discussed in section 1.2.3, rather than 'discourse analysis' per se, would be epistemic analysis. This epistemic analysis would be more focused as an analysis of a collective 'body of work' as part of a discipline.

3.1.2.04   The use of 'Foucauldian' also was an issue. I have replaced discourse analysis with epistemic analysis and I have used Foucault's ideas on *episteme* as a philosophic base for the epistemic analysis. However Foucault never used the *episteme* as a basis of analysis, for him it was a philosophical concept. I have decided to develop such epistemic analysis using archaeology as the research method. The archaeology I use results in the creation of what I have described as the *aliran*. The term archaeology is generally accepted as 'being' Foucauldian, according to Lawlor, "obviously, the word 'archeology' belongs to Foucault" [Lawlor, 2003, p24].

3.1.2.05   Yet as pointed out by Lawlor "at the end of his life, Merleau Ponty, and this virtually at the same time as Foucault was characterizing his own thinking as an archaeology" [Lawlor, 2003, p24], albeit with a different focus to Foucault. This still does not mean however that the term archaeology 'belongs' to either Foucault or to Merleau Ponty. According to Lawlor [2003] the word has a 'pre-history' with Foucault attributing his source of the word to Kant, with Merleau Ponty finding the source of his version of archaeology in Husserl's 'phenomenological archaeology'.

3.1.2.06   While it may be more academically acceptable to use the expression Husserlian phenomenological archaeology rather than Foucauldian archaeology, I am pointing out that to ascribe archaeology to either Foucault or to Husserl may be limited and also may miss the objective of good form in that it ignores the efforts of others in the same field. The term lineage tends to better express the flow of ideas from one academic to the next, i.e. the notion of knowledge being a *continuum*. Support for the notion of lineage is inherent in the concept of annotation where one attributes ideas of others that have contributed to their

work. However, it may be that for academic 'ease', ideas are attributed to one source, whereas a wider literature review may reveal other sources, including those in the lineage of that idea.

3.1.2.07   This section has moved the methodological focus from Foucauldian discourse analysis and archaeology towards Husserl's phenomenological archaeology. In the next section I discuss the next part of this process, where phenomenology and hermeneutics are used together.

3.1.3 Phenomenology and hermeneutics

3.1.3.00   This section introduces the two step process of firstly using phenomenological method (as a 'concept of method' [Heidegger, 1993, p72]) followed by an hermeneutic analysis of the data derived from such method.

3.1.3.01   To attempt to apply the research findings of the disciplinic *episteme* from the Web of Science database on entrepreneurship, selected for the research, to the discourse on entrepreneurship as a whole could have been to follow the scenario described by Gartner [2001] where researchers into entrepreneurship were perceived to be describing parts of the elephant and attributing that part to the whole. My research is intended to initially present the *episteme* 'as it is'.

3.1.3.02   The idea of presenting the *episteme* 'as it is' suggested, within the emergent methodology, that a phenomenological approach may be justified.

> Phenomenology declares that philosophy must start by carefully describing experience without incorporating any presuppositions about the meaning of the that experience. Husserl's maxim 'to the things themselves' means that philosophy must return to a pure description of the things themselves as they are experienced [Schmidt, 2006, pp49-50].

3.1.3.03   The origin of the term phenomenon means 'what shows itself in itself' [Schmidt, 2006, p61]. Gartner's description of researchers into entrepreneurship describing

an elephant brings to mind Husserl's example of walking around a table. "From each position only a particular perspective of the table is experienced. You never see the whole table, although in experience we are also conscious of the whole table" [Schmidt, 2006, p50].

3.1.3.04   The question that then needs to be asked is whether the researchers of entrepreneurship are 'conscious of the whole table'? While, as pointed out by Schmidt "phenomenological research means carefully to describe our experience without making judgments about what the experience implies" [Schmidt, 2006, p7], phenomenology may only be a first step in my epistemic analysis. A second step is required to examine what phenomenology describes, as per Schmidt, "the description is phenomenological and the examination is hermeneutic [Schmidt, 2006, p7].

3.1.3.05   In my epistemic analysis, the two parts, discussed in section 3.1.1.05 being a quantitative data collection process which provided a basis for a more qualitative analysis of such data, correspond philosophically to firstly a phenomenological description of the *episteme* and secondly a hermeneutic examination of what phenomenology 'shows itself in itself' [Schmidt, 2006, p61]. In other words, to describe what the selected *episteme* on entrepreneurship shows what it considers entrepreneurship 'to be' and secondly an analysis, based, in part, on my own experience, as to whether such 'to be' could be considered to be representative of the 'being' of entrepreneurship. Are the researchers into entrepreneurship conscious of Husserl's whole table, or following Gartner's analogy, are they conscious of the whole elephant?

3.1.4 Mixed theories – justifying the lineage used

3.1.4 01   In section 3.1.1.02 above I described how, as part of my mixed methodologies, I am using philosophical sources from two different European schools of thought. To use both Foucault from the 1960s with Heidegger from the 1920s may be an anathema to some purist or situationalists [Niglas, 2000]. I adopt an approach from Bergson that is consistent with the pragmatism I have discussed in section 3.1.1.10.

Philosophy ….. does not consist in choosing between concepts and in taking sides for one school, but in seeking a unique intuition from which one redescends as well to the diverse concepts, because one has placed oneself above the divisions of the school [cited in Lawlor, 2003, p142].

3.1.4 02   However, Bergson does not necessarily give license to simply take diverse concepts and apply them ad hoc. There does need to be, as per Bonjour [1998], some form of epistemic justification for such application. The concept of knowledge being a *continuum* provides such justification in that concepts need to be part of a recognised lineage, with those lineage being connected in a meaningful manner.

3.1.4 03   The concept of academic lineage discussed in section 3.1.2.01 above with regards to archaeology linking Foucault and Merleau Ponty with Kant and Husserl's phenomenological archaeology can also be applied to hermeneutics. Schmidt [2006] traces the lineage from Schleirmacher's universal hermeneutics to Dilthey's hermeneutics understanding, to Heidegger's hermeneutics ontology to Gadamer's theory of hermeneutic experience. In the field of phenomenology there is also a lineage that links Heidegger, as a student of Husserl, and critical of his phenomenological predispositions [Lawlor, 2003; Schmidt, 2006].

3.1.4 04   There is, however, no direct lineage between Foucault and Heidegger. Dreyfus and Rabbinow [1983] raise a number of ideas that were discussed by both Heidegger and Foucault. Heidegger [1993, p318] also discussed, albeit briefly, the issues of *techne* and *episteme*, which Foucault delved into in greater detail. It is within the concepts of Husserl's phenomenological archaeology that some linkage is provided, archaeology is linked downstream to Merleau Ponty and Foucault, phenomenology links Husserl to Heidegger. It is, however, the link between phenomenology and ontology that justifies bringing Heidegger's hermeneutic ontology firmly into the picture to examine the result of my phenomenological archaeological description of the *episteme*.

3.1.4 05   Foucault was not greatly involved in discussions on ontology, which could be considered to be Heidegger's forte. Yet phenomenology is intricately linked to ontology as

offered by Schmidt as well as Lawlor. "Ontology is only possible as phenomenology" [Schmidt 2006 p61]. "Phenomenology investigates the originary ontological experiences that institute the sense of being…." [Lawlor, 2003, p28]. In section 2.5.5 I justified my use of ontology as the basis of epistemic analysis instead of epistemology.

3.1.4 06 Questioning whether the *episteme* reveals the 'being' of entrepreneurship is a typically Heideggerian issue. While Foucault's *episteme* provides a theoretical base to an epistemic analysis and phenomenological archaeology provides a research method, it is Heidegger's ontological test as discussed in section 2.4.3 that, as per Lawlor [2003], 'investigates the originary ontological experiences that institute the sense of being' and provides the justification to link the two schools of thought. This is further justified in the next section regarding time.

3.1.5 Time, dimensionality and application issues

3.1.5.00 This section addresses the issues of time and dimensionality in applying these theories to this dissertation.

3.1.5.01 Foucault introduces the concept of time into the *episteme*, presenting the notion of the *episteme* being three dimensional and also dynamic in character.

> Questioned at this archaeological level, the field of the modern *episteme* is not ordered in accordance with the ideal of a perfect mathematicization, nor does it unfold, on the basis of a formal purity, a long descending sequence of knowledge progressively more burdened with empiricity. The domain of the modern *episteme* should be represented rather as a volume of space open in three dimensions [Foucault, 2002, p378].

> Moreover, the *episteme* is not a motionless figure that appeared one day with the mission of effacing all that preceded it: it is a constantly moving set of articulations, shifts and coincidences that are established only to give rise to others [Foucault, 2004, p211].

3.1.5 02 Ideally, a three dimensional model of the *episteme* could be developed in which the ontologies are outlined and their inter-relationships determined, including those that

could be termed cross or inter-disciplinary and the movement in these shown over time. This model could, as is currently increasingly being done for construction models in the engineering industry, be presented using model design and review software such as AutoCAD or Navisworks. However the fundamental problem of presenting such information in an academic dissertation is that the dissertation has to be submitted in two dimensional paper format. These models could only be incorporated into a dissertation by means of time limited (i.e. static) cross sectional analyses which defeat the purpose of having a three dimensional, dynamic model in the first place. Ideally, a three dimensional model could be developed, submitted in soft copy, and reviewed as such by supervisors and examiners. The technology is available in the engineering industry for such presentations, however such technology has yet to reach academia.

3.1.5 03 The aspect of time is significant and I believe that Filion's list of ontologies, submitted in section 2.5.4.11, are fundamentally flawed because they lack relevancy to time. Heidegger's maxim is that "the central range of problems of all ontology is rooted in the phenomenon of time correctly viewed and correctly explained" [Heidegger, 1993, p61]. My examination of the *aliran* endeavours to show some aspects of time.

3.1.5 04 While Schultze [2003] has described phenomenology as being qualitative (anti positivist), I believe that this is not necessarily a prerequisite or fixed rule. Pragmatically, the function of phenomenology, as per the previous chapter, is to describe something 'as it is'. Whether this is done quantitatively or qualitatively is determined by the research method of the individual researcher. In this research I am using mixed methodology as well as mixed data collection and data analysis processes. My citation analysis of the *episteme* can be described as quantitative as it involves numbers and the initial development of the *aliran* the same. However, once I start to identify the sub-*aliran* as representational of the ontologies of the discipline I move to analyse the data qualitatively. Foucault [2004, p202] warns to be careful when distinguishing between *scientific domains* and *archaeological territories*. I am, however, comfortable in the applied representationality, justified in part by my belief that the discipline of entrepreneurship has not passed Foucault's point of scientificity. My analysis necessarily becomes more

qualitative, based primarily on my own experience and knowledge derived from being entrepreneurial.

3.1.5 04   The process of the phenomenological epistemic analysis using archaeology to develop the *aliran* which is then hermeneutically analysed to determine whether the discipline recognizes the 'being' of entrepreneurship is discussed in the next sections.

3.2 Data Collection Processes / Method

3.2.1 The Web of Science *episteme*
3.2.2 Data collection processes – applying phenomenology
3.2.3. Analysis techniques and table layout
3.2.4 Problems encountered
3.2.5 Hermeneutics – developing the *aliran*

3.2.00   In this chapter, I develop the practical aspects of the theoretical methodologies discussed in the previous sections to this part. The manner of developing the *episteme* is discussed, firstly by a discussion on my selection of the Web of Science database, followed by the data collection process I undertook in order to present the *episteme* by way of a phenomenological approach to show it 'as it is'. The presentation format I use to display the *episteme* is then outlined followed by the outline of some of the problems encountered. The next part to this section looks at the hermeneutic approach taken to develop the *aliran* from the *episteme*. Some preliminary observations are made on this process and the emergent information which influenced this approach.

3.2.01   As discussed in section 3.1, phenomenology is the methodological approach being used to show the *episteme* 'as it is'. In the earlier parts to this dissertation I described the *episteme* as a strategic apparatus used by the discipline to regulate the acceptability of knowledge into the discipline. The *aliran* as defined earlier is: from the Malaysian and Indonesian languages and has multiple meanings including: 'flow, drift, current, trend, channel, conduit, school of learning as well as an ideology.' [Echols and Shadily, 1994]. I believe that *episteme* are the entry points or portals to the *aliran*. In this research, I am looking at the Web of Science *episteme* as the portal to the *aliran* on entrepreneurship

3.2.1 The Web of Science *episteme*

3.2.1.00.   This section is primarily to discuss my selection of the Web of Science database used to define the *episteme* for the selection of the citations used to create the *aliran*.

3.2.1.01   Initially I selected the Web of Science to be the database for the *episteme* based upon prior use and familiarity in my other post graduate studies. However a literature review on 'citation analysis' and a comparison of results from another database Proquest did lead to some questions during the research as to whether Web of Science was a suitable database.

3.2.1.02   Harzing and van der Wal [2008] list a number of strengths and weaknesses of Web of Science when comparing it to Google Scholar (GS) and h index by Hirisch and g index by Egghe. They found that:

> Overall, we would argue that for the field of management the various GS-based citation metrics provides a more comprehensive picture of journal impact than the ISI (Web of Science) JIF [p10].
>
> On average, GS reports nearly 2.5 times as many citations as the ISI Web of Science [p12].
>
> The use of GS generally results in more comprehensive coverage in the area of management and international business, which benefits academics publishing in sources that are not (well) covered in ISI (Web of Science). Among these are books, conference papers, non US journals and generally journals in the field of strategy and international business [p12].

3.2.1.03   A parallel search of another database, Proquest using the same parameters as the Web of Science search yielded 5,000 plus articles when compared to the 2,161 garnered using Web of Science. On its website, Proquest's self description notes: 'It features a highly-respected, diversified mix of scholarly journals, trade publications, magazines, and newspapers.'

3.2.1.04   Both Harzing and van der Wal's [2008] criticisms of Web of Science and the greater number of search results from Proquest, could have called into question my selection of Web of Science when it could appear that Google Scholar or Proquest could have had a greater accessibility to listings of relevant articles.

3.2.1.05   However, a closer look at the Google Scholar and Proquest search contents, did result in less dissonance with my selection of the Web of Science database. Firstly, the Web of Science has credibility as being the most commonly used source of bibliometric data.

> Traditionally, the most commonly used source of bibliometric data is Thomson ISI Web of Knowledge, in particular the Web of Science and the Journal Citation Reports (JCR) [Harzing and van der Wal, 2008, p1].

Secondly, Proquest and GS include non academic references such as newspapers and magazine. Including articles such as the Wall Street Journals and trade publications tends to take this search out of the discipline and into the discourse. Based on my model developed in Part Two, it could be said that these relate more to contributions by intellectuals in some cases and possibly non-academics and even non-intellectuals (op-eds) in others. The focus of my research is to look at the evolving discipline of entrepreneurship by academics and to assess the impact of intellectuals / non-academics, with the possible advent of discontinuities on the discipline, by way of citation by academics to articles by non-academics or intellectuals, rather than the articles by these intellectuals / non-academics, themselves. It could appear that the Web of Science database has a more specific focus on the discipline rather than the discourse and in the instance of this research it may be more appropriate to use Web of Science rather than other databases to determine the positioning of the *episteme*.

3.2.1.06   A further small point in favour of using Web of Science rather than ProQuest was that the 2,161 articles from Web of Science contained some 87,060 citations that were analysed individually and manually. Any larger number of citations, that could have sourced from analysing all of the citations from 5,000 or more journals, could have become significantly larger than my patience. The question also needs to be raised whether using the 5,000 + *episteme* portal from Proquest would produce a significantly different *aliran*, or simply more citations pointing to the same articles.

3.2.1.06   As discussed further in the first section of Part Four, dealing with empirics, the issue of the selection of the Web of Science as my *episteme* of choice becomes an

academic issue. There appeared to be a built in redundancy between the *episteme* and the *aliran* that ameliorated the issue of using the Web of Science.

3.2.2 Data collection processes – applying phenomenology

3.2.2.01　　This section outlines the process I used to collect the data from the Web of Science database in order to illustrate the *episteme* used by this particular database and the *aliran* that could be developed from it.

3.2.2.02　　The primary process is citation analysis using frequency tables to establish which journal articles or texts cited in the *episteme* have the highest citation counts and can therefore be considered to have the greater *gravitas*.

3.2.2.03　　The data collection process in this case involved searching the Web of Science database for all journal articles that related to entrepreneurship based upon the following search criteria.

- Topic Search (TS) = entrepreneurship,
- Document Type = article,
- Language = English,
- Timespan = 1956 to 2006.

3.2.2.04　　Initially in my research proposal, I proposed a time period of 25 years from 1976 to 2006; however preliminary searches showed the spread of Web of Science articles, as per Graphic 3a, where the bulk of the articles were post 1990. I decided to extend the time parameter to 1956 for two reasons. Firstly the oldest article in the Web of Science search was from 1956 and coincidentally this date gave a round figure of 50 years to work with. Secondly because the number of articles prior to 1976 was not considered large I felt it would not incur much additional work to include these additional years and it could be possible to get a better picture of the whole *episteme*.

Graphic 3a	*Bar chart of numbers of articles published each year in the episteme from 1956 to 2006.*

Published Items in Each Year
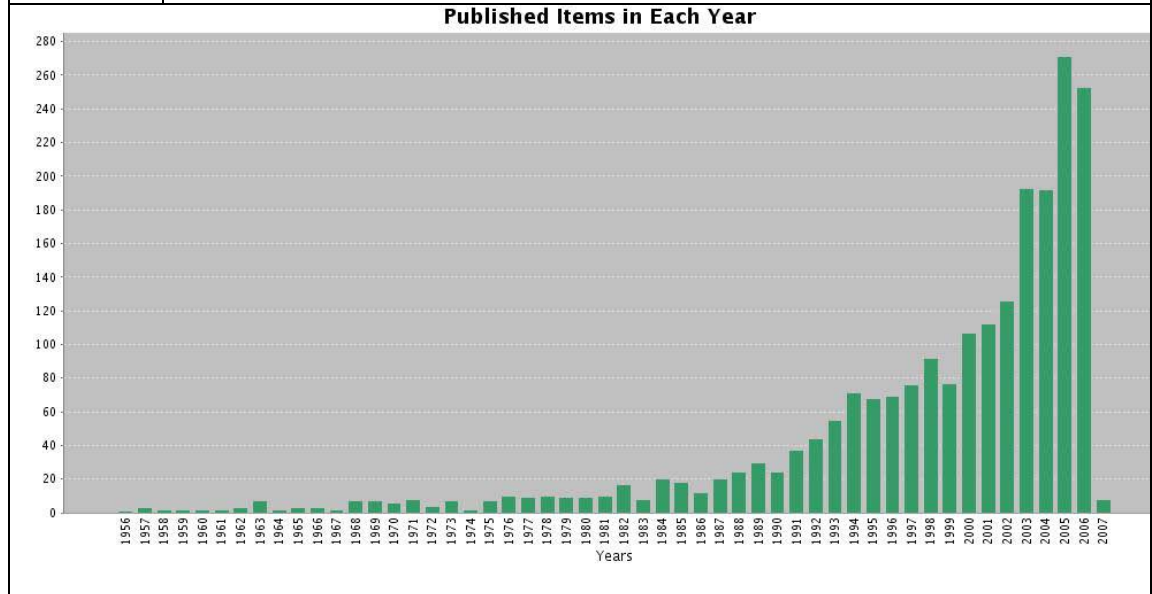
3.2.2.05 English was selected as the language of choice basically because I am limited to English and the Malaysian / Indonesian languages and any qualitative research on languages with which I was unfamiliar would be pointless. Also very few articles are published in the Malaysian / Indonesian languages.

3.2.2.06 I selected 'articles' because Web of Science is a journal articles based database and, as discussed further in the next chapter, I considered that journal articles better reflected the discipline of entrepreneurship, rather than texts / books or newspaper / magazine articles which could be considered to be from the discourse on entrepreneurship, rather than the discipline.

3.2.2.07 It was for the same reason that I used the term 'entrepreneurship', because I believe this reflects the discipline. I considered that using the search term 'entrepreneur' would change the focus of the search to outside of the discipline. Preliminary searches

using 'entrepreneur' also gave a volume of citations that was larger than I wanted to handle.

3.2.2.08   The above search parameters gave a search result of 2,161 articles.

3.2.2.09   One of the first mistakes I made was to follow the Web of Science figure that indicated these articles contained 13,000 citations. (the spread is shown in Graphic 3b) I felt that this was a manageable number of citations to analyse. However this is a limitation on the Web of Science citation counts, as it only refers to citations to articles contained in the Web of Science list of journals. It does not account for the citations external to the Web of Science database. So rather than there being 13,000 citations to analyse the final figure came to 87,060. I attribute this to my inexperience as a researcher and blithely continued with my citation analysis, expecting to be analysing 13,000 citations and only when my citation count surpassed this figure did I begin to realise the problem. I gained experience in a rather steep, and time consuming, learning curve.

Graphic 3b	*Bar chart of list of citations from the Web of Science database 1956 – 2006. Total 13,000 citations.*

Citations in Each Year
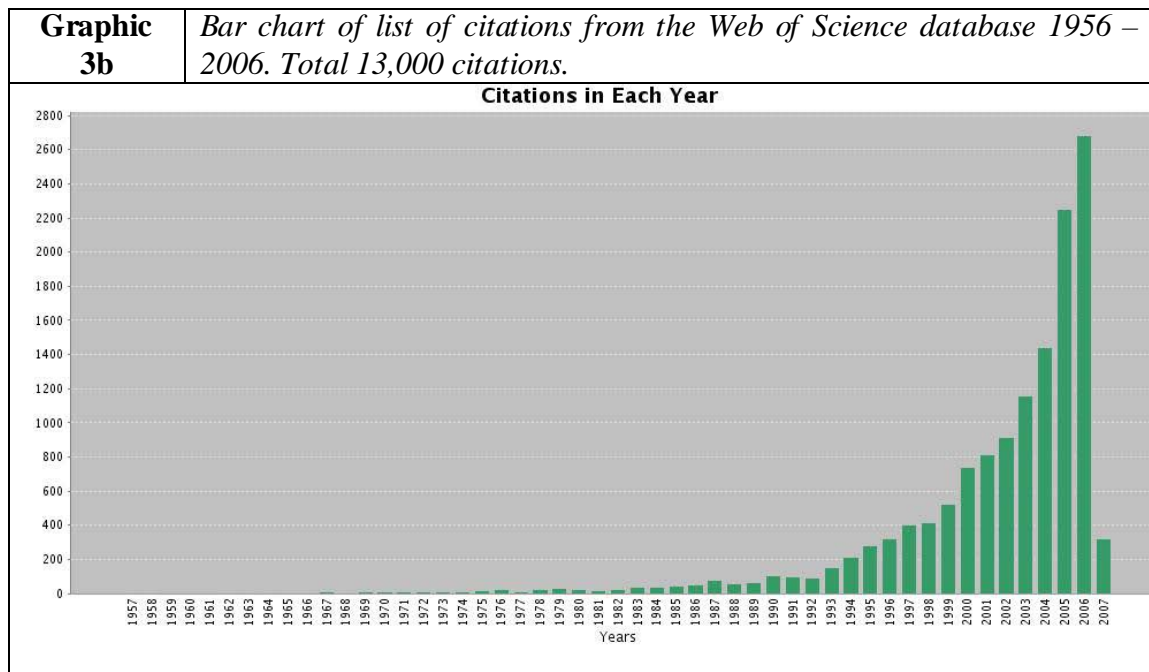
3.2.2.10   These two figures, 13,000 and 87,060, provide a useful tool to define the difference between the *episteme* and the *aliran*. The Web of Science *episteme* is the

collective 13,000 citations according to, and effectively recognised by, the Web of Science, while the 87,060 citations are what I describe as the *aliran*. I use *episteme* as in the Web of Science articles *episteme* which has dates 1956 to 2006 and the *aliran* in a more broader sense that includes texts, and commences from Cantillon, Adam Smith, Jean Baptiste Say, etc that are referred to, by way of citations, from the *episteme*, but which are not necessarily part of the *episteme*. As discussed earlier the Web of Science *episteme* is effectively a portal to the *aliran*.

3.2.3. Analysis techniques and table layout

3.2.3.00 This section outlines the step by step process in undertaking the citation analysis of the results of my search of the Web of Science database and the layout of the frequency tables produced.

3.2.3.01 Citation analysis was undertaken on the 87,060 citations within this *aliran* using simple frequency tables. As could be expected there were large numbers of single times or dual times citations to what could be described as peripheral articles; however 789 articles (16,753 citations) were cited 10 times or more. For better manageability of the data, it was decided to raise the bench-mark level (of those articles attaining *gravitas*) to being cited 14 times or more. This reduced the number of articles to 476 which was considered more manageable while reducing total of citations to only 13,278. The benchmark of 14 times cited allowed for the inclusion of a 1965 article by McClelland, 'Achievement and motivation', which could be considered, in my opinion, to be an article with significance to the emerging discipline. While its *gravitas* is not especially high, being cited only 14 times, it significance lies in its pioneering status in the emerging discipline of entrepreneurship.

3.2.3.02 The following describes the steps taken in the citation analysis:

a) Extract the list of 2,161 articles from Web of Science, inclusive of citation lists, abstracts, journal of origin, and dates. A sample of this is shown in Graphic 3c for McClelland's 1965 article.

Graphic 3c	*Sample of citation report from the Web of Science*

	PT J
	AU MCCLELLAND, DC
	TI N ACHIEVEMENT AND ENTREPRENEURSHIP - A LONGITUDINAL-STUDY
	SO JOURNAL OF PERSONALITY AND SOCIAL PSYCHOLOGY
	LA English
	DT Article
	CR ATKINSON JW, 1958, MOTIVES FANTASY ACTI
	  MCCLELLAND DC, 1953, ACHIEVEMENT MOTIVE
	  MCCLELLAND DC, 1961, ACHIEVING SOC
	  MEYER HH, 1961, J ABNORMAL SOCIAL PS, V63, P570
	  MOSS HA, 1961, J ABNORMAL SOCIAL PS, V62, P543
	  RICCIUTI HN, 1955, PREDICTION ACADEMIC, V2
	NR 6
	TC 75
	PU AMER PSYCHOLOGICAL ASSOC
	PI WASHINGTON
	PA 750 FIRST ST NE, WASHINGTON, DC 20002-4242
	SN 0022-3514
	J9 J PERSONAL SOC PSYCHOL
	JI J. Pers. Soc. Psychol.
	PY 1965
	VL 1
	IS 4
	BP 389
	EP 392
	PG 4
	SC Psychology, Social
	GA CBG26
	UT ISI:A1965CBG2600021
	ER

	Note – times cited 'TC 75' refers to the number of times cited in total Web of Science journals. My count from the *episteme* search is 14 times. The difference equates to the fact that the article has been cited by more articles than our particular 'entrepreneurship' *episteme* reveals, the difference may be in articles unrelated to entrepreneurship.

b) This list was downloaded to a local computer in blocks of 500 files. The blocks of 500 are a feature of the Web of Science database that has a maximum limit of 500 articles per download. These blocks did however provide a rough, if uneven,

chronological sequence. This gave a layout of four blocks of 500 with a balance download of 161 articles as shown in Graphic 3d. The symbol 'VC' is Roman numerals for 500.

Graphic 3d	Breakdown of the four blocks of 500 articles per download				
VC1 (500) 2006-2005	VC2 (500) 2005-2002	VC3 (500) 2002-1997	VC4 (500) 1997-1983	Bal (161) 1983-1956	Total (2161)

c) The blocks of 500 that I initially used do have minimal value, except that they are chronological and give an approximate overview with regards to time. Thus Reich 1987 HARVARD BUS REV, V65, as shown in Graphic 3e, does indicate that the article by Reich, published in 1987 in volume 65 of the Harvard Business Review, was popular after publication in the late 80s, but since 2002 been largely ignored.

Graphic 3e	Example of chronological sequence on one article							
				VC1 (500) 2006 2005	VC2 (500) 2005 2002	VC3 (500) 2002 1997	VC4 (500) 1997 1983	Bal (161) 1983 1956	Total (2161)
REICH R	1987	HARVARD BUS REV, V65	J	0	0	3	10	0	13

d) The blocks of 500 were transposed from the downloaded email format to Microsoft Word '*.doc' format, to enable better copy and paste functionality.

e) All citations (except those marked with an asterisk (*) which indicated an article without a specific author that could be identified e.g. *BIBLE, I TIMOTHY, V6 or *CENTR STAT OFF, 1950 CENS AGR) were copied to an Excel spread sheet with the five (four VC and one balance) columns for each block. Each reference has a single count in the respective column. These citations were sorted alphabetically.

f) For ease of use, the total list was copied to a separate alphabetical file. All references to the same article were manually accumulated into one row with the

totals of the respective columns as a frequency table. All columns were totaled horizontally, to get totals per article, and vertically, as a cross check to ensure all references were accounted for.

g) Sorting the articles based on total references accumulated enabled identification of those references greater than 10 total references. These 789 references were copied to a separate file.

h) Looking at these 789 references gave the impression of having too much data, so to further limit the total data to be analysed, the list was shortened to only include those with greater than 14 total references. This figure was selected to permit the inclusion of McClelland's 1965 article. This revision gave a list of 476 articles. The layout of this table is described in the section below.

3.2.3.03 An initial eleven column table layout was used with the respective columns, from left to right, consisting as follows:

1. First author name, in the format used by Web of Science.
2. Other authors as identified by the article / text.
3. Year of publication; for articles the year of publication is used. If texts, the same except when there are multiple editions then there is a range of years, however the first year is the one actually used.
4. Short title of the journal or text, as per the format used by Web of Science, as mentioned above this sometimes was prone to changes.
5. Type :
   - T = text as in book
   - J = journal article
   - JE = journal article that was part of the *episteme* of 2,161,
   - JNW = journal article not in the Web of Science – discussed further in the next chapter.

6-11. VC1, VC2, VC3, VC4, Bal, Total. Being that discussed in section

3.2.3.02 b.

3.2.3.04 Graphic 3f is a sample of this presentation format and shows the presentation for the 21 most frequently cited articles in the *aliran*. The full list of the 476 articles / texts is shown in Appendix One.

Graphic 3f	*The 21 most frequently cited articles and texts in the aliran*										
Name first author	Co-author	Year	Short Title	T/J	VC1 (500) 2006 2005	VC2 (500) 2005 2002	VC3 (500) 2002 1997	VC4 (500) 1997 1983	Bal (161) 1983 1956	Tot. 2161
SCHUMPETER		1911 - 2004,	THEORY EC DEV	T	79	68	86	69	29	331
SCHUMPETER		1934 - 1995,	CAPITALISM SOCIALISM	T	30	42	34	38	1	145
MCCLELLAND		1961 - 1976,	ACHIEVING SOC	T	26	18	23	36	27	130
SHANE	Venkataraman	2000,	ACAD MANAGE REV, V25,	JE	60	48	9	0	0	117
KIRZNER		1973,	COMPETITION ENTREPRE	T	31	23	23	26	8	111
DRUCKER		1984 - 1999,	INNOVATION ENTREPREN	T	23	19	24	42	0	108
EVANS	Leighton	1989,	AM ECON REV, V79	J	35	27	32	12	0	106
PORTER		1984 - 1998,	COMPETITIVE ADVANTAG	T	25	27	28	24	0	104
KNIGHT		1921,	RISK UNCERTAINTY PRO	T	29	17	29	17	7	99
BARNEY		1991,	J MANAGE, V17	J	35	29	26	3	0	93
GRANOVETTER		1985,	AM J SOCIOL, V91	J	23	33	21	14	0	91
PORTER		1980 - 1984	COMPETITIVE STRATEGY	T	21	15	32	21	0	89
PENROSE		1959 - 1995	THEORY GROWTH FIRM	T	19	20	33	12	5	89
LUMPKIN	Dess	1996	ACAD MANAGE REV, V21	JE	23	28	29	1	0	81
LOW	Macmillan	1988	J MANAGE, V14	J	12	15	25	28	0	80
WALDINGER	Aldrich	1990 - 1992	ETHNIC ENTREPRENEURS	T	4	23	32	21	0	80
NELSON	Winters	1982	EVOLUTIONARY THEORY	T	20	24	22	13	0	79
REYNOLDS		1999 - 2007	GLOBAL ENTREPRENEURS	T	55	19	5	0	0	79

EVANS	Jovanovic	1989	J POLIT ECON, V97	J	30	14	23	10	0	77
VENKATARAMAN		1997	ADV ENTREPRENEURSHIP, V3	J	34	29	14	0	0	77
GARTNER		1988	AM J SMALL BUSINESS, V12		20	11	14	12	0	57
		1989	ENTREP THEORY PRACT, V13		5	7	4	4	0	20
										77

3.2.3.05   In section 4.3 during the discussion of the identification of the sub-*aliran* the format is modified with the exclusion of Type and VC1, VC2, VC3, VC4, and Bal. An additional column is added that includes the title to the article / text. The following section details some of the problems encountered with collating the data.

3.2.4. Problems encountered

3.2.4.01 Problems encountered during the above analysis were as follows:

a) The initials of the first author's name were sometimes singular, or plural or sometimes transposed. This gave some initial difficulties in sorting functions that meant that the process could not be automated. Spelling errors were common.

b) Occasionally changes in names of the journal's short title used by Web of Science created problems. For example 'ENTRE THEORY AND PRAC' was also named 'ENTREPRENEUR THE', and 'J BUS VENT' was also named 'JNL BUSINESS VENTURING'.

c) Poor initial citing of reference in the originating article occurred.

d) Poor transposition of reference data from the original article to the Web of Science database sometimes also occurred.

e) Some dual or more articles by one author appeared in the same journal. For example Baumol had four articles in the 1968 AM ECON REV, V58, However looking at the journal article usually gave an indication which one was relevant. The original citation included page references. However I had removed them during the sorting process for convenience, which, in retrospect, was a bit premature.

f) For the journal articles there were not many that were reprints of previous articles, only one by Gartner, 'Who Is an Entrepreneur? Is the Wrong Question' that was published in both AM J SMALL BUSINESS, V12 and ENTREP THEORY PRACT, V13. The combined *gravitas* of these two articles raised its total to 77 and bought it into the Top 21 as shown in Graphic 3f.

3.2.5 Hermeneutics – developing the *aliran*

3.2.5.01   The above completed the data collection process in order to try and show the *episteme* 'as it is'. The next step was to apply the hermeneutic approach for a more qualitative analysis process of the above. The 476 high *gravitas* articles could be sorted either as to year of publication to give a time line or sorted as to weighting from those articles / texts having the most *gravitas* to those with the least *gravitas*. Effectively this sorting provided a two dimensional perspective, with the article and its weighting, over time. Appendix One shows the 476 high *gravitas* articles sorted chronologically.

3.2.5.02   Foucault [2002] has described the *episteme* as being three dimensional and it is logical that such three dimensionality also apply to the *aliran* as an extension of the *episteme*. The first dimension is the article and its *gravitas*, the second dimension being time, the third dimension is some form of spatial relationship between the articles, for which I am using sub-*aliran* or the ontology.

3.2.5.03   As discussed in Part Two, the ontology should be apparent from the archaeological process used and I was hoping that an ontology would readily present itself

in the *aliran* in that the sub-*aliran* would be easily identifiable. In some ways this was possible, but only in a limited manner. For example an ethnic / racial sub-*aliran* could be identified with articles by authors such as Light, Bonaich etc., being significant in this sub-*aliran*. However in other areas, while there was as suggestion of some form of sub-*aliran*, actually justifying inclusion of articles into sub-*aliran* became increasingly illusive. The identification of significant words (not key words) in the abstracts or the article did assist in such justification process, however slotting an article into an ontology proved difficult. The Web of Science key word was not used as often it seemed to vary significantly from the contents of the article or abstract.

3.2.5.04   This lack of ability to clearly delineate sub-*aliran* or ontologies did suggest that the notion of ontologies as being unthematized [Smith, 2003 and Mulhall, 2005] was happening and that the thematic process has not occurred in the *episteme* of entrepreneurship. This lack of thematisation could be as because as per Gruber [1993], ontological commitment has not taken place or no 'discontinuities' have been presented. However what was also possible was that my own data analysis was not yet suitable and it was because of this that patterns were not emerging.

3.2.5.05   To see if there was any possible way to detect any pattern I further analysed a random selection of the citations to see which journals carried articles that cited the original article citations. This analysis was primarily to see whether there was any distinct pattern and a suggestion of any inter-relationship between journals. There was a possible pattern in areas such as ethnic ontologies to entrepreneurship, as can be seen in Graphic 3g in which the journals citing LIGHT I, 1972, ETHNIC ENTERPRISE AM, T do tend towards a similar ontology. However this pattern was all that I perceived with my random attempt, although further research may reveal some form of pattern emerging.

3.2.5.06   To a certain degree I was limited in this analysis as I did not have a clear frame of reference for identifying the sub-*aliran* of ontologies, from which to work. The search for the ontology of entrepreneurship is described and discussed in section 4.2. It involved firstly attempting to apply an ontological frame of reference developed by

Mintzberg, Ahlstrand, and Lampel [1998] for strategic management to entrepreneurship. This approach, as is discussed later, had limited results.

Graphic 3g	*A sample of seeking an ontological guide using the reference location in the citing journals*

Microsoft Excel - Episteme

File Edit View Insert Format Tools Data Window Help

Arial   10   B I U

J37   fx 5

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
46	2	SMITH NR,		1967,	ENTREPRENEUR HIS FIR	T	EntStud		3	5	6	2	16	
47	1	THOMPSON JD,		1967,	ORG ACTION	T	Orgn	5	7	5	12	7	36	
48	2	WEBER M,		1968 - 1978,	EC SOC	T	EcSoc	9	3	5	4	1	22	
49	4	BAUMOL W,		1968,	AM ECON REV, V58	JE	EntStud	7	5	6	16	4	38	4 articles
50		BAUMOL W,		1968,	AM ECON REV, V58	JE								
51		BAUMOL W,		1968,	AM ECON REV, V58	JE								
52		BAUMOL W,		1968,	AM ECON REV, V58	JE								
53	1	LEIBENSTEIN H,		1968,	AM ECON REV, V58	JE	EntStud	2	7	7	9	4	29	
54	3	MCCLELLAND DC,		1969,	MOTIVATING EC ACHIEV	T	Psych	2	1	4	9	2	18	
55	1	HORNADAY JA,	ABOUD J	1971,	PERS PSYCHOL, V24	J	EntStud	7	3	6	15		31	
56	1	KILBY P,		1971,	ENTREPRENEURSHIP EC	T	EntStud	2	4	7	13	10	36	Heffa-lump:
57	1	ALCHIAN AA,	DEMSETZ H	1972,	AM ECON REV, V62	J	EconCh	3	2	10	4	2	21	Team productive process
58	1	CHILD J,		1972,	SOCIOLOGY, V6	J	Orgn	5	6	13	9	1	34	
59	1	GREINER LE,		1972,	HARVARD BUS REV, V50	J	Orgn	7	10	4				
60	6	LIGHT I,		1972,	ETHNIC ENTERPRISE AM	T	EcSoc	6	8	26				
61	2	BONACICH E,		1973,	AM SOCIOL REV, V38	J	EcSoc	4	6	9				
62	2	GRANOVETTER MS,		1973,	AM J SOCIOL, V78	J	EcSoc	17	21	5				
63	4	KIRZNER IM,		1973,	COMPETITION ENTREPRE	T	EntTheo	31	23	23				
64	2	MINTZBERG H,		1973,	CALIFORNIA MANAGEMEN, V16	J	Orgn	2	3	4				ONFIG
65	1	RUMELT RP,		1974 - 1989,	STRATEGY STRUCTURE E	T	CorpS	5	1	3				
66	1	TVERSKY A,	KAHNEMAN	1974,	SCIENCE, V185	J	Theory	5	2	7				
67	1	HAIR JF,		1975 - 1999,	MULTIVARIATE DATA AN	T	ResM	12	10	3				
68	2	SHAPERO A,		1975,	PSYCHOL TODAY, V9	J	Psych	5	3	9				
69	2	WILLIAMSON OE,		1975,	MARKETS HIERARCHIES	T	Econ	5	8	20				
70	1	JENSEN MC,	MECKLING	1976,	J FINANC ECON, V3	J	Firm	9	10	11				
71	2	BIRCH DL,		1977 - 1979,	JOB GENERATION PROCE	T	EcSoc	6	5	8				
72	1	TIMMONS J,		1977 - 2003,	NEW VENTURE CREATION	T	NewVen	16	21	21				
73	1	ARMSTRONG JS,		1977,	J MARKETING RES, V14	J	ResM	5	7	9				
74	3	CHANDLER AD,		1977,	VISIBLE HAND MANAGER	T	Mngmt	1	5	6				ONFIG
75	9	COOPER AC,	Bruno AV	1977,	BUS HORIZONS, V20	J	HiTech	5	1	4				
76	1	DEVRIES MFR,		1977,	J MANAGE STUD, V14	JNW	EntStud	4	2	5				
77	4	HANNAN MT,	FREEMAN J	1977,	AM J SOCIOL, V82	J	Orgn	7	10	14				IVIRO
78		HANNAN MT,	TUMA NB, (	1977,	AM J SOCIOL, V82	J	EcSoc							IVIRO
79	2	JOHANSON J,	VAHLNE JE	1977,	J INT BUS STUD, V8	J	Intl	14	11	5				
80	1	KHANDWALLA A,		1977,	DESIGN ORG	T	Orgn	1	4	10				
81	1	MEYER JW,	ROWAN B	1977,	AM J SOCIOL, V83	J	Orgn	14	11	7				
82		MEYER JW,	ROWAN B	1977,	AM J SOCIOL, V83	J								

Lock:
INT MIGR REV V35
ORGAN STUD V22
Jl Small Bus. Econ. Group V16
ETHN RACIAL STUD V24
SOC SCI QUART V81
ENVIRON PLAN A V32
SOCIOL FORUM V15
J HUM RESOUR V35
SOC PROBL V47
INT MIGR REV V34
CAN J SOCIOL V25
URBAN EDUC v34
ETHN RACIAL STUD V22
SOCIOL INQ V69
ETHN RACIAL STUD V22
CAN GEOGR-GEOGR CAN V42
URBAN GEOGR V19
URBAN GEOGR V19
URBAN GEOGR V19
SOCIOL FORUM V13
J BUS VENTURING V13
J SOC HIST V31
J SMALL BUS MANAGEMENT V35
CAN J ADM SCI V14
INT MIGR REV V34
ENVIRON PLAN C-GOV POLICY V18

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3.2.5.07 Subsequently I ventured, using Formal Concepts Analysis, into developing a graphic representation of what, based on the information from the *episteme* and the *aliran*, the 'heffalump' of entrepreneurship might look like. As discussed in section 4.2, this provided a representation of the spatiality but missed the aspects of *gravitas* and of time.

3.2.5.08 Given the limitations on presenting three dimensional models as discussed earlier I was getting increasingly frustrated as to finding justification for the identification

of sub-*aliran* and suitable presentation methods. However the development of the heffalump described above began to suggest an approach that did not involve slotting articles into a sub-*aliran* or ontology, that had proved difficult. The representation of the heffalump suggested that it may be the attempt to slot the articles into an ontology that was problematic, whereas what may be feasible was instead positioning the article in relationship to the interstices between the ontologies. Given the model developed in Graphic 2h the more subjective nature of the discipline meant that the ontologies were not strongly defined and the relationship of the sub-*aliran* together with the interstices suggested a different approach. This approach was undertaken and the results generated are discussed in the third chapter to the following Part Four on Empirics. The method in this approach involved reviewing the 476 texts and articles in the *aliran* and is described in section 4.2.3.06.

3.2.5.08   Part of the hermeneutic approach that is developed in Part Four is determining the level of overt construction in the various sub-*aliran* that I am taking to be the ontologies in the discipline. As Schmidt [2006, p102] discusses: "The task of hermeneutic understanding is to differentiate the legitimate prejudices from all of the illegitimate ones that need to be criticized and dropped". Once I had resolved the issues of ontological identification through greater use of the interstices then such process of differentiation became substantially easier. The heffalump model I developed became something of a basis against which such construction could be compared to determine overt-ness. The results of the hermeneutic examination, as will be discussed in Part Four, did reveal some weaknesses in the heffalump model that meant that the model did need to be revised. These revisions, as will be discussed in Part Five, did actually contribute to a greater understanding of the value of the heffalump model and its application to the evolution of the discipline.

Part Four: Empirics

4.0   Part Four discusses the empirics of this investigation starting with a discussion on some of the preliminary observations from the phenomenological analysis on the Web of Science database of journals from which I draw my *episteme*. From this *episteme* I search for an existing ontology of entrepreneurship and after having tried an approach developed by Mintzberg, Ahlstrand, and Lampel's [1998] which they applied to strategic management, found it to be wanting and instead tried to use a Formal Concepts Analysis approach which produced a rough outline of an ontology of the discipline, which I have called my heffalump model. I then look to the *aliran* produced from the 87,060 citations from the e*pisteme* to see if this heffalump model is an accurate representation of the discipline. A selection of sub-*aliran* from the *aliran* are discussed as ontologies and assessed as to their past or future contributions to the discipline.

4.1 Interpretation – Journals from the *episteme*

4.1.1 Preliminary observations
4.1.2 Double redundancy in my data collection process
4.1.3 Data collection summary – the 2,161 portal
4.1.4 Suggestions for ontologies

4.1.00   Five numbers are significant in the following sections. The total number of journals from the database search in the Web of Science is 627. The number 2,161 is the number of articles that constitutes the *episteme*; and 87,060 being the *aliran* which is the total citation references produced by the *episteme*. From which 789 articles and texts received ten citations or more. Of those articles 476 received more than fourteen citations each.

4.1.01   The following sections firstly look at some of my preliminary observations from the epistemic analysis. I then suggest that, due to a built in double redundancy in my search, the choice of *episteme* may not be too significant and it is the *aliran* produced by the *episteme* that is more significant. Some of the problems faced with my use of Web of Science as the source of the *episteme* may be ameliorated by the *aliran*.

4.1.03   I then continue to look at the 2,161 portal in more detail, including a discussion on citations and citation indexing and later try to identify ontologies from this *aliran*.

4.1.1 Preliminary observations

4.1.1.01   As graphics 3a and 3b indicate, the number of articles in the *episteme* and in particular the number of citations (even if only to those Web of Science listed journals) has increased markedly over the last 10-15 years. My search produced 2,161 articles which as per the above graphic indicate that it is a fairly young *episteme* but one that appears, based upon Graphic 3a to have grown rapidly, particularly in the last ten years.. The relative recency of the majority of the articles could well support Low's [2001] contention that the discipline is still in its adolescence.

4.1.1.02   The first interesting preliminary observation I have is more a reaction from me as a person who has at times been entrepreneurial. This is not a research finding per se but is something that is part of a discussion. I find by reading the abstracts of these 2,161 articles it is very clear that entrepreneurs, as practitioners, are not the intended audience. It could be argued that my selection of 'entrepreneurship' in the search prejudiced the results to appear thus; however my belief is that by even using 'entrepreneur' as the 'topic search' (rather than entrepreneurship) would have produced a similar result.

4.1.1.03   Using 'Foucault's Triangle' of Power, Right and Truth Effects, I suggest that these articles in the *episteme* are very much focused towards the Right apex where entrepreneurship as a discipline is creating itself. This could be where the difference between *savoir* / *verstehen* / understanding and *connaissance* / *erklaren* / explanation as per Graphic 2c comes into play in that these articles are representational of the later. The academics are attempting to explain entrepreneurship.

4.1.1.04   Very likely little of this is filtering through to the actual entrepreneurs to aid in their understanding of entrepreneurship. It is almost as if the academics are saying `we are talking about you - not to you, directly.' In section 2.2.1.07 I discussed the bi-directional flow of power around Foucault's triangle. The clockwise flow where the Truth Effects of the practitioner replenishes the power of the discipline and the anti-clockwise flow where the connaissance knowledge is imparted to the nascent practitioners by way of teaching, workshops and seminars. As discussed in section 2.2.1 I offer my own *savoir* opinion that while such impartation of knowledge assists in explaining entrepreneurship it may not necessarily lead to a greater understanding of being entrepreneurial. I started, from this point, to get the awareness that this particular episteme from the Web of Science is very much a peer to peer type exercise and could best be described as a forum for academics where they explain entrepreneurship to each other.

4.1.1.05   The second preliminary observation that emerges from the analysis to date is that very few of these 2,161 articles from the Web of Science *episteme* could be considered to be significant within the *aliran*. Assuming that citation analysis is

representational of a form of peer acceptance then the greater level of citation per article would indicate a greater level of peer acceptance. Only 69 articles (JE) from the *episteme* were included in the final 476 articles with high *gravitas* in the *aliran* and they had a total of 1,731 citations out of the 13,278 citations. This may suggest that the Web of Science is not a good source from which to derive the *episteme*. However as discussed in the next chapter there is a form of double redundancy in the data collection process, (between the *episteme* and the *aliran*) which ameliorates possible limitations in the selection of the database.

4.1.1.06   This lack of significance of the *episteme* articles in the *aliran* could be, in part, due to the relative 'youth' of the *episteme* in that these articles have 'yet to be discovered'. It could also be, in part, due to a 'natural academic inclination towards obscurity' in that their area of specialization is such that it is only 'understood by a few people' [Fuller, 2005].

4.1.1.07   What it did suggest is that the *episteme* (based upon the Web of Science or any other academic listing of journals and citations) is limited as a particular research tool and that the *aliran* may be a better tool in which to approach such subject. This is elaborated on in the next section.

4.1.2 Double redundancy in my data collection process

4.1.2.00   As discussed in the previous sections, my selection of the Web of Science as the database to create my *episteme* may not be an 'ideal' choice; however I believe that there is a built in double redundancy in the creation of the *aliran* from this *episteme* that ameliorates the problems with this selection.

4.1.2.01   While using the Web of Science database does give less dissonance, it could be said that it is still not a perfect database per se. Apart from the external factors discussed in section 3.2.1 above there are a range of internal problems in the Web of Science that my research revealed. It has flaws, it is incomplete, there are, in my opinion, a very high

number of mis-spellings and errors in data entry, that meant that the sorting process could not be automated. However I would assume that these flaws are not only found in Web of Science database, and since it appears that most of the databases are compiled manually, the same errors can reasonably be expected to also appear in the other databases.

4.1.2.02   Harzing and van der Wal [2008] also commented on misspellings being significant issue, particularly when comparing studies. They also listed the following criticisms of Web of Science:

- Web of Science 'general search' is limited to ISI-listed journals.
- Web of Science 'cited reference' is limited to citations from ISI-listed journals.
- Web of Science 'cited reference' counts citations to non-ISI journals only with respect to the first author.
- Web of Science has poor aggregation of minor variations of the same title.
- Web of Science has very limited coverage of non-English sources. [pp3-4]

4.1.2.03   From my own study, the Web of Science is incomplete as to the journals that it lists. While my research revealed that 627 different journals contributed to the *episteme* from the Web of Science database, these journals were not necessarily complete as to full listings of volumes and issues. In Graphic 4a the first column contains two entries, the first is the journal name and the second entry is the first issue of that journal that is used in the Web of Science citation list. If the Web of Science was complete in its listings of journals, then all journals would start from Volume: 1 Issue: 1, plus any special issues. However for the top twenty one journals from my study there are some significant journals such as those listed below where the first volume in the Web of Science database (as shown in parenthesis) are significantly distant from the actual first volume produced by those journals.

- Entrepreneurship and Regional Development. (Volume: 13 Issue: 1 2001)

- Entrepreneurship – Theory and Practice. (Volume: 28   Issue: 2 2003)

- Journal of Small Business Management. (Volume: 33 Issue: Jan 1995)

- International Small Business Journal. (Volume: 21   Issue: 1 2003)

- Harvard Business Review. (Volume: 34   Issue: 1 1956)

Graphic 4a	The top twenty one journals in the Web of Science episteme on entrepreneurship including the data on the first volume of each journal in the episteme						
JOURNAL NAME **First issue used in Web of Science**	**TS Impact Index 2006**	**VC1 (500) 2006 2005**	**VC2 (500) 2005 2002**	**VC3 (500) 2002 1997**	**VC4 (500) 1997 1983**	**Bal (161) 1983 1956**	**Total (2161)**
1. The Journal of Business Venturing: Entrepreneurship, Entrepreneurial Finance, Innovation and Regional Development Volume: 2 Issue: 1 1987	1.608	29	45	54	70	0	198
2. Small Business Economics Volume: 4 Issue: 1 1992	0.476	41	26	28	14	0	109
3. Technovation Volume: 1 Issue: 1 1981	0.582	19	12	11	13	2	57
4. Entrepreneurship and Regional Development. Volume: 13 Issue: 1 2001	0.800	17	22	7	0	0	46
5. Strategic Management Journal Volume: 1 Issue: 1 1980	2.632	5	10	15	9	1	40
6. Entrepreneurship – Theory and Practice Volume: 28 Issue: 2 2003	2.123	26	13	0	0	0	39
7. Journal of Small Business Management Volume: 33 Issue: Jan 1995	1.018	9	10	14	2	0	35
8. Research Policy Volume: 3 Issue: 1 1974	1.328	12	15	7	1	0	35
9. International Journal of Technology Management Volume: 9 Issue: 5-7 1994	0.233	14	6	3	7	0	30
10. Journal of Business Ethics Volume: 1 Issue: 2 1982	0.597	12	8	6	0	0	27
11. Regional Studies Volume: 1 Issue: 2 1967	1.162	5	8	2	7	0	22
12. Journal of Management Volume: 9 Issue: 2 1983	1.954	5	6	3	5	0	19
13. Management Science Volume: 3 Issue: 1 1956	1.687	7	4	6	1	1	19
14. International Small Business Journal Volume: 21 Issue: 1 2003	0.812	11	7	0	0	0	18
15. Journal of Business Research Volume: 1 Issue: 2 1973	0.815	4	6	1	6	0	17
16. Organization Studies Volume: 2 Issue: 1 1981	1.583	6	4	4	3	0	17
17. Academy of Management Journal Volume: 1 Issue: 1 1958	3.533	4	3	5	2	2	16
18. Business History Volume: 1 Issue: 1 1958	0.288	1	2	1	6	4	14
19. Harvard Business Review	1.505	1	0	5	7	1	14

Volume: 34 Issue: 1 1956						
20. Journal of Evolutionary Economics Volume: 6 Issue: 1 1996	0.692	1	6	7	0	0	14
21. Journal of International Business Studies Volume: 7 Issue: 1 1976	2.254	3	5	2	3	1	14
		232/ 500	218/ 500	181/ 500	156/ 500	12/ 161	800/ 2161
		46.4%	43.6%	36.2%	31.2%	7.5%	37.0%

4.1.2.04   While it cannot be denied that the criticisms of Web of Science described by Harzing and van der Wal [2008], along with the limits I have found from my own research, do present the possibility of biased or incomplete data, there is a significant issue that, it could be argued, may serve to ameliorate such criticism and limits. This is the simple fact that it is not the 2,161 journals in the Web of Science that are being used as the basis of my research, but the 87,060 citations from those 2,161 journals. These citations are not delimited by the exclusions from the ISI index on which Web of Science is based. Hence the limitations described by Harzing and van der Wal [2008] above may not actually have such a major impact on my own research.

4.1.2.05   For example within my *aliran* of 87,060 citations there are references to non-English journals such as 'TIJDSCHRIFT VOOR ECONOMISCHE EN SOCIALE GEOGRAFIE' and 'RIVISTA INTERNAZIONALE DI SCIENZE ECONOMICHE E COMMERCIALI' and references to journals not listed in ISI. The Journal of Developmental Entrepreneurship and the Journal of Research in Marketing and Entrepreneurship, associated with the Association of Marketing, that were discussed in section 2.5.4.06, are not ISI journals and do not appear in the Web of Science *episteme*. However both of them appear in the *aliran*. The 'J DEV ENTREPRENEURSH' (established 1996) received a total of 49 citations and the 'RES MARKETING ENTREP' (established 1999) received a total of 34 citations. One article from the Journal of Developmental Entrepreneurship 'ARDICHVILI A, 2001, J DEV ENTREP, V6, P169' received a total of 12 citations, making it the most cited article from this journal.

4.1.2.06   The 'minor variations in title' described by Harzing and van der Wal are mostly identified and solved with the manual processing of the data. Furthermore the issue of 'first author name only' is less that significant in this research because the *gravitas* of the article is more important than the *gravitas* of the author(s) per se. The use of first author name only is an indexing measure of convenience.

4.1.2.07   For want of a better description, in this study, the Web of Science *episteme* is only a portal. It provides an entry point to access the 87,060 citations of the *aliran* provided by the 2,161 journals that the portal contains. By not using the journals themselves, but the citations within the journal there is, in a sense, a form of 'double redundancy' (to use a term from engineering remote control /SCADA systems) where the limitations and exclusions of the Web of Science *episteme* have a lesser impact on the *aliran* itself.

4.1.2.08   The *aliran* is protected from the incompleteness of the Web of Science *episteme* as discussed in 4.1.2.03 in that while, for example, the Web of Science listings of 'Entrepreneurship – Theory and Practice' start from 'Volume: 28   Issue: 2 2003' there are 21 citations   relating to earlier volumes of this journal. Also there are 9 citations relating to the Journal of Business Venturing, volume 1 that are not included in Web of Science journals but appear in my *aliran*.

4.1.3   Data collection summary – the '2161' portal.

4.1.3.00   This section looks in more detail at the 2,161 *episteme* from the Web of Science database and starts to draw some discussion topics on the development of the *episteme*.

4.1.3.01   The 2,161 articles sourced from a total of 627 Web of Science *episteme* journals and produced 87,060 citations. What was apparent was that while there were large numbers of citations to a reasonably large number of journals, the data tended to skew in favour of a small number of journals which may be considered significant to entrepreneurship.

4.1.3.02   The top 21 journals listed in Graphic 4a accounted for 800 appearances out of the total of 2,161, or 37%. Two journals, the Journal of Business Venturing and Small Business Economics respectively had 198 and 109 appearances. Entrepreneurship and Regional Development, Entrepreneurship – Theory and Practice, and the Journal of Small Business Management probably could have had a greater number of appearances is all issues of the journals had been in the portal. As discussed in 4.1.2.08, Entrepreneurship – Theory and Practice should have garnered 21 more appearances to make actual 60 appearances. Also Journal of Business Venturing should have had a further 9 appearances for those articles in Volume:1 that were not in the Web of Science database.

4.1.3.03   Besides the top 21 journals with 37% of appearances from total journals, the distribution of the other journals was as shown in Graphic 4b. There is a heavy weighting for the number of journals which made only small numbers of appearances in the portal. While using 'entrepreneurship' as a search key word, many of the articles may have had only a peripheral reference to the subject and hence a large portion of the citations are to journals that could be considered less than relevant to the *episteme*.

Graphic 4b		*Chart depicting the spread of the 2,161 articles from the 627 journals in the Web of Science episteme on entrepreneurship.*			
21	journals had	more than 14	articles	800	37%
3	journals had	13	articles	39	1.8%
7	journals had	12	articles	84	3.9%
5	journals had	11	articles	55	2.5%
3	journals had	10	articles	30	1.4%
7	journals had	9	articles	63	2.9%
5	journals had	8	articles	40	1.9%
8	journals had	7	articles	56	2.6%
14	journals had	6	articles	84	3.9%
22	journals had	5	articles	110	5.0%
21	journals had	4	articles	84	3.9%
51	journals had	3	articles	153	7.1%
103	journals had	2	articles	206	9.5%
357	journals had	1	articles	357	16.5%
627	Total		Total	2,161	

4.1.3.04 It could seem that entrepreneurship is becoming increasingly focused on the top journals. In Graphic 4c (extracted from the data in Graphic 4a) there is a higher percentage of 46.4% in column VC1 compared to 31.2% in VC3 and 7.5% in VC4. This is a possible indication that the discipline is gaining greater identity over time and the core of the discipline is more strongly focused on these top journals rather than the peripheral journals.

Graphic 4c	Detail extracted from Graphic 4a to show the increased concentration of later articles in the episteme in fewer journals.				
VC1 **(500)** **2006-2005**	**VC2** **(500)** **2005-2002**	**VC3** **(500)** **2002-1997**	**VC4** **(500)** **1997-1983**	**Bal** **(161)** **1983-1956**	**Total** **(2161)**
232/ 500	218/ 500	181/ 500	156/ 500	12/ 161	800/ 2161
46.4%	43.6%	36.2%	31.2%	7.5%	37.0%

4.1.3.04 It is possible that even inside this 'core' that there is also a trend where 'The Journal of Business Venturing' has seen its share decrease from VC4 where with 70 appearances that comprise nearly half of the top 21 journal appearances (see Graphic 4a) and 14% of the 500 appearances in VC4 to 29 appearances in VC1 with only 12.5 of the top 21 journals mentioned and only 5.8% of the 500. By comparison 'Small Business Economics' has seen its share double in post 2005 VC1 compared to VC2. This could simply be a logistics situation where, in a burgeoning arena, the JBV has only limited space via a limited number of articles and issues per annum. It could also represent a change in the direction of the journal with fewer articles including the term entrepreneurship. This could represent a shift in *gravitas* of the JBV within the discipline or could be a conscious effort by the JBV to relocate itself in relationship to the discipline.

4.1.3.05 To look at the *gravitas* of the various journals in the top 21 the Thompson Impact Indexes have been included in Graphic 4a. While there may be some value in comparing the impact indexes for each journal I am of the opinion that these are really of minor value. When in established sciences, such as medicine, the New England Journal of Medicine receives an ISI Impact Factor of 34.83 and the Annual Review of Immunology receives an ISI Impact Factor of 52.28, the range of ISI Impact Factors received by the

various journals in Graphic 4a, which range from 0.233 for the International Journal of Technology Management to 3.533 for the Academy of Management Journal, does pale by comparison. Whether such low impact indexes are a measure of the dubious nature of the discipline, not only of entrepreneurship, but of management as well, or simply a measure of their adolescence, is a moot point.

4.1.3.06   I tend to believe that simple quantitative numerics such as ISI Impact Indexes may not be an ideal measure of the relationship between journals within the discipline and with the discipline itself. Biehl, Kim and Wade [2006] measure the groupings of journals with the concept of different roles of journals either being sinks, transmitters or sources.

> Using large-scale sociometric analyses on about 140,000 citations we found that the integration of the citation network has increased over time. Moreover, the information flow from Finance and Economics to Management has become stronger and, within Management, a polarization between information generators and users has taken place. We also found that most business academics published in distinct and mostly non-overlapping disciplines. The only exceptions were Finance and Economics as well as Strategic Management and OB/HR. Surprisingly, we also found that the general business journals, which could be assumed to be cited by most other journals across the management disciplines, are not central to the entire field [p1].

4.1.3.07   The Biehl, Kim and Wade [2006] type of study presents a more relative view of the impact of the journals on the discipline. It could be said that based on my discussion of citations, *gravitas* and discontinuities in Part Two that the more established journals may accept work from those authors with higher *gravitas*, but which may present a repetition of established ideas, i.e. sinks. It is the new authors, without a high recognition or level of *gravitas*, but which may be conducting and presenting new research and work, but which cannot get published in the better regarded journals, are instead turning to the lower regarded journals for publication, i.e. sources or transmitters. These works may have a better chance of providing discontinuities that encourage new, and maybe more relevant, directions to the discipline. Entry levels are less stringent and may be less orientated towards the status quo.

Graphic 4d	List of journals produced by the Academy of Management						
	TS Impact Index 2006	**VC1 (500) 2006 2005**	**VC2 (500) 2005 2002**	**VC3 (500) 2002 1997**	**VC4 (500) 1997 1983**	**Bal (161) 1983 1956**	**Total (2161)**
Academy of Management Executive	1.216	0	1	5	0	0	6
Academy of Management Journal	3.533	4	3	5	2	2	16
Academy of Management Learning and Education	n.a.	1	0	0	0	0	1
Academy of Management Perspectives (formerly Academy of Management Executive)	n.a.	1	0	0	0	0	1
Academy of Management Review	4.515	2	1	4	0	0	7

4.1.3.08 The role of the institutions behind the journals is also relevant. The Academy of Management publishes a set of journals shown in Graphic 4d. Also the Harvard Business School publishes a set of journals included in Graphic 4e. The collective *gravitas* of the institutions behind the journals can be expected to have some impact on the discipline, but again as per Biehl, Kim and Wade [2006] their role as sinks, generators or transmitters within the discipline may be more interesting than their simple numeric value, and may provide grounds for further study.

Graphic 4e	List of journals produced by the Harvard Business School						
	TS Impact Index 2006	**VC1 (500) 2006 2005**	**VC2 (500) 2005 2002**	**VC3 (500) 2002 1997**	**VC4 (500) 1997 1983**	**Bal (161) 1983 1956**	**Total (2161)**
Business History	0.288	1	2	1	6	4	14
Business History Review	0.286	0	0	3	3	6	12
Harvard Business Review	1.505	1	0	5	7	1	14

4.1.4 Suggestions for ontologies

4.1.4.00 One of my expectations from the initial study of the journals and articles in the *episteme* was that an ontology specific to the discipline of entrepreneurship would start to emerge. As discussed below a short study of the journal names did provide some indications of an outline of such ontologies.

4.1.4.01   One important piece of value that the listings of the top journals provides is an etymology that could suggest possible ontological categories that the discipline has constructed or developed. A simple word count of the words in the titles of the top 21 journals listed in Graphic 4a provides the list of words detailed in Graphic 4f (words such as study, journal, review, etc. are omitted).

Graphic 4f	*Etymology extracted from the titles of the top twenty one journals in the Web of Science episteme on entrepreneurship.*

• Business	9
• Management	6
• International / Regional (Spatial)	6
• Evolutionary / History /Development (Time)	4
• Small	3
• Entrepreneurship	3
• Technology	2
• Research	2
• Economics	2
• Innovation	2
• Venturing	1
• Policy	1
• Organization	1
• Science	1
• Ethics	1
• Theory	1
• Practice	1
• Entrepreneurial Finance	1

4.1.4.02   The divide between the terms business and management is an interesting aspect of entrepreneurship. I discussed the role of management, in particular the Academy of Management, in the evolving discipline of entrepreneurship in earlier chapters. However from the journals themselves it is possible that business may be considered a more significant, or relevant term, to entrepreneurship than management. To develop this idea further the etymological analysis was broadened to include all journals with more than 10 appearances that included the additional journals as per Graphic 4g.

Graphic 4g	List of the 22nd to 39th journals in the Web of Science episteme on entrepreneurship.						
JOURNAL NAME	TS Impact Index 2006 2005	VC1 (500) 2006 2005	VC2 (500) 2005 2002	VC3 (500) 2002 1997	VC4 (500) 1997 1983	Bal (161) 1983 1956	Total (2161)
22. Ethnic and Racial Studies	0.896	2	2	5	4	0	13
23. International Migration Review	0.910	1	3	6	3	0	13
24. Journal of Organizational Change Management	0.479	3	1	9	0	0	13
25. Business History Review	0.286	0	0	3	3	6	12
26. European Planning Studies	0.513	7	5	0	0	0	12
27. Journal of Economic Behavior & Organization	0.627	3	1	5	3	0	12
28. Journal of Management Studies	2.000	2	3	2	5	0	12
29. Organization Studies	2.815	1	3	4	4	0	12
30. Public Administration Review	1.339	1	1	5	5	0	12
31. Simulation and Gaming	n.a.	0	0	0	12	0	12
32. Economic Development Quarterly	0.451	2	4	4	1	0	11
33. Environment and Planning A - Government Policy and Planning	1.610	3	1	5	2	0	11
34. Journal of World Business	0.627	6	3	2	0	0	11
35. R & D Management	0.443	3	5	2	1	0	11
36. World Development	1.298	0	1	4	6	0	11
37. Economic and Political Weekly	n.a.	0	0	3	7	0	10
38. Environment and Planning C – Government Policy and Planning	0.652	2	4	3	1	0	10
39. Human Organization	1.167	2	1	2	4	1	10
		38	38	64	61	7	208
		270/ 500	256/ 500	245/ 500	217/ 500	19/ 161	1008/ 2161
		46.4%	43.6%	36.2%	31.2%	7.5%	37.0%

4.1.4.03   Adding the key words from Graphic 4g to the list developed in Graphic 4f gave the results in Graphic 4h. What is interesting here is the increasing emergence of terms such as policy, planning, public administration which have been grouped together. I find this significant in that it suggests entrepreneurship seems to have a relevancy to public policy. In Part Two I discussed the aspects of funding and the influence of the flow of power around Foucault's Triangle. It could seem that *connaissance* knowledge has an influence, in this instance, on policy. As mentioned by Foucault [1980, p93] it is the truth effects corner of the triangle that replenishes the power from which the right derives its power. If the *connaissance* knowledges become distant to the *savoir* knowledges the

representationality of the discipline can be called into question. If public policy is based upon questionable *connaissance* knowledge then there could be, in time, significant repercussions with funding, supplied by public policy, being diverted to other sources.

Graphic 4h	Etymology extracted from the titles of the top thirty nine journals in the Web of Science episteme on entrepreneurship.		
	Top 21	22-39th	Totals
Business	9	2	11
International / World / Regional (Spatial)	6	4	10
Management / Mngmt Studies	6	3	9
Evolutionary / History / Development / Change (Time)	4	4	8
Policy /Planning / Public Administration /Political	1	5	6
Economics	2	3	5
Organization	1	4	5
Research /R&D	2	1	3
Small	3	0	3
Entrepreneurship	3	0	3
Environment	0	2	2
Simulation / Gaming	0	2	2
Technology	2	0	2
Innovation	2	0	2
Ethnic / Racial	0	2	2
Science	1	0	1
Ethics	1	0	1
Venturing	1	0	1
Theory	1	0	1
Practice	1	0	1
Entrepreneurial Finance	1	0	1
Human	0	1	1
Behaviour	0	1	1
Science	0	1	1
Migration	0	1	1

4.1.4.04   The two other aspects of Graphic 4h that I find to be relevant are the aspects of time and space (as in spatial) that start to provide the three dimensionality of the *episteme* mentioned by Foucault [2002] and discussed in section 3.1.5. This three dimensionality will be discussed further in the following sections as I look at the *aliran* based on the 87,060 citations. However, I next discuss how I looked at the existing research on firstly ontology in entrepreneurship, and secondly my search for existing approaches to ontology that could be relevant to this research.

4.2 Searching for the Ontology of Entrepreneurship.

4.2.1 Domains of reality and themes
4.2.2 Trying Mintzberg's approach
4.2.3 Formal concepts analysis – developing the heffalump

4.2.00   In Part Two, section 2.1.1.11, I introduced the Smith's [2003] idea that ontological conceptualisations remain largely unthematized. This was discussed further, in section 2.3.2.02, with Mulhall [2005] suggesting that the discipline 'demarcates and structures its own area of study; and those foundations tend to remain unthematized by the discipline itself, until it finds itself is a state of crisis. In this section I look at the discipline of entrepreneurship as demarcated by the *episteme* to see if any existing thematisation is apparent. Mintzberg, Ahlstrand, and Lampel's [1998] approach will be tried and found wanting and instead I use a Formal Concepts Analysis approach to develop an ontological representation of the discipline, which I have called my heffalump model.

4.2.1 Domains of reality and themes

4.2.1.00   I have taken the thematic conceptualisations and domains of reality, as discussed in Part Two, to be the foundations of ontologies in the discipline. In their simplest expression these may be termed 'topics'; however I believe that the relationship is more complex and the way the discipline formulates these themes, and the interstices between them, create an ontological pattern of ontologies and interstices between these ontologies, that is an underlying structure of the discipline. This section discusses the development of an ontological pattern in the discipline of entrepreneurship.

4.2.1.01   Shane and Venkataraman [2000] (117) in their article 'The promise of entrepreneurship as a field of research: A few comments and some suggested extensions', published in the Academy of Management Review, describe entrepreneurship as 'a rich field of study'. This article is the most highly cited journal (non text) article in the *episteme*, receiving a total of 117 citations. Its rise to such position in a period of six years can best be described as meteoric.

4.2.1.02   Yet for 'a rich field of study' entrepreneurship appears to lack any recognised ontological base. Shane and Venkataraman [2000] commented that the discipline of entrepreneurship seemed to lack any 'conceptual framework.' It could be asked whether the discipline has actually contributed to a better and more cohesive collection of knowledge regarding entrepreneurship? Descriptions of the discipline being an 'elephant' [Gartner, 2001] and a 'heffalump' [Kilby, 1971] tend to support this query.

4.2.1.03   I believe that an ontological base is significant as per Atmanspacher and Primas [2003], cited earlier in Part Two. I have taken 'domains of reality' to refer to ontologies and such interpretation suggests that theories advanced by academics do need to be placed in the context of an ontological base. Yet this contextualisation does not seemed to have happened within the discipline of entrepreneurship.

4.2.1.04   It may be that as per Mulhall [2005] and as discussed in section 2.3.2.02 that such ontological foundations have not yet been thematized because the discipline has yet to find itself in a 'state of crisis'. It could be said that the discipline exists in a state of complacency where the 'social relationships' [Dery and Toulouse, 1996] between researchers have failed to generate such states of crisis.

4.2.1.05   This is not to say that there have not been any suggestions for such ontology. Following Mintzberg, Ahlstrand, and Lampel's [1998] approach to Strategic Management where they found 10 'schools of thought' of Strategic Management, I searched for the term "entrepreneurial schools of thought" I found a reference to a course conducted at the Dakota State University, in which the following schools of thought were outlined:

Macro View: Environmental School of Thought
Financial / Capital School Thought
Displacement School of Thought

Micro View: Entrepreneurial Trait School of Thought (People School)
Venture Opportunity School of Thought
Strategy Formulation School of Thought

4.2.1.06   These seemed to suggest some form of basic ontology towards entrepreneurship. Yet in a question posed to the course students, mention of 'process approach to studying entrepreneurship' were included.

> 8. Explain what is meant by each of the following schools of thought approach to studying entrepreneurship:
> a) macro
>> 1) environmental
>> 2) financial / capital
>> 3) displacement
> b) micro
>> 4) entrepreneurial trait
>> 5) venture opportunity
>> 6) strategic formulation
>
> 9. Explain what is meant by each of the following types of the process approach to studying entrepreneurship:
>> a) events approach
>> b) assessment approach
>> c) multidimensional approach
>> [www. courses.dsu.edu/entre/oldstuff/Guides/unit1.htm]

4.2.1.07   The course text was 'Entrepreneurship', 4th Ed., Hisrich and Peters [1998] yet my research showed that the above approaches did not seem to be part of those authors' recognised thinking. I finally traced the macro and micro approaches to Kuratko and Hodgett's [2001]. To date I have not been able to find the source of the process approaches to entrepreneurship. The thinking is compatible with work by Kirzner [1997] or from Bhave [1994], yet the exact source still eludes me. The course was conducted by John (Jack) Walters, however Prof James Janke also previously conducted this course. Enquiries to Dakota State University have not yielded replies.

4.2.1.08   I tended to like this nine-fold ontology because it covers not only most of the fields for entrepreneurship in particular but also the approaches taken. A good rule of thumb I use is to look at ethnic entrepreneurship, which under a subject based illustration falls under race / ethnicity, yet which ontologically can fall into both cultural, as in an environment, or immigrant, as displacement. Displacement also covers those, not necessarily with an ethnic slant, who go into entrepreneurship because they may have been fired from their jobs and seek self-employment. Entry into entrepreneurship can be where

some one decides in a planned manner, as per the assessment approach (Azjen's [1994] theory of planned behaviour), to start being entrepreneurial and / or is influenced by an event, as in Shapero's [1975] 'entrepreneurial event'. Furthermore the process approaches start to introduce a dynamic perspective of time, which the schools of thought micro and macro approaches seem to lack, providing a more static perspective. The lack of references to these process approaches does tend to suggest that they are not in the mainstream of academic thought regarding entrepreneurship.

4.2.2   Trying Mintzberg's approach

4.2.2.00   Mintzberg, Ahlstrand, and Lampel [1998] developed a 'schools of thought' model to strategic management. In this section I discuss my efforts to apply this same model to entrepreneurship.

4.2.2.01   Mintzberg, Ahlstrand, and Lampel's [1998] model comprises 10 'schools of thought' approaches to strategy: Design, Planning, Positioning, Entrepreneurial, Cognitive, Learning, Power, Culture, Environment and Configuration. It seemed that it could be possible to apply the same approaches to entrepreneurship. Indeed, when it came to applying this to illustrating sub-*aliran* it worked well - for a while.

4.2.2.02   For the strategy linked articles in the *aliran,* it was not a problem. There were obvious links with articles by: Simon and March to cognitive; Potter to positioning; Schumpeter to environment; Weick, Prahalad and Hamel to learning; and so forth. Then the lines started to blur, March could be placed in both cognitive and learning; Chandler in both design and configuration. This is probably logical as their works (or how their works are perceived) could be said to cover both approaches to strategy.

4.2.2.03   However, for the non-strategy linked articles, applying Mintzberg, Ahlstrand, and Lampel's [1998] model for strategy to entrepreneurship did not seem to work. A lot of the ethnic / race articles could be assigned to Culture or Environment, and quite a few articles could readily be placed into what was becoming a very over-crowded

Entrepreneurial school of thought, but beyond that applying the model did not fit in any way that made me comfortable. In many ways, the link between strategic management and entrepreneurship went beyond two disciplines that over-lapped on flat planes, I began to get the impressions that the two disciplines were perpendicular to each other with a domain of interaction. (This aspect of strategic entrepreneurship is discussed more in section 4.3.11.)

4.2.2.04 I began to question whether it is possible to define the ontologies of a discipline or whether it is only possible to make representations, as per Said [1996], as to possible forms such ontology may take.

4.2.3 Formal concepts analysis – developing the heffalump

4.2.3.00 I began to search for ways to make such representations either graphically or conceptually.

4.2.3.01 In earlier chapters to this dissertation I discussed Leibniz's philosophical approaches to 'bodies' and gravity and applied this to disciplines. However Leibniz has also been described as a 'pioneer in symbolic logic' [Sowa, 1999] and I began to search for ways to describe the representations of entrepreneurship in a logical format that could be depicted graphically. Formal Concept Analysis, developed by Ganter and Wille in 1999 [cited in Sowa, 1999] became a possible option.

4.2.3.02 Using the lattice system proposed by Sowa I began to develop a set of divisible concepts as to what 'Entrepreneurship is ….'; however, this began to be difficult because it suggested a degree of mutual exclusivity between the concepts or schools of thought. Ganter and Wille [cited in Sowa, 1999] successfully applied their model in an example for beverages, which could be readily defined with a strong degree of exclusivity; however, such became problematic for entrepreneurship. Instead I changed the expression to 'Entrepreneurship can be the study of ….' and this made the process work.

4.2.3.03   I developed eight expressions as to what 'Entrepreneurship can be the study of ….' as listed below in Graphic 4i and using these eight expressions developed a rough representation as to how these could be perceived graphically in Graphic 4j.

4.2.3.04   The eight expressions in Graphic 4i are a rough attempt to delineate some logical ontological boundaries within entrepreneurship. The first expression was to define entrepreneurship as a human activity for which some people seem to have greater aptitude either through certain traits that may or may not be learned. The second and third expressions delineate that entrepreneurship could be either a non – economic or an economic activity. While the etymology derived earlier in this part focused on the business and management aspects the domains of social and political entrepreneurship still needed to be placed in the lattice. Expressions four to seven subdivide the economic human activities into four groups based upon; sociological aspects, cognitive / learned behaviours, whether the individual was key or a leader of an organisation was key, and whether the behaviour was rational / planned / unplanned or opportunism. These delineations do attempt to merge the 'schools of thought' and 'approaches' discussed in section 4.2.1 above. The eighth expression is a bit of a catch-all to include the aspects of new-ness, change and innovation which could not be logically fitted into the earlier expressions. In Graphic 4j this eighth expression developed as a bottom up representation compared to the top down representation of the first three expressions.

4.2.3.05   This could be seen as a two step process in firstly developing the eight expressions and secondly the graphic representation in Graphic 4j. In practice it was actually a process of simultaneous development of both the eight expressions and the graphic representation. In some cases it was a relatively easy development and in others it was a trial and error positioning of the articles and texts into inductively derived categories which seemed logical based upon the review of the *aliran* articles and texts.

4.2.3.06   Practically the process was undertaken by reviewing the 476 articles and texts in the *aliran* where these were readily available, or where not available reading their abstracts, or reviews or commentaries on the works. Some 90% of the 476 articles and

texts were reviewed in this manner, some in greater depth than others. Those that were not reviewed tended to be the low *gravitas* articles and texts that were either difficult to access or which had few commentaries or reviews that were considered relevant. From this review it was possible to see where patterns emerged between sub-*aliran* and the interstices between them. The three dimensionality of the *aliran* could be viewed as if it had XYZ axes, with X being the sub-*aliran,* Y the orientation with other sub-*aliran* (determining the interstices) and Z being the inter-relationship within the sub-*aliran* (or often plural sub-*aliran*) with earlier works by other researchers. To a degree the Z axis also gave a time orientation and a sense of relativity between earlier articles and texts and those which followed. In most instances it was difficult to actually precisely determine the position of X, which had been the underlying problem in applying the Mintzberg, Ahlstrand, and Lampel [1998] model to entrepreneurship. As mentioned previously it was often difficult to position the article or text into one sub-*aliran* giving a greater significance to the Y axis where the interstices between, what turned out (in most cases) to be, two sub-*aliran* gave greater substance to the *aliran* and made it possible to develop the graphical representation shown in Graphic 4j.

4.2.3.07   Graphic 4j could well be an image of a 'heffalump'. I do not claim that it is a comprehensive representation of entrepreneurship, nor are all of the possible connections between the different aspects of entrepreneurship included. The connections can be bi-directional and start points are optional. However what it does is provide a sense of spatiality to the aspects of entrepreneurship, what it lacks is any sense of weight to, or between, these aspects and it also lacks any sense of time as to how these aspects are developed in the *episteme*. It is, at best, an interim step in such process. The next chapter 'The 87,060 *aliran* of entrepreneurship' will take the next step in the process. That step is to look in more detail at the high *gravitas* texts and journals that constitute the sub-*aliran* and from this more detailed review discuss their positioning in the representations that have been outlined in this part.

Graphic 4i	Eight expressions of what 'Entrepreneurship can be the study of....? Using Formal Concepts Analysis

1. Entrepreneurship can be the study of a human activity at which some people are better equipped to engage in than others.
    - i. entrepreneurial traits (genetic / cultural implications)
    - ii. learned behaviour

2. Entrepreneurship can be the study of a non-economic human activity. (includes social and political entrepreneurship, also refers to its exclusion from the classical rational economics field)
    - i. social entrepreneurship
    - ii. political entrepreneurship

3. Entrepreneurship can be the study of an economic human activity. (Brings into the realm of making money.)
    - i. Austrian school
    - ii. Knight's Chicago school (may be a subset of 7. below)

4. Entrepreneurship can be the study of an economic human activity that maybe carried out within a sociological perspective.
    - i. displacement
    - ii. ethnicity
    - iii. environment (as different to entrepreneurial traits in 1. above)

5. Entrepreneurship can be the study of an economic human activity that maybe carried out within a cognitive (mental process) element, or as a learned element.
    - i. cognitive – mental process
    - ii. learned behaviour

6. Entrepreneurship can be the study of an economic human activity that maybe carried out with relationship to an economic organization.
    - i. individual as key / small businesses
    - ii. organization with leader (or without) as key / larger firms

7. Entrepreneurship can be the study of an economic human activity that maybe carried out with either rational or non-rational, planned or unplanned, responses to events.
    - i. rational / planned
    - ii non-rational / unplanned / opportunism

8. Entrepreneurship can be the study of a response to risk or uncertainty that may be associated with change or new-ness of: ideas, technonology, opportunities, and responses to such new-ness by the establishment of new ventures.

Graphic 4j	*My Heffalump – A graphic representation of the discipline of entrepreneurship based upon the eight concepts developed in Graphic 4i.*

4.3 The 87,060 *aliran* of entrepreneurship

4.3.00   This chapter looks at the hermeneutic analysis of the *aliran* starting with pin pointing what I consider to be the emergence of the discipline. In this chapter I look at the *aliran* from a range of domains and in order to have some variety have selected several sub-*aliran* which, in my opinion, best illustrate some of the issues that have been discussed in the previous parts and chapters to this dissertation. Starting from the top of my heffalump model I first look at social entrepreneurship and how significant the *aliran* perceives this to be within the discipline. As behaviouralist methodologies have apparently been dominant in the early years of the discipline I briefly look at the methodological sources that receive high or significant *gravitas* in the *aliran*. Following on from this, is a discussion on the construction of the ontologies where I draw comparisons between the sub-*aliran* of innovation which I perceive as being a more natural construction and that of corporate entrepreneurship which construction seems to have been subject to influence by some high *gravitas* figures in the discipline.

4.3.01   The venture capital sub-*aliran* is viewed as one of the few sub-*aliran* where savoir and connaissance knowledge are perceived to merge. The issues of size and shape of entrepreneurship are then discussed with relevance to the sub-*aliran* of organizations, organizational learning, small businesses and the self-employed individual. Here I start to

distinguish between the term 'corporate' and corporation as well as creating a further model that shows the relationship of size and shape to the 'entrepreneurial firm'.

4.3.02 The gender sub-*aliran* is presented as a minor sub-*aliran* followed by a critical appraisal of the ethnic / immigrant sub-*aliran*. The final section in this chapter looks at the strategic entrepreneurship sub-*aliran* which I perceive to be a new frontier in the *aliran* and one that could well resolve some of the definitional and ontological issues that have been discussed to date.

4.3.03 Throughout the discussions the heffalump model that I have developed and shown in Graphic 4j is used as the reference point. As per my earlier discussions it becomes increasingly apparent that the interstices between the domains shown in this model are very significant. A pattern emerges with domains that appear to be more extroverted by having a greater range of interstices and those that are considered more introverted, with fewer interstices, and subsequently less developed.

4.3.03 Note that the citation reference in this Part used for articles/ texts from the *aliran* have the [year] followed by (*gravitas*). This is done to include an element of 'weightiness' to the reference.

4.3.1 Pinpointing the emergence

4.3.1.00 To pick a time for the emergence of a discipline is probably not possible, or would be presumptuous to attempt to do so. However, what is possible is to identify articles with high *gravitas* that are markers of the emergent discipline. This is not to say that the first article mentioning entrepreneurship is the first marker, as without epistemic justification this first article may reside in the discourse rather than the discipline of entrepreneurship.

4.3.1.01 According to Foucault [2003a], and discussed in Part Two, "the disciplinarization of knowledges, this organization of knowledges into disciplines" began

in France in the 18th and 19th centuries [Foucault, 2003, p183]. However, this should not imply any attachment of disciplinarization to one part of the world at one point in time. Ibn Khaldun [2005], Hobson [2004] and Morgan [2007] also discusses the concept of such organization of knowledge in Moorish Spain in the 12th century, which later moved eastwards to South West Asia as Christian barbarians overthrew the Moorish civilization. While entrepreneurship, as per Cantillon, had some mention in France during the 18th century, this mention does not imply that the discipline of entrepreneurship started at that time.

4.3.1.02 In Section 2.5 I discussed the Foucauldian analysis of the emerging discourse / discipline, in particular:

      a) mapping the first surface of their emergence;
      b) describing the authorities of delimitation; and
      c) analysing the grids of specification [Foucault, 2004].

While I am mapping the first surfaces of the emergence, it is simply a suggested point in an evolving process that indicates that a point in the process has been approached; it is not an absolute start point.

4.3.1.03 In my *aliran* there are texts with high *gravitas* by authors such as Schumpeter, Knight and Marshall, from the early 20th century; it could be considered that these mark the 'first surface of their emergence'. However I believe that the discipline of entrepreneurship first began to emerge only in the 1960s primarily due to two articles, the first a text by Barth 'The role of the entrepreneur in social change in Northern Norway' [1963] (14) and the second being the journal article by McClelland 'Achievement and entrepreneurship: A longitudinal study' [1965] (14) published in the Journal of personality and Social Psychology.

4.3.1.04 While they are low *gravitas* articles I believe that these articles are among the first to apply some form of epistemic justification to the discourse on entrepreneurship.

Barth's article is a study on social entrepreneurship in Norway, and McClelland's article is a longitudinal study on achievement in entrepreneurship. Barth's article relates more to the social / non economic human activities that is part of the Formal Concepts Analysis that was discussed in section 4.2.3. Ironically this, as will be discussed later, is a minor ontology within the discipline which is dominated by the various ontologies that primarily perceive entrepreneurship to be an economic activity.

4.3.1.05   Besides the simple fact that these are the first two articles to include the word entrepreneurship in their titles, the fundamental reason for selecting these two articles relates to epistemic justification. In Part Two I have discussed the concept that epistemic justification is that which separates the knowledge of the discipline from that of the discourse. If I apply the results of the study by Dery and Toulouse [1996], who were critical of the application of epistemology within the discipline of entrepreneurship, then it could end up being a very small discipline, as it could be considered that the application of epistemic justification has not be sufficiently applied to qualify for entry by many articles into the discipline. However, as discussed in section 2.5, epistemology is based to a degree on the belief of the researcher, and I would rather stay away from such belief based arguments as to what can be justified. My objective is to identify the emergence of the discipline and apply some form of weighting to the ontological components of that discipline that have also emerged as part of that discipline.

4.3.2 From discourse to discipline

4.3.2.00   While many would regard Schumpeter as being integral in the emergent discipline, I believe that epistemically such a role cannot be justified. His role is better described as being 'integral to' rather than 'integral in'.

4.3.2.01   Schumpeter's contribution to entrepreneurship, based upon the *gravitas* accorded his works within the *aliran*, is simply the largest in the whole *aliran*. His texts 'The theory of economic development' and 'Capitalism, socialism and democracy' respectively garner 331 and 145 citations in the *aliran* and are the two highest. It could be

said that the seeds of genesis for Schumpeter to be often described as the father of entrepreneurship were based upon what could be considered a minor 'state of crisis' in rational economics which could not accept the intuitive entrepreneur advocated by Schumpeter. However, as mentioned in the previous section I do not believe that the discipline emerged with Schumpeter simply because I doubt that Schumpeter's comments on the entrepreneurship can be epistemically justified.

4.3.2.02 Can Schumpeter's comments on the entrepreneur be epistemically justified? By default 'yes' as the *episteme* obviously regards his works as something of an icon, a 'must-cite'. Whether the consistent level of citation to Schumpeter is actually because people have read his work or simply feel the need to cite Schumpeter's articles because of their iconic status and not to do so would render their work less than authentic, remains an issue that will not be possible to prove or disprove. I would tend to place the works of Schumpeter with Smith and Knight in the forum of being intellectuals, rather than academics per se with regards to entrepreneurship. While I cannot comment on their works on economics in this regard, I would place them as intellectuals with specific regards to entrepreneurship. Their works would form part of the discourse on rather than the discipline, of entrepreneurship.

4.3.2.03 Schumpeter advanced a theory on 'the entrepreneur' that really had no epistemic justification besides probably a good dose of common sense, and a need for a start point for his theories on business cycles. Personally I think Schumpeter did a great dis-service by using the term 'the entrepreneur' when I think that using the entrepreneurial process or function, would have done the whole discourse, and later discipline, a much better service. I have previously discussed my own opinion that I have been entrepreneurial at times in my life, but deny myself the title of 'entrepreneur', believing that such a title is not only temporary but also cannot be justified. Somehow within some of the behaviouralist ontologies on entrepreneurship, the term 'the entrepreneur' has become something akin to a life peerage. Barth concurs "that an entrepreneur should not be treated as a status or a role, but rather as 'an aspect of a role: it relates to actions and activities, and not rights and duties" [cited in Jannicke, 2007, p6]. However the intuitive (non-rational)

position that Schumpeter attributed to the entrepreneurial process was probably, in my opinion, Schumpeter's greatest contribution.

4.3.2.04   The other Austrian school economists such as Hayek and von Mises I would also place in the discipline of economics or the discourse of entrepreneurship. However I believe that Kirzner [1973] (111) [1979] (48) with his high *gravitas* texts, 'Competition and entrepreneurship' and 'Perception, opportunity, and profit' deserves a position in the discipline. The aspects of risk and opportunity discussed by Kirzner are, in my opinion, some of the significant aspects of the entrepreneurial process.

4.3.2.05   McClelland [1965] (14) also refers to entrepreneurial positions rather than using 'the entrepreneur' (despite the fact that it was the position that McClelland was referring to rather than the type of person filling that position). The definitions used for such positions may seem initially seem quaint compared to other later definitions, but may actually be prescient, and cover both the business and management ontologies that were delineated in section 4.1.4.

Entrepreneurial:
- Sales (except clerical sales)
- Real estate and insurance sales
- Operates own business (including family business if a key executive)
- Management consulting, fund raising, etc.
- Officer of a large company, assistant to the President of a large company, etc.
- For example, money management at lower levels is classified as "nonentrepreneurial" (for example, establishing consumer credit), but Vice-President of a large New York commercial bank in charge of credit is classified as 'entrepreneurial' [McClelland, 1965, p390].

4.3.2.06   McClelland's achievement motive orientation did not really attract a great following in subsequent literature in the *aliran* except in Johnson's [1990] (17)   low *gravitas* article   'Toward a multidimensional model of entrepreneurship: The case of achievement motivation and the entrepreneur.' The interesting point about McClelland's [1965] (14) article is the lack of mention of innovation, new ventures and corporate entrepreneurship, these ontologies are constructed later in the *aliran* as part of the

development of the discipline. Innovation is discussed in section 4.3.3 while new ventures and corporate entrepreneurship are discussed in section 4.3.6. Prior to those discussions I discuss Barthes' work and predominant methodologies in the discipline.

4.3.3 Social entrepreneurship – Barthes' forgotten branch

4.3.3.00 Pio [2008, p122] defines social entrepreneurship as occurring when "a person seeks to create social value by focusing on social goals". As pointed out by Licht and Siegel [2004], Schumpeter had the entrepreneur as the agent of both economic and social change, highlighting the social aspect of the role. The scope of entrepreneurship has the potential to be a broadly based subject identifying with change of all types. It would appear however that the discipline of entrepreneurship tends to follow the economic aspects of such change.

4.3.3.01 Social entrepreneurship, as a study of the non-economic aspects of the activity, is a minor ontology within the discipline. However, I am including it in the discussion to highlight the non-economic aspects of entrepreneurship that are part of my heffalump model. Barth's use of case studies highlights the social impact of the entrepreneur in Northern Norway. In many ways Barth's article is unique in that as well as being one of the first articles in the discipline, it looks at the non-economic aspects of the discipline and it also is an early adopter of a case study approach, recognising the value of observing *savoir* knowledge.

4.3.3.02 Graphic 4k lists some of the articles in the *aliran* that relate to the social aspect of entrepreneurship. These tend to fall into two categories: firstly the impact of the entrepreneur on social change; and secondly, the aspects of social capital / social networking on entrepreneurship. Four articles from this ontology rank in the top 50 articles in the *aliran* which, while not belying its minor status, does suggest it has some significance. Schumpeter's description of the entrepreneur as an agent of economic change is perceived by the *aliran* to be the most significant role. His lack of applying entrepreneurship as a process is discussed in the next section.

Graphic 4k		The aliran articles that are perceived to relate to the social aspect of entrepreneurship.			
BARTH		1963	ROLE ENTREPRENEUR SO	14	The role of the entrepreneur in social change in Northern Norway.
HAGEN		1962	THEORY SOCIAL CHANGE	29	Theory of social change
SHAPERO	Sokol	1982,	ENCY ENTREPRENEURSHI,	49	The social dimensions of entrepreneurship.
ALDRICH	Zimmer	1986,	ART SCI ENTREPRENEUR	60	Entrepreneurship through social networks
BANDURA		1986,	SOCIAL F THOUGHT ACT	30	Social foundations of thought and action
ALDRICH	Rosen, Woodward	1987,	FRONTIERS ENTREPRENE	15	The impact of social networks on business foundings and profit: A longitudinal study
COLEMAN		1988,	AM J SOCIOL, V94	49	Social capital in the creation of human capital.
COLEMAN		1990,	FDN SOCIAL THEORY	32	Foundations of social theory
STARR	Macmillan	1990,	STRATEGIC MANAGE J, V11	30	Resource co-optation via social contracting – resource acquisition strategies for new ventures.
BURT		1992,	STRUCTURAL HOLES SOC	58	Structural holes: The social structure of competition
PORTES	Sensenbrenner	1993	JNL AMER SOC V98	27	Embeddedness and immigration: Notes on the social determinants of economic action.
BATES		1994,	SOC FORCES, V72	15	Social resources generated by group support networks may not be beneficial to Asian immigrant-owned small businesses.
EISENHARDT	Schoonhoven	1996,	ORGAN SCI, V7	14	Resource-based view of strategic alliance formation: Strategic and social effects in entrepreneurial firms
SANDERS	Nee	1996	AM SOCIOL REV, V61,	17	Immigrant self-employment: The family as social capital and the value of human capital
BURT		1997,	ADMIN SCI QUART, V42	15	The contingent value of social capital
NAHAPIET	Ghoshal	1998,	ACAD MANAGE REV, V23	30	Social capital, intellectual capital, and the organizational advantage
JACK	Anderson	2002,	J BUS VENTURING, V17	14	The effects of embeddedness on the entrepreneurial process
DAVIDSSON	Honig	2003,	J BUS VENTURING, V18	17	The role of social and human capital among nascent entrepreneurs

4.3.4 Behaviouralism and methodologies

4.3.4.00   I have expressed above my opinion that Schumpeter did a great disservice to the nascent discipline when he described 'the entrepreneur' rather than highlighting the entrepreneurial process. This section briefly overviews the initial predominance of behaviouralist methodologies in the discipline but points out that this dominance may be changing.

4.3.4.01   Despite Barth's comment about an entrepreneur not being a role but 'an aspect of a role' (to a degree this view was also followed by McClelland), there have been many articles and texts (summarized by Gartner, 1988) in the *aliran* that attempt to describe, define and list the attributes of 'the entrepreneur'. As pointed out by Filion [1997] "the behaviorists dominated the field of entrepreneurship for 20 years, until the early 1980s".

4.3.4.02   While I am not going to list or describe all of the behaviourist articles, what is of interest is that the *aliran* also identifies the sources of frequently used methodologies and I find it of interest to look at these and how they have changed over time. Graphic 4l lists the articles in the *aliran* that relate to methodology

4.3.4.03   As the Graphic 4l indicates there has been a strong initial positivist influence. However, what could be described as a changing orientation, from the mid 80s with Yin's [1984] (63) text on 'Case study research; Design and methods', towards case studies and, with Miles and Huberman's [1994] (33) 'Qualitative data analysis: A sourcebook of new methods', towards qualitative data analysis, could suggest that positivism has become less prevalent as a research paradigm in entrepreneurship.

4.3.4.04   I consider Eisenhardt's [1989] article which stresses the building of theories from case studies to be significant. This article suggests using knowledge derived from case studies, what I would consider to be more *savoir* knowledge, to build theories rather than using case studies to test existing theories. As pointed out by Kearins, Collins and

Tregidga [2008] "case studies can help overcome a disconnection between theory and practice that is increasingly the subject of concern".

Graphic 4l	Table on prevailing methodologies in the aliran					
NUNALLY	Bernstein	1967-1978	PSYCHOMETRIC THEORY	58	Psychometric Theory
HAIR	Black, Babin, Anderson Tatham	1975 - 1999	MULTIVARIATE DATA AN	31	Multivariate Data Analysis
ARMSTRONG	Overton	1977	J MARKETING RES, V14	21	Estimating nonresponse bias in mail surveys.
HECKMAN		1979	ECONOMETRICA, V47	19	Sample selection bias as a specification error.
FORNELL	Larcker	1981	J MARKETING RES, V18	24	Evaluating structural equation models with unobservable variables and measurement error.
COHEN	Cohen, West, Aiken	1983	APPL MULTIPLE REGRES	20	Applied Multiple Regression/Correlation Analysis for the Behavioral ... Statistical Power Analysis for the Behavioral Sciences.
YIN		1984 - 2003	CASE STUDY RES DESIG	63	Case Study Research: Design and Methods
EISENHARDT		1989	ACAD MANAGE REV, V14	56	Building theories from case study research.
EISENHARDT		1989	ACAD MANAGE REV, V14		Agency theory – an assessment and review.
GREENE		1990 - 2003	ECONOMETRIC ANAL	28	Econometric Analysis
MILES	Huberman	1994	QUALITATIVE DATA ANA	33	Qualitative Data Analysis: A Sourcebook of New Methods

4.3.4.05 As per my earlier discussion on discontinuities, I consider Gartner's [1988 and 1989] (77) article: 'Who is an entrepreneur? Is the wrong question', to be key in attempting to change the prevalent behaviourist mind set towards entrepreneurship, in seeking to describe 'the entrepreneur', towards an approach more geared towards identifying the entrepreneurial process.

4.3.4.06 While this section has identified some of the prevailing epistemologies I do not wish to place too much emphasis on epistemology but focus more on the ontologies that have developed or have been constructed in the discipline. The next two sections look at these aspects, firstly a natural constructed ontology and then a discussion on some ontologies that I consider to be part of as process of overt construction or whose development has been heavily influenced by those with high *gravitas*.

4.3.5 Innovation sub-*aliran* – a natural development

4.3.5.00   As discussed in section 2.2.3 the role of the gatekeepers can assist in a natural development of an ontology or alternatively a constructed ontology where they attempt to exercise power to apply their own opinions and theories onto the discipline. I consider the innovation sub-*aliran* to be a naturally constructed ontology, whereas in section 4.3.6 I look at what I consider to be an overtly influenced construction of an ontology, that of corporate entrepreneuring. The aspect of ontological commitment is also discussed in section 4.3.6.

4.3.5.01   Innovation is first included in the *aliran* with Burns and Stalker's [1961] (27) text on 'The management of innovation' that took a management orientation to the domain. In the next year innovation appeared twice in the *aliran* with a more economic orientation with Arrows' [1962] (31) 'Economic welfare and the allocation of resources for innovation', and Rogers' [1962] (31) 'Diffusion of innovation'. I believe that these first three articles in the *aliran* are part of the discourse on innovation prior to its inclusion in the yet-to-emerge discipline.

4.3.5.02   It is probably not until 1982 that innovation became a sub-*aliran* or ontology as part of the discipline of entrepreneurship with Miller and Friesen's [1982] (35) article 'Innovation in conservative and entrepreneurial firms – 2 models of strategic momentum'. Drawing in part from Mintzberg's [1973] (14) model from 'Strategy making in three modes', they outline an entrepreneurial firm, which has a different orientation to the other works of that time where 'the organization' is used more prevalently than 'the firm'. This delineation between business firms and organizations is clearly commented on by the authors.

4.3.5.03   Drucker's [1984] (108) high *gravitas* text, 'Innovation and entrepreneurship', does, in my opinion, belong within the discourse rather than the discipline. Drucker does not take any approach to epistemic justification to his material, instead relying on his experience as a manager. However, in my opinion (as per my own prejudice), this

experience, while probably qualifying him to discuss innovation, does not necessarily qualify him to discuss entrepreneurship. Quinn's [1985] (18) article in the Harvard Business Review 'Managing innovation: Controlled chaos' does bring innovation back into the discipline. While not having high *gravitas*, Quinn's article also introduces a different orientation of corporate innovation which is continued by Burgelman and Sayres [1986] (20) with 'Inside corporate innovation' and Bantel and Jackson's [1989] (16) article 'Top management and innovations in banking: Does the composition of the top team make a difference' which harks back to McClelland's [1965] article on entrepreneurial positions. Burgelman later introduces a new ontology, that of corporate entrepreneurship, that is discussed in section 4.3.6.1.

4.3.5.04 Published in Research Policy, Teece's [1986] (29) article 'Profiting from technological innovation: Implications for integration, collaboration and public policy' writes from a policy perspective on innovation as a business strategy rather than management strategy. The article also questions why some business firms who innovate often fail to gain full benefits from such innovation, such benefits accrue to firms with 'complementary assets'. In a variation on the innovation sub-*aliran,* the concepts of 'innovating nations' are also discussed by Teece, later followed by: Lundvall [1992] (17) in 1992 with the lowly ranked text 'National systems of innovation: Towards a theory of innovation and interactive learning'; Nelson [1993] (23) with 'National innovation systems: A comparative analysis'; and Etzkowitz and Leydesdorff [2000] (19) with 'The dynamics of innovation: From national systems and 'mode 2' to a triple helix of university-industry-government relations'. The concept of innovation having an ethnic or national orientation was continued with Nonaka and Takeuchi's [1995] (25) 'The knowledge-creating company: How Japanese companies create the dynamics of innovation'.

4.3.5.05 The fairly narrow 'sources of innovation' orientation discussed by Teece is further discussed by von Hippel [1998] (18) in the text 'Sources of innovation' by looking at functional sources of innovation and suggesting that innovations may in fact originate from a wide range of diversified sources. This places a different perspective on that

provided by Teece. A slightly different orientation is provided by Henderson and Clark [1990] (17) with 'Architectural innovation: The reconfiguration of existing product technologies and the failure of established firms' which looks at the effect of innovation on firm's failures.

4.3.5.06   From the works on corporate innovation by Burgelman [1983a], Burgelman and Sayres [1986] , Quinn [1985] and Bantel and Jackson [1989] in the mid 80s, the early 90s saw a greater focus on innovation from small firms. In 1990, the founders of the Small Business Economics Journal, Acs and Audretsch [1990] (25) discuss the significant role of small firms with the text 'Innovation and small firms'. This theme was continued by Audretsch [1995] (37) with his text 'Innovation and industry evolution' which claims that small firms are changing a century old trend and generating more jobs than are larger firms. In the same year Cohen and Levanthal [1990] (68) produced a highly rated article in the Administrative Science Quarterly, discussing the 'firm's absorptive capacity and suggest that it is largely a function of the firm's level of prior related knowledge.' This article relates to the difference between the collective individual knowledge in the firm and the organization's own diversity, in part a function of research and development. This orientation differs from that of Bantel and Jackson [1989] (16) and McClelland [1965] (14).

4.3.5.07   The last two items in the innovation sub-*aliran* present opposing views. A somewhat bearish orientation on innovation is given by Christensen [1997] (28) in the text 'The innovator's dilemma: When new technologies cause great firms to fail.' Presenting the notion that 'blindly following the maxim that good managers should keep close to their customers can sometimes be a fatal mistake', it differs from Hurley and Hult's [1998] (14) low *gravitas* article in the Journal of Marketing where their research 'indicate(s) that higher levels of innovativeness in the firms' culture are associated with a greater capacity for adaptation and innovation.'

4.3.5.08   Interestingly enough, the sub-*aliran* on innovation primarily links innovation with firms and less with the individual or organization. Based on the *aliran,* innovation is the function of an economic organization as in a firm, not a behavioural

characteristic of the individual entrepreneur, nor of the generic organization. Seemingly, as far as the lack of an interstice with the individual is concerned, innovation does not relate to original new-ness, but some form of incremental new-ness. In my 'heffalump' model I have an interstice between innovation and organizations. This needs to be amended to firstly indicate a difference between firms and organisations, and secondly the interstice between innovation and firm needs to be more heavily weighted, with no weight attributed to interstice between innovation and the individual, unless in connection to a small firm. There would also appear to be some connection to the cognitive process of innovation within organizations but no real direct link between organizations and innovation. As discussed in section 2.5.4.06 there was a perceived difference in the *episteme* of the Academy of Management's Entrepreneurship Division and the American Marketing Association's Special Interest Group on Marketing and Entrepreneurship, with innovation not being perceived as being part of the Academy's Entrepreneurship Division *episteme*. It is possible that the organization sub-*aliran* reflects this Academy of Management prejudice on innovation, which has placed innovation under the Technology and Innovation Management Division.

4.3.5.09 The other interesting features of this ontology is firstly the collectivist approach to innovative nations or national systems of innovation, seemingly bordering on ethnic / national traits that are inherent within the national corporations (discussed further in Part 5). There also seems to be a low weight of interstice between innovation and new ventures, but a definite link to technology. Innovations are not perceived to be linked to events, suggesting instead a planned approach. While it could be expected that innovation is linked to research and development that interstice has not been highly apparent in this analysis to date, except by Drucker [1984] (108) and Cohen and Levanthal [1990] (68).

4.3.5.10 This section has looked at the sub-*aliran* of innovation and how this has ontologically become part of the discipline. I believe that it is a natural development (although probably more political at the level of the Academy of Management) even though the results from the *aliran* show little correlation with an innovating individual, which is something that I would have expected, but instead showing a focus towards

innovation being correlated to a firm. The next section addresses the ontology of corporate entrepreneuring which I believe shows a propensity towards being constructed by those with high *gravitas*.

4.3.6 Ontological commitment and constructions

4.3.6.1 Corporate entrepreneuring sub-*aliran*
4.3.6.2 New Ventures and Corporate Venturing sub-*aliran*
4.3.6.3 Ontological commitment?

4.3.6.00 As discussed in the previous sections, the sub-*aliran* of innovation shows a marked propensity towards the small firm and corporation rather than the individual. If looked at from a Schumpetarian perspective, this is probably a logical development. Schumpeter's [1950] five modes of innovation are:

1. Bringing a new product to market;

2. Introducing a new method of production;

3. Initiating a new market;

4. Opening new sources of supply of raw materials or half-manufactured goods;

5. Creating a new organization of industry.

4.3.6.01 Applying these modes of innovation to a firm or corporation is a logical development. However what I find less than logical within the *aliran* is the construction of a corporate entrepreneurship sub-*aliran*. My question addresses: What does the ontology of corporate entrepreneurship do that has not been covered by the previously evolved ontology of corporate innovation, as per Schumpeter's modes of innovation? The concept of ontological commitment seems to have been misplaced, rather than committing to ontologies that are currently existing within the discipline and expanding on these, there seems to be a move to create ontologies with new names that replicate existing ontologies. This section looks at this issue in more detail in particular regards to corporate entrepreneuring.

4.3.6.1 Corporate entrepreneuring sub-*aliran*

4.3.6.1.00   The early 1980s marked the emergence of the corporate entrepreneurship ontology in the discipline, initially with two articles by Burgelman, and later championed by Zahra. Burgelman [1983b] (40) [1984] (22), who seemingly morphed from corporate innovation into corporate entrepreneurship, firstly had a high *gravitas* article with 40 citations on 'Corporate entrepreneurship and strategic management, 'Insights from a process study' and secondly a lower *gravitas* product with 'Design for corporate entrepreneurship in established firms'. According to Burgelman there was a perceived need, because the Schumpetarian model was no longer considered 'adequate', to encourage internal entrepreneurs and risk, within the corporation, particularly at middle management level.

4.3.6.1.01   Corporate entrepreneurship was seen as a way for existing corporations to gain competitive advantage that was seemingly not available under corporate innovation. According to Guth and Ginsberg [1990] (43) 'Corporate entrepreneurship: Introduction' 'The *de novo* development of new businesses within established firms reflects the process of corporate entrepreneurship.' However the question I have is why does a new ontology need to be developed when the Schumpetarian model still seems valid and comprehensive? What part of these 'new businesses' is not covered under Schumpeter's concept of innovation being new markets, new product, new organizations, etc?

4.3.6.1.02   One of the leading figures in this field is Zahra with a collection of *gravitas* articles in the *aliran* as shown in Graphic 4m.

4.3.6.1.03   Corporate entrepreneurship was considered sufficiently significant to the discipline for the editors of Entrepreneurship Theory and Practice to run a special issue on corporate entrepreneurship published in *Entrepreneurship Theory and Practice,* [1999]. Only the one article by Zahra, from this special edition, made it into the *aliran*.

Graphic 4m	Zahra's influence on the corporate entrepreneuring sub-aliran					
ZAHRA		1991,	J BUS VENTURING, V6	37	Predictors and financial outcomes of corporate entrepreneurship – an exploratory study.
ZAHRA		1993,	J BUS VENTURING, V8	35	Environment, corporate entrepreneurship, and financial performance – a taxonomic approach.
ZAHRA		1995,	J BUS VENTURING, V10,	45	Corporate entrepreneurship and financial performance – The case of the management leveraged buyouts.
ZAHRA		1996,	ACAD MANAGE J, V39	22	Governance, ownership, and corporate entrepreneurship: The moderating impact of industry technological opportunities
ZAHRA	Kuratko Jennings	1999,	ENTREP THEORY PRACT, V23	19	Corporate entrepreneurship and the acquisition of dynamic organizational capabilities,

4.3.6.1.04 Interestingly enough none of the above articles are included by Zahra in his list of major publications at the University of Minnesota web site. Nor does Zahra include corporate entrepreneurship on his current list of interests. It seems like the *aliran* has some invisible hand that governs what people will be remembered by, from what they think they will be remembered by. Whether the *gravitas* status of these articles is a function of the fact that Zahra has served on 15 editorial boards and by citing his articles assisted in authors' attaining publication remains indeterminate.

4.3.6.1.05 Apart from Burgelman's [1983b and 1984], Guth and Ginsberg [1990], and Zahra's articles, six other articles on the ontology appear in the *aliran*. These are Jennings and Lumpkin [1989] (14) 'Functioning modeling corporate entrepreneurship – an empirical integrative analysis'; Kuratko, Montagno and Hornsby [1990] (15) 'Developing an intrepreneurial assessment instrument for an effective corporate entrepreneurial environment'; Hornsby, Naffziger, Kuratko and Montagno [1993] (15) 'An interactive model of the corporate entrepreneurship process'; Stopford and Badenfuller [1994] (30) 'Creating corporate entrepreneurship'; Barringer and Bluedorn's [1999] (16) The relationship between corporate entrepreneurship and strategic management; and Birkinshaw [1997] (17) 'Entrepreneurship in multinational corporations; The characteristics of subsidiary initiatives.'

4.3.6.1.06 Stopford and Badenfuller's [1994] title 'Creating corporate entrepreneurship' does seem to sum up this ontology, in that it is a creation from within the discipline-based

upon *connaissance* knowledge. 'Corporate innovation' exists in my heffalump model on the interstices between organization and innovation, organization and new ventures, organization and new technology, and organization and new-ness. 'Corporate entrepreneurship' does not appear in this model. This does not necessarily reflect a defect in the model. Corporate entrepreneurship looks to devolve entrepreneurial traits from a leader, to a number of leaders at different levels of the organization (as per Schumpeter's fifth innovation – creating new organizations). So adding an 's' to 'Leader', in the heffalump model would relatively easily position corporate entrepreneurship in the model. This does mean that the interstices in the heffalump model that connect other ontologies or sub-*aliran* to 'leader' do remain in corporate entrepreneurship. (The positioning within the heffalump model is discussed in Part Five, together with other positioning that emerge in the later sections to this Part.) I cannot help but notice the correlation between McClelland's 'entrepreneurial positions' and the intent of corporate entrepreneurship, which needs not only these positions, but also needs the right people to fill them. This does support my comments about McClelland's prescience in his description of entrepreneurship.

4.3.6.1.07   I do not believe that corporate entrepreneuring is a valid ontology in its own right. It is an attempt by the discipline to resolve the problem faced by the discipline of positioning the role of the entrepreneur viz a viz the management of such role within the organization or corporation.   Other ontologies such as the new ventures / corporate venturing ontology have addressed this same problem to a better degree, have more or less retained their ontological domain status, and maintain their fit with Schumpeter's frame of reference. As discussed later in section 4.3.11, I believe that this attempt at an ontology has been superceded by the ontology of strategic entrepreneurship.

4.3.6.2 New Ventures and Corporate Venturing sub-*aliran*

4.3.6.2.00   Corporate innovation sought to use innovation to ensure corporate continuity, and corporate entrepreneuring sought to devolve the entrepreneurial characteristics of the entrepreneur to middle management. Some of the interstices from the new ventures sub-*aliran* that connect to the more corporate activities also endeavour to apply new venturing in a similar manner. In section 4.3.8.2, I discuss the differing perceptions by the *aliran* between corporate and corporation – at this point I still retain the evolving position that corporate relates to the corporation. The new ventures / corporate venturing ontologies highlights the divide between the personal aspects of the entrepreneur and the attempts by the management of the corporation to be entrepreneurial by way of engaging in new ventures. While the new venture / corporate venturing ontologies emerged from this divide it also seems to have accepted this divide as part of its substance. The emergence of the ontologies were based on a perceived longitudinal perspective to this divide, as pointed out by Sandberg and Hofer [1987] (31), from new ventures, based upon a behaviourist style utilizing the entrepreneurs' characteristics, towards corporatized venture capital.

> This article examines the determinants of new venture performance. Specifically, it rejects the traditional academic model of new venture performance, which argues that success is based solely on the characteristics of the entrepreneur, …. and supports instead the broader model of venture capitalists, which claims that success depends not only on the characteristics of the entrepreneur, but also on the structure of the industry entered and the strategy of the venture involved [Sandberg and Hofer, 1987].

4.3.6.2.01   There are three main broad interstices that can be defined: firstly corporate venturing as introduced above; secondly new firms venturing; and thirdly individual venturing that mostly finds mention in the *aliran* by way of self-employment and ethnic related interstices. There are other minor interstices that are discussed in 4.3.6.2.06. Organizations do not, according to the *aliran*, engage in new ventures, that is mostly the function of the firm as will be discussed in section 4.3.8. In my heffalump model, the new venture ontology is marked with interstices to various aspects of newness and interstices to both the organization and the individual. This means that the model needs some adjustment

to place the interstices that currently connect to the organization to be more clearly defined as linking to firms and possibly corporations.

4.3.6.2.02   In Graphic 4n, I list the articles and texts from the *aliran* that relate to the first two broad interstices of new venturing; new businesses by the firm and corporate venturing. The initial emergence of the new ventures sub-*aliran* was with Timmons and Spinelli's [1977] (70) high *gravitas* text 'New venture creation: Entrepreneurship in the 21st Century. It was with Vesper's [1980] (64) high *gravitas* text 'New venture strategies' three years later that raised the latitudinal orientation to this divide - of new ventures being either 'startup' or 'acquisitions', involving both personal and corporate strategies. Later editions of this text also included new appendices of the 'chemistry of entrepreneurship' and 'corporate venturing.'

Graphic 4n	*The new venture and corporate venture sub-aliran*				
TIMMON	Spinelli	1977	NEW VENTURE CREATION	70	New venture creation; Entrepreneurship in the 21st Century
VESPER		1980 - 1990	NEW VENTURE STRATEGI	64	New Venture Strategies
BURGELMAN		1983	ADMIN SCI QUART, V28	20	A process model of internal corporate venturing in the diversified major firm
VAN DE VAN	Hudson, Schroeder	1984	J MANAGE, V10	24	Designing new business startups; entrepreneurial, organizational and ecological considerations'
KANTER		1985	J BUSINESS VENTURING, V1	17	Supporting innovation and venture development in established companies
MACMILLAN	Block, Subbanarasimha,	1985	J BUSINESS VENTURING, V1	49 (two articles)	Corporate venturing: alternatives, obstacles encountered, and experience effects
MILLER	Camp	1985	J BUSINESS VENTURING, V1	16	Exploring determinants of success in corporate ventures
MACMILLAN	Day	1987	J BUS VENTURING, V2	36 (two articles)	Corporate ventures into industrial markets- dynamics of aggressive entry.
SANDBERG	Hofer	1987	J BUS VENTURING, V2	31	Improving new venture performance – The role of strategy, industry structure and the entrepreneur.
STUART	Abetti	1987	J BUS VENTURING, V2	14	Start-up ventures – towards the prediction of initial success.
ROMANELLI		1989	ADMIN SCI QUART, V34	21	Environments and strategies of organization start-up: Effects on early survival
STEVENSON	Roberts,	1989	NEW BUSINESS	14	New business ventures and the

	Grousbeck		VENTURE		entrepreneur:
TSAI	MacMillan, Low	1991	J BUS VENTURING, V6	18	Effects of strategy and environment on corporate venture success in industrial markets
SHAVER	Scott	1991	ENTREP THEORY PRACT, V16	29	Person, process, choice: The psychology of new venture creation.
STOREY		1991	SMALL BUSINESS EC, V3	16	The birth of new firms – does unemployment matter? a review of the evidence.
COOPER	Gascon	1992	STATE ART ENTREPRENE	25	Entrepreneurs, processes of founding, and new firm performance.
REYNOLDS	Miller	1992	J BUS VENTURING, V7	15	New firm gestation: Conception, birth, and implications for research
COOPER		1993	J BUS VENTURING, V8	19	Challenges in predicting new firm performance.
BLOCK,	MacMillan	1993	CORPORATE VENTURING	26	Corporate venturing: Creating new businesses within the firm
CHANDLER	Hanks	1994	J BUS VENTURING, V9	19	Measuring the performance of emerging businesses – a validation study.
HOLTZ-EAKIN	Joulfaian, Rosen	1994	RAND J ECON, V25	24	Entrepreneurial decisions and liquidity constraints.
HOLTZ-EAKIN	Joulfaian, Rosen	1994	J POLIT ECON, V102	31	Sticking it out: Entrepreneurial survival and liquidity constraints.
GATEWOOD	Shaver, Gartner	1995	J BUS VENTURING, V10	23	A longitudinal study of cognitive factors influencing start-up behaviors and success at venture creation.
GEROSKI		1995	INT J IND ORGAN, V13,	18	What do we know about entry?
REYNOLDS		1997	SMALL BUS ECON, V9	15	Who starts new firms? - Preliminary explorations of firms-in-gestation

4.3.6.2.03 It is within the four quadrants, suggested by Vesper's text (personal start-up, personal acquisition, corporate start-up and corporate acquisitions) that seems to encompass most of this ontology. This is my own interpretation, with many of the articles in the sub-*aliran* seeming to fit within these quadrants. Whether such interpretation conforms to the intentions of the authors of the *aliran* articles is another matter. Van de Ven, Hudson and Schroeder [1984] (24) in their article 'Designing new business startups – entrepreneurial, organizational and ecological considerations', use two of these perspectives plus an ecological perspective commenting that

> The entrepreneurial perspective concentrates on the characteristics and background of the founding individual. The organizational perspective looks at the planning and initial development processes of the firms. The ecological perspective uses the population of firms as a level of analysis and is concerned with the success of the industry as a whole [p1].

4.3.6.2.04   Similar research findings were made by Stuart and Abetti [1987] (14) in their article 'Start-up ventures: Towards the prediction of initial success'

> The research confirmed two items that are understood by most scholars and experienced practitioners: the importance of the entrepreneur and the importance of pursuing new ventures that match the technical and market experience of the team. The less obvious results are those that suggest that success is favored by strong review and control by the entrepreneur rather than the development of employee initiative and independence. Also, the initial success appears to be coming more readily to firms in more slowly growing or less dynamic markets [p1].

With reference to corporate entrepreneuring, the role of the entrepreneurial leader inside corporations is still significant despite the perceived need by the constructors of the corporate entrepreneurship ontology for the development of middle management entrepreneurial skills in the corporation.

4.3.6.2.05   Burgelman's [1983] (20) article 'A process model of internal corporate venturing in the diversified major firm' is a marker of the emergence of the new ventures / corporate venturing sub-*aliran*. But like his efforts on corporate entrepreneurship, it was championed by others. Kanter [1985] (17) in the 1985 article 'Supporting innovation and venture development in established companies' seems to focus less on personal start ups and more on corporate venturing. MacMillan, the founding editor of the Journal of Business Venturing, along with various co-authors that include Siegel, Subba-Narasimha, Block, Zemann and Day, produced pairs of braced articles in the 1985 and 1987 volumes of the Journal of Business Venturing. The paired articles in each volume dealt respectively with venture capital and corporate venturing. In addition to the braced pairs of articles in Journal of Business Venturing, Block and MacMillan [1993] (26) have a text entitled 'Corporate venturing: Creating new businesses within the firm'. Tsai, MacMillan and Low [1991] (18) have an article in the Journal of Business Venturing 'Effects of strategy and environment on corporate venture success in industrial markets.'

4.3.6.2.06   As per the articles and texts shown in Graphic 4n and as per the previous section it could be suggested that corporate venturing has evolved from the general sub-*aliran* of new venturing with the support of high *gravitas* figures who sought to overtly

construct a greater corporate orientation to this sub-*aliran*. Other sub-*aliran* that developed in a similar manner and can be identified based upon interstices from the new venture sub-*aliran* are international new ventures and new technology based ventures. The international new ventures sub-*aliran* continues the aspect of corporate continuity with an orientation towards internationalization. The *aliran* articles on this sub-*aliran* reflect a clique, mostly of McDougall and Oviatt, involved in constructing this ontology, as shown in Graphic 4o.

4.3.6.2.07 The definition of new **i**nternational entrepreneurship is a "combination of innovative, proactive, and risk-seeking behavior that crosses national borders and is intended to create value in organizations" [McDougall and Oviatt, 2000]. This description places this sub-*aliran* in association with the interstices on reactive approaches or planned approaches to risk and also with innovation.

Graphic 4o	*Internationalization sub-aliran*				
JOHANSON	Vahlne	1977	J INT BUS STUD, V8	31	Internationalization process of firm – model of knowledge development and increasing foreign market commitments.
MCDOUGALL		1989	J BUS VENTURING, V4	19	International versus domestic entrepreneurship – New venture strategic behaviour and industry structure
MCDOUGALL	Shane, Oviatt	1994	J BUS VENTURING, V9	29	Explaining the formation of international new ventures; The limits of theories from international business research.
BLOODGOOD	Sapienza, Almeida	1996	ENTREP THEORY PRACT, V20	24	The internationalization of new high-potential U.S. ventures: antecedents and outcomes.
OVIATT	McDougall	1994	J INT BUS STUD, V25	36	Towards a theory of international new ventures.
MCDOUGALL	Oviatt	1996	J BUS VENTURING, V11	14	New venture internationalization, strategic change, and performance: A follow-up study
AUTIO	Sapienza, Almeida	2000	ACAD MANAGE J, V43	30	Effects of age at entry, knowledge intensity, and imitability on international growth
MCDOUGALL	Oviatt	2000	ACAD MANAGE J, V43	24	International entrepreneurship: The intersection of two research paths
ZAHRA	Ireland, Hitt	2000	ACAD MANAGE J, V43	30	International expansion by new venture firms: International diversity, mode of market entry, technological learning, and performance

4.3.6.2.08 Shane, the entrepreneurship editor of Management Science, (2001 to present) later was central in the construction of a particular ontological orientation on technology

and new ventures. While this orientation initially appears in the *aliran* with Roure and Keeley's [1990] (15) low *gravitas* article 'Predictors of success in new technology based ventures', it has been Shane who has had a noted impact for the short amount of time in the *episteme* with sets of articles, published in Management Science in 2001 and 2002, on technology and new ventures, co-authored with Cable for the second article. As per my heffalump model, this orientation falls onto the interstice between new ventures and new technology either with individuals or organizations.

4.3.6.2.09   On one hand, as discussed in section 4.3.6.1 above, Burgelman and Zahra can be perceived as constructing an ontology of 'Corporate Entrepreneurship' and, as discussed in section 4.3.6.2.05   above, MacMillan as instrumental in constructing a differing ontology of 'Corporate Venturing', and McDougall doing the same for 'International New Ventures'. These are small ontologies with mid rated *gravitas*. The first does not fit into my heffalump model as an ontology with interstices, while the second is more of an interstice between new venturing and the corporate organization, probably falling into the category of having 'less' retained its domain status, as discussed in section 4.3.6.1.07. The third ontology would tend to be similar to the second. The role of high *gravitas* individuals in the development role of such ontologies is discussed in the next section.

4.3.6.3 Ontological Commitment?

4.3.6.3.00   In my opinion, there is a problem of 'ontological commitment' within parts of the discipline. The poor delineation between corporate entrepreneuring, corporate venturing and corporate innovation may be indicative of a lack of ontological commitment and possibly a failure to meet Heidegger's ontological test. The tacit acceptance of such poor construction by the discipline, may be in part due to uncertainty about the true meaning of being of entrepreneurship or may also be due to the social relationships, including the personal *gravitas* accorded editors of journals, which rather than encouraging the thematisation of ontologies, lets them remain as status quo.

4.3.6.3.01   In section 2.5.1.05 I discussed the criticism raised on the "contentional definitional debate in entrepreneurship" [O'Connor, 2006, p1], as members of the discipline sought to define what is an entrepreneur. According to Gartner [1988] there were in 1988 32 different definitions of what is an entrepreneur. As discussed in this section I believe that this excess of definitions is further indication of a lack of ontological commitment from within the discipline. It is questionable whether this excess of definitions reflects the variety within the discipline, or is simply a means by some academics to construct their own spheres of influence.

4.3.6.3.02   While on one hand it is commendable to look at expanding the scope and diversity of the discipline, but I believe that should be done substantively and not through a process of re-nomination of existing ontologies or attempting to overtly construct ontologies. As discussed in section 4.3.6.1 above, it would appear that despite there being an existing corporate innovation ontology, supported by Schumpeter's model of innovation, some in the discipline saw a need to create an ontology of corporate entrepreneuring. I would suggest that, in a similar issue to that experienced by rational economists, some management academics have a problem fitting the entrepreneur into models or theories of the organization or the corporation. Vesper [1979] (64) solved this issue by dividing new ventures into personal or corporate ventures. Katz and Gartner [1988] (36) in the 'Properties of emerging organizations', published in the Academy of Management Review, proposed the term 'pre-organization' as a means to better understand the relationship between entrepreneurship and organizations. It could appear that corporate entrepreneuring is another attempt to reconcile this issue by introducing the characteristics of the entrepreneur into the middle management of a corporation, and an attempt to construct an ontology in the process. Like the surfeit of definitions, there is also a surfeit of ontologies, possibly due to a perceived lack of commitment to existing ontologies and a perceived need by some with high *gravitas* within the discipline to create spheres of their own.

4.3.6.3.03   As discussed in section 2.5.3.11, there is the possibility that the gatekeepers seek to influence future directions of research. They have the ability to set and influence

the 'eligibility to participate and acceptability of knowledge' within the *episteme* and ultimately the discipline. It is debatable whether by their attempts to influence such direction, they are following a more natural development of the knowledge within the discipline or are attempting to overtly construct a part of the discipline to their own particular bent. The complex nature of the citation and the politics involved with citations as discussed in section 2.1.4.09 does give those with high *gravitas* the ability to generate more *gravitas* as reflected in citation indexing. Whether such constructions can be sustained over time as the gatekeepers' influence fades will be something that may only be capable of assessment once the discipline has been in existence for a longer period of time. My belief is that it can only be sustained, if qualified by *savoir* knowledge, including amongst other things, case studies and research drawn from the *savoir*. The research findings by Stuart and Abetti [1987] quoted in section 4.3.6.2.04 above do tend to support the contention that corporate entrepreneurship is unsustainable. The implications of introducing *savoir* knowledge into *connaissance* knowledge are discussed in the next section.

4.3.7 Venture capital sub-*aliran* – where *connaissance* meets *savoir*

4.3.7.00   In section 4.3.4 above I discussed the aspect of introducing *savoir* knowledge into the discipline. In general it seems to date that it is the exception rather than the rule for articles in the *aliran* to use *savoir* knowledge or produce *connaissance* knowledge that can be used by the practitioner**.** The exception to that rule seems to be in the sub-*aliran* of venture capital.

4.3.7.01   The pairs of braced articles by MacMillan et al, in Journal of Business Venturing volume 1 [1985] and volume 2 [1987], first mentioned above, take a different orientation to that of many other articles in the *aliran*. Their focus is the criteria for acquiring funding for ventures. Rather than belonging in new ventures sub-*aliran*, they could be better placed in the a different sub-*aliran* more related to issues of financing new ventures. The other four articles in the *aliran* Gompers and Lerner [1999] (25) with their text 'The venture capital cycle'; Sahlman's [1990] (20) article 'The structure and

governance of venture capital organizations'; Tyebjee and Bruno [1984] (16) with 'A model of venture capital investment'; and Dubini [1988] (15) with 'Which venture capital backed entrepreneurs have the best chances of succeeding?' also share a similar perspective and tend, with the exception of the latter, to take a peripheral orientation towards entrepreneurship per se.

4.3.7.02   An interesting aspect of these articles is that they are possibly articles that might have practical relevance to an entrepreneur. In an *aliran* that has a perceived historical tendency to separate *savoir* and *connaissance* knowledges, this sub-*aliran* seems to have produced *connaissance* knowledge that can be applicable in the realm of *savoir* knowledge.

4.3.8 Organizations, corporations, firms, small businesses or individuals
- the question of size and shape of entrepreneurship

4.3.8.1 Organizations and organizational learning sub-*aliran*
4.3.8.2 Corporations, firms and businesses
4.3.8.3 Small businesses and entrepreneurial firms – the issue of size
4.3.8.4. The self-employed individual

4.3.8.00   Two points relating to organizations have emerged from this study of the *aliran* of entrepreneurship as discussed so far. The first is that, as discussed in section 4.3.6.2.01, organizations do not seem to create new ventures. The second point is that, as discussed in section 4.3.5.08, organizations do not seem to innovate. Innovation, as it is perceived from the *aliran*, is a corporate activity primarily linked with firms and is less linked to individuals. This section 4.3.8 looks at the 'shape' of the initiators of entrepreneurship; whether they be organizations, firms, small businesses or individuals, as perceived from the *aliran*. Linked with this is the aspect of 'size' between these different 'shapes'.

4.3.8.1 Organizations and organizational learning sub-*aliran*

4.3.8.1.00   If, from the depiction of the *aliran*, organizations do not innovate or create new ventures the question could be asked: Why does the organization sub-*aliran* have a significant role in the discipline of entrepreneurship based upon the high level of citation to articles and texts in this sub-*aliran*? This section addresses this question, suggesting some answers to this question without actually arriving at a conclusion.

4.3.8.1.01   In Graphic 4p I have listed the major articles and texts in the *aliran* that relate to the organization or to organizational learning. Effectively there are two sub-*aliran* as the organization sub-*aliran* is difficult to delineate from the organizational learning sub-*aliran*. The first point I emphasize is the time frame of the organization sub-*aliran*. From 1958 to 1995 the time frame covers the initial 37 years out of the 50 years of this study with the bulk of the articles from the 80s. From 1995 to 2006, there were only a few additions to these sub-*aliran*, mostly involved in organizational learning, suggesting that for some reason the inclusion of the organization sub-*aliran* in the discipline is time

limited. Senge's [1990] (20) text 'Discipline: The art & practice of the learning organization' may have been a turning point or discontinuity in this movement towards organizational learning, although the earliest article on organizational learning in the sub-aliran is Argyris and Schon's [1978] (25) text 'Organizational learning: A theory of action perspective.'

Graphic 4p	*The organization sub-aliran including the sub-aliran on organizational learning*				
MARCH	Simon	1958 - 1993	ORGANIZATIONS	38	Organizations
LAWRENCE	Lorsch	1967 - 1969	ORG ENV MANAGING DIF	21	Organization and environment: Managing differentiation and integration.
THOMPSON		1967	ORG ACTION	36	Organizations in action
KHANDWALLA		1977	DESIGN ORG	21	The design of organizations
ARGYRIS	Schön	1978 - 1996	ORG LEARNING THEORY	25	Organizational learning: A theory of action perspective,
ALDRICH		1979,	ORG ENV	23	The organization and its environment
PFEFFER	Salancik	1978	EXTERNAL CONTROL ORG	40	The external control of organizations,
MILES		1978	ORG STRATEGY STRUCTU	38	Organization strategy, structure, and process
WEICK		1979	SOCIAL PSYCHOL ORG	25	The social psychology of organizing
MINTZBERG		1979	STRUCTURING ORG SYNT	18	Structuring of organizations: A synthesis
DIMAGGIO	Powell	1983	AM SOCIOL REV, V48,	40	The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields
FAMA	Jensen	1983	J LAW ECON, V26	15	Separation of ownership and control
FREEMAN	Carrol, Hannan	1983	AM SOCIOL REV, V48	16	The liability of newness – Age dependence in organizational death rates
SMITH	Miner	1983	STRATEGIC MANAGE J, V4	14	Type of entrepreneur, type of firm, and managerial motivation: Implications for organizational life cycle theory
DESS	Beard	1984	ADMIN SCI QUART, V29	24	Dimensions of organizational task environments.
HAMBRICK	Mason	1984	ACAD MANAGE REV, V9	27	Upper echelons: The organization as a reflection of its top managers
HANNAN	Freeman	1984	AM SOCIOL REV, V49	34	Structural inertia and organizational change
MILLER	Friesen	1984	ORG QUANTUM VIEW	21	Organizations: A quantum view
COVIN	Slevin	1986	FRONTIERS ENTREPRENE,	17	The development and testing of an organizational- level entrepreneurship scale
SCOTT		1987	ADM SCI Q, V32	14	The adolescence of institutional theory.
HANNAN	Freeman	1988 - 1989	ORG ECOLOGY	41	Organizational ecology
KATZ	Gartner	1988	ACAD MANAGE	36	Properties of emerging organizations

			REV, V13		
KEATS	Hitt	1988	ACAD MANAGE JNL, V31	14	A causal model of linkages among environmental dimensions, macro organizational characteristics, and performance
COVIN	Slevin	1988	J MANAGE STUD, V25	16	The influence of organization structure on the utility of an entrepreneurial top management style.
EISENHARDT	Schoonhoven	1990	ADMIN SCI QUART, V35	41	Organizational growth: Linking founding team, strategy, environment, and growth among United States semiconductor ventures, 1978 -1988.
PRAHALAD	Hamel	1990	HARVARD BUS REV, V68	16	The core competence of the corporation
SENGE		1990	5 DISCIPLINE ART PRA	20	Discipline: The art & practice of the learning organization
HUBER		1991	ORGAN SCI, V2	18	Organizational learning: The contributing processes and the literatures
MARCH		1991	ORGAN SCI, V2	34	Exploration and exploitation in organizational learning
GARTNER	Bird, Starr	1992	ENTREP THEORY PRACT, V16	24	Acting as if: Differentiating entrepreneurial from organizational behavior
LEVINTHAL	March	1993	STRATEGIC MANAGE J, V14	20	The myopia of learning
NONAKA		1994	ORGAN SCI, V5, P1	16	A dynamic theory of organizational knowledge creation
WEICK		1995 – 2001	SENSE MAKING ORG	23	Making sense of the organization
SLATER	Narver	1995	J MARKETING, V59	25	Market orientation and the learning organization
UZZI		1996	AM SOCIOL REV, V61		The sources and consequences of embeddedness for the economic performance of organizations: The network effect.
HURLEY	Hult	1998	J MARKETING, V62	14	Innovation, market orientation, and organizational learning: An integration and empirical examination

4.3.8.1.02 I suggest that this time limited status derives firstly from the relationship between a discourse and the discipline. The organization sub-*aliran* draws from the discourse on organizations paralleling the emergence of the discipline of entrepreneurship. I further suggest that an initial close relationship between the management discipline (as it pertains to management of organizations) and the discipline of entrepreneurship supported the inclusion of this sub-*aliran* within the latter. This later reference is supported by the articles by Covin and Slevin [1986] (17), Covin and Slevin [1988] (16), and Eisenhardt and Schoonhoven [1990] (41) which look at entrepreneurship within the context of an organization. It is also possible that the use of organization may be indicative of a greater inclusiveness in the discourse and studying organizations was preferred to studying the

narrower orientation of the firm or corporation. It could appear that the organization sub-*aliran* is more related to the management discipline as distinctly differing to the business orientation of entrepreneurship as discussed in section 4.1.4.

4.3.8.1.02   The aspects of organizational learning that seem to have more prevalence in the latter years of the organization sub-*aliran* may also suggest that this interstice between organization and learning may have a particular relevance to entrepreneurship. As discussed later in section 4.3.8.2.04   another point raised from the *aliran* is that organizations learn whereas firms do not have, based upon the *aliran*, this need to learn. It is also a possibility that the aspects of innovation and new venturing (as aspects of learning for the organization) may have found some genesis within this domain of organizational learning.

4.3.8.1.03   At the risk of sounding dramatic it could also be suggested that the death knell of the organization sub-*aliran* within the discipline of entrepreneurship came in 1992 when Gartner, Bird and Starr [1992] (24) pointed out that there was a difference between entrepreneurial behaviour and organizational behaviour. This may also qualify this article to be considered as having contributed to a discontinuity in the discipline.

4.3.8.1.03   Another possibility is that in the evolution of the discipline the organization sub-*aliran* was superceded, for various reasons, by other emerging sub-*aliran* such as those associated with the firm, corporations and businesses and discussing organizations, except for organizational learning, in the context of entrepreneurship simply became *passe*.

4.3.8.2   Corporations, firms and businesses

4.3.8.2.00   As discussed above in the various sections of corporate innovation, corporate venturing and corporate entrepreneuring, these in the main suggest an emergence of a general corporate interstice around the early 1980s. Prior to Burgelman's use of the word in 1983, in the context of corporate venturing, the word only appears once in the *aliran* titles in 1960 in Andrews' [1960] (14) text 'The concept of corporate strategy.' In this

discussion on the shape of the entrepreneurship vehicle in the *aliran* there does appear to be a difference in the way the *aliran* treats the word 'corporate' when compared to 'corporations' and the use of 'the firm'.

4.3.8.2.01 Just doing a quick word count from the *aliran* titles, there are 56 appearances of the word 'firm' and only 4 appearances of the word 'corporation'. There are 50 appearances of the word 'corporate'. Seemingly there is little correlation between the use of the words 'corporate' and 'corporation' and no sense of mutual exclusivity between 'corporate' and use of 'the firm'. Some of the appearances of the term 'corporate' are in association with the use of the word 'the firm'. For example Burgelman [1983 and 1984] uses both words in the 1983 article 'A process model of corporate venturing in the diversified major firm' and in the 1984 article 'Designs for corporate entrepreneurship in established firms'. Similarly Block and MacMillan [1993] (26) use both words in 'Corporate venturing: Creating new businesses within the firm'.

4.3.8.2.02 Clearly the use of the word 'corporate' in the corporate sub-*aliran* does not relate to the 'shape' of the vehicle of entrepreneurship as a corporation as differentiated from a firm or organization. I suggest that the word 'corporate', as it is used in the *aliran*, is more related to the rational approach as shown in my heffalump model, which may be assumed to be more associated with corporate management.

4.3.8.2.03 Based on the discussion above, I need to modify my heffalump model to show the delineation the *aliran* indicates between the organization from the firm. As discussed in section 4.3.5.02 Miller and Friesen [1982] (35) clearly delineate between the entrepreneurial firm and the organization.

4.3.8.2.04 As part of the modification I need also to have a heavier emphasis on the interstice between learning and the organization and less emphasis on the interstice between learning and the firm. The *aliran* seems to place a high emphasis on organizational learning, as discussed in section 4.3.8.1.02, but very little emphasis on learning by the firm. Only the three items from the *aliran* in Graphic 4q specifically focus

on learning by 'the firm' whereas in Graphic 4p there is significantly more emphasis on organizational learning.

Graphic 4q	*Learning by 'the firm'*				
COHEN	Levinthal	1990	ADMIN SCI QUART, V35,	68	Absorptive capacity; A new perspective on learning and innovation
KANTER		1989 - 1990	WHEN GIANTS LEARN DA	23	When giants learn to dance: The definitive guide to corporate success
HAMEL	Prahalad	1994 - 1996	COMPETING FUTURE	23	Competing for the future

4.3.8.2.05 Other articles by some of the same authors listed in Graphic 4q such as Prahalad and Hamel [1990] (16) 'The core competence of the corporation' and Levinthal and March [1993] (20) 'The myopia of learning' could be expected to focus on learning by the firm or corporation; they are in fact more focused on organizational learning. Both of these articles are included in Graphic 4p.

4.3.8.2.06 The third shape that needs to be discussed relates to use of the word 'business' in the *aliran*. A word count from the *aliran* titles shows 37 appearances of the word business. 30% of these related to 'small businesses' 25% to 'new businesses', 20% involved generic use of the word and the balance involving miscellaneous applications such as gender, strategy and ethnic / immigrant.

4.3.8.2.07 The *aliran* suggests that the 'shape' of the entrepreneurial vehicle tends towards being either organizations, firms or businesses. There is minor use of the term 'corporation'. Organizations seem to be treated generically as a shape with little reference as to size and may have a time limited function within the discipline with a greater focus on organizational learning as it pertains in some manner to entrepreneurship. The relationship between small business, corporate and the entrepreneurial firm is discussed in the next section on size.

4.3.8.3 Small businesses and entrepreneurial firms – the issue of size

4.3.8.3.00   Schumpeter predicted the demise of the entrepreneurial function due to the increase in socialism that would render the entrepreneurial function redundant. [Langlois, 2004]. Lucas [1978] (15) postulated a similar demise for small businesses in his article 'Size distribution of business firms' suggesting that 'rising real wages will make working for someone else more lucrative than the return' [Lucas, 1978, p523] from working one's own small business. Neither have proven their case, instead it would appear as per my discussion in section 4.3.8.2 above that the use of the word 'corporate' has added to the scope of the entrepreneurial function from being only the start point of business cycles, as proposed by Schumpeter, to an incremental rational function more related to the continuity of business of larger firms. Also the small business sub-*aliran* maintains its place in the *aliran* defying Lucas' prediction.

4.3.8.3.01   I suggest that the two terms 'corporate' and 'small business' represent two ends of a polar scale in the development of the discipline. As Maidique [1986] points out "to date, little attention has been paid to the evolution of the entrepreneurial role" [Maidique, 1986, p60]. Maidique discusses that "the small firm is the easiest to analyse" [Maidique, 1986, p72] yet the development of organizational complexity has meant that "during the last two decades … a new literature on entrepreneurship has developed that emphasizes the role of individuals within the firm who also exhibit entrepreneurial characteristics" [Maidique, 1986, p60]. This fits with my comments above on the evolution of the 'corporate' aspects of the discipline. As Maidique comments further, "this development in the literature has identified a plethora of new and often confusing, internal entrepreneurial roles that make interpretation of the new literature difficult" [Maidique, 1986, p60]. Again this supports my comments in section 4.3.6 on the apparent overt construction of ontologies within the discipline.

4.3.8.3.02   The two terms 'corporate' and 'small business' do have an implication of differences in size, this may also be interpreted as differences in management sophistication. However, it is not the size of the vehicle that pertains to entrepreneurship,

but also the degree of 'being entrepreneurial' or not. As pointed out by Carland, et al [1984] (44) in their article 'Differentiating entrepreneurs from small business owners; a conceptualisation', and by Stewart, Watson and Garland [1999] (15), in their article 'A proclivity for entrepreneurship: A comparison of entrepreneurs, small business owners, and corporate managers', simply being a small business owner does not necessarily imply a greater entrepreneurial role. An entrepreneurial firm can be a company with a sophisticated management structure or it can be a small business; just as larger and more sophisticated companies and small or new businesses can also be non-entrepreneurial.

4.3.8.3.03 The relationship between the corporate, the small business and the entrepreneurial firm is best shown as a chart as shown in Graphic 4r. Positioning a firm on the horizontal scale is a measure of its entrepreneurial-ness, the vertical scale is an implication of size or sophistication. The horizontal scale is covered by Miller and Friesen [1982] (35) in their article 'Innovation in conservative and entrepreneurial firms: Two models of strategic momentum.'

4.3.8.3.04 It would seem, as per Maidique's comments on the evolution of the entrepreneurial role and together with the emergence of the corporate sub-*aliran* discussed in section 4.3.6 that the discipline is expanding its *connaissance* knowledge into the upper areas of Graphic 4r.   The lower areas in Graphic 4r are what could be considered the 'traditional' domains of knowledge of the discipline. These upper and lower domains are the ends of the polar scale between corporate and small business referred to in section 4.3.8.3.01.

4.3.8.3.05 The *aliran* differentiates between the small business and the individual who enters the domains of entrepreneurship through self-employment or unemployment. The delineation is not so clear as to whether the term 'small business' also covers the self-employed, I assume that it does. Accordingly while I have two separate graphics for the small business sub-*aliran* (Graphic 4s) and the self-employed sub-*aliran* (Graphic 4t) I link the discussion on their status in the *aliran*.

Graphic 4r	*A 2 x 2 matrix depicting the relationship between corporate, small businesses and the entrepreneurial firm*
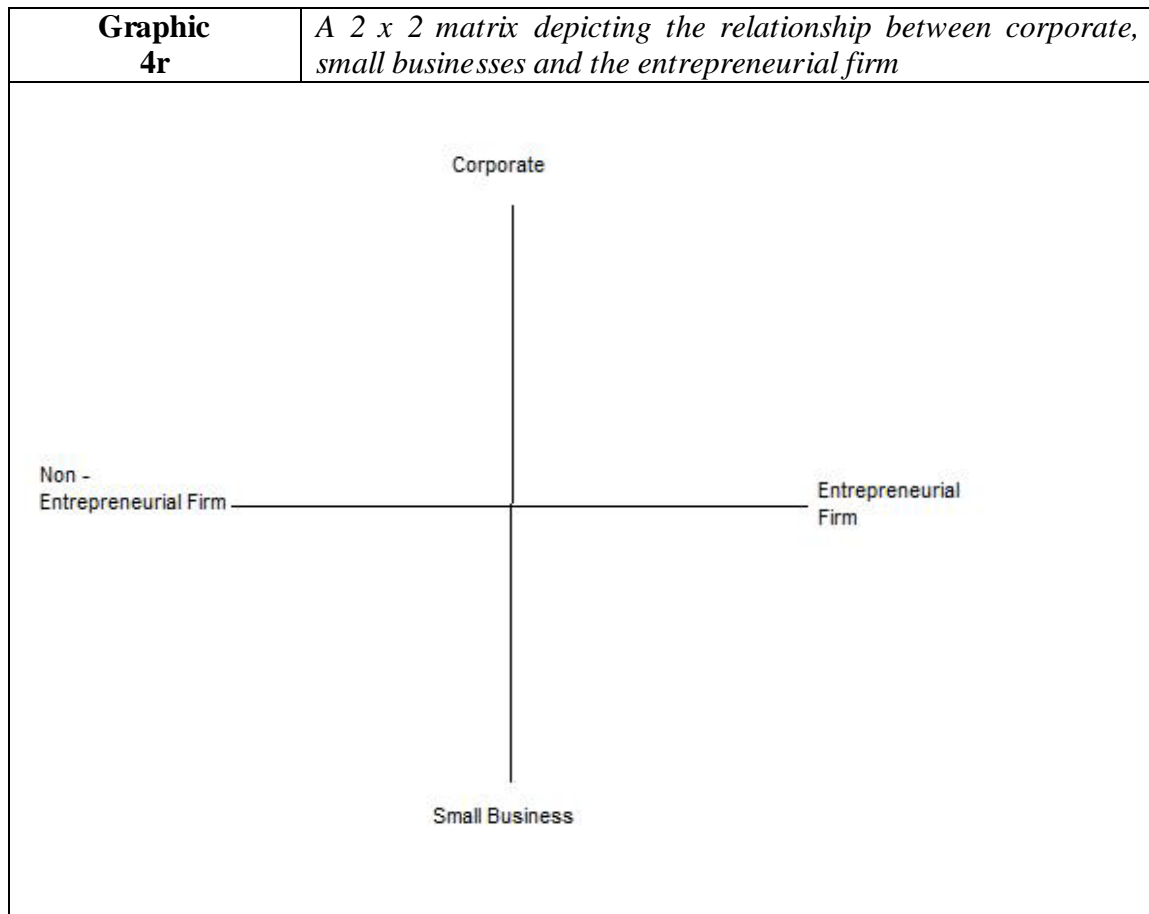
4.3.8.3.06 The main texts and articles in the small business sub-*aliran* are listed in Graphic 4s. As can be seen from the list there is a prevalence to interface with other sub-*aliran* such as ethnic / immigrant, self / un-employment, gender, etc. I suggest that there are two reasons for this. Firstly as per Maidique the small firm is easier to analyse. Secondly it is possible that in the corporate area there is difficulty to delineate between the discipline of entrepreneurship and other disciplines such as management or strategy. The internal nature of the upper quadrants in Graphic 4r may be more amenable to an management interpretation rather than an entrepreneurial interpretation per se. An example of this could be ethnicity, it may be easier to relate ethnicity / immigrancy to small businesses rather than the employment of ethnic / immigrant managers in a larger firm, even though such a person may also be entrepreneurial in that position. While the ethnic / immigrant status may be significant in a corporate sense, it is possible that any entrepreneurial role is regarded as being more relevant to the management discipline rather than the discipline of entrepreneurship.

Graphic 4s	The small business sub-aliran				
LUCAS		1978	BELL J ECON, V9	38	On the size distribution of business firms
BONACICH		1980	EC BASIS ETHNIC SOLI	35	The economic basis of ethnic solidarity; Small business in the Japanese American community
CHURCHILL	Lewis	1983	HARVARD BUS REV, V61	34	The 5 stages of small business growth.
CARLAND	Boulton, Hoy, Carland	1984	ACAD MANAGE REV, V9	44	Differentiating entrepreneurs from small business owners; a conceptualisation.
ALDRICH	Auster.	1986	RES ORGAN BEHAV, V8	27	Even dwarfs started small: Liabilities of age and size and their strategic implications.
BEGLEY	Boyd	1987	J BUS VENTURING, V2	34	Psychological characteristics associated with performance in entrepreneurial firms and smaller businesses.
BIRCH		1987	JOB CREATION AM OUR	34	Job creation in America: How our smallest companies put the most people to work
MIN		1988	ETHNIC BUSINESS ENTE	16	Ethnic business enterprise: Korean small business in Atlanta
COOPER	Woo, Dunkelberg	1989	J BUS VENTURING, V4	19	Entrepreneurship and the initial size of firms
COVIN	Slevin	1989	STRATEGIC MANAGE J, V10	69	Strategic management of small firms in hostile and benign environments.
ACS	Audretsch	1990	INNOVATION SMALL FIR	25	Innovation and small firms.
BATES		1990	REV ECON STAT, V72	35	Entrepreneur human capital inputs and small business longevity.
COVIN	Slevin, Covin	1990	J BUS VENTURING, V5	21	Content and performance of growth seeking strategies – a comparison of small firms in high technology and low technology industries.
EVANS	Leighton	1990	SMALL BUSINESS EC, V2	17	Small business formation by unemployed and employed workers
DAVIDSSON		1991	J BUS VENTURING, V6	19	Continued entrepreneurship – ability, need, and opportunity as determinants of small firm growth.
KALLEBERG	Leicht	1991	ACAD MANAGE J, V34	27	Gender and organizational performance – determinants of small business survival and success.
BATES		1994	SOC FORCES, V72	15	Social resources generated by group support networks may not be beneficial to Asian immigrant-owned small businesses.
STOREY		1994	UNDERSTANDING SMALL	56	Understanding the small business sector
COVIELLO	Munro	1997	INT BUSINESS REV, V6	17	Network relationships and the internationalisation process of the small software firm
COVIELLO	McAuley	1999	MANAGE INT REV, V39	15	Internationalisation processes and the smaller firm: A review of contemporary empirical research'
STEWART	Watson, Carland et al	1999	J BUS VENTURING, V14	15	A proclivity for entrepreneurship: A comparison of entrepreneurs, small business owners, and corporate managers.

4.3.8.3.05   While this section has focused on small businesses, it should also be read in conjunction with the next section on   'the self-employed individual'. As probably benefiting their more traditional status as domains in entrepreneurship these sub-*aliran* have a significant number of articles, some with high *gravitas*. I suggest that these are two of the core ontologies to the discipline not only because of the number of articles but also because of the high level of interaction along the interstices to other sub-*aliran*.

4.3.8.4. The self-employed individual

4.3.8.4.00   Evans and Leighton's [1989] (106) high *gravitas* article 'Some empirical aspects of entrepreneurship' discuss the 'disadvantage theory' which 'views entrepreneurs as misfits cast off from wage work' and suggest this aspect of entrepreneurship "is consistent with many findings" [Evans and Leighton, 1989, p1]. This introduces another ontology within the *aliran*, that of self-employment. The smallest denominator of the entrepreneurial world, the sole operator, attracted a number of articles in the *aliran* as listed in Graphic 4t. While Evans and Leighton's [1989] (106) article has the highest *gravitas* in the sub-*aliran,* the concept of self-employment was initially seen in Light's [1979] (19) lower *gravitas* 'Disadvantaged minorities in self-employment'.

4.3.8.4.01   The self-employed individual sub-*aliran* covers both unemployment and self-employment. I suggest that the difference between unemployment and self-employment is, as per the frame of reference of my heffalump model, the difference between reactive and planned approaches to entry into entrepreneurship. The unemployed entry point is a reactive approach that ends in self-employment, while the other approach suggests that this was part of a planned process towards self-employment. In other words, they planned the process rather than simply it being a reaction to getting fired.

Graphic 4t	The self-employed individual sub-aliran				
LIGHT		1979	INT J COMP SOCIOL, V20,	19	Disadvantaged minorities in self-employment.
BORJAS		1986	J HUM RESOUR, V21	28	The self-employment experience of immigrants.
REES	Shah	1986	J APPLIED ECONOMETRI, V1	25	An empirical analysis of self-employment in the U.K.
BLAU		1987	J POLIT ECON, V95	24	A time series analysis of self-employment in the United States.
BORJAS	Bronars	1989	J POLIT ECON, V97	19	Consumer discrimination and self-employment.
EVANS	Jovanovic	1989,	J POLIT ECON, V97	77	An estimated model of entrepreneurial choice under liquidity constraints
EVANS	Leighton	1989	AM ECON REV, V79	106	Some empirical aspects of entrepreneurship
EVANS	Leighton	1990	SMALL BUSINESS EC, V2	17	Small business formation by unemployed and employed workers
ARONSON		1991	SELF-EMPLOYMENT LABO	19	Self-employment : a labor market perspective
STOREY		1991	SMALL BUSINESS EC, V3	16	The birth of new firms – does unemployment matter? A review of the evidence.
BATES		1995	J BUS VENTURING, V10	14	Self-employment entry across industry groups.
DEMEZA	Southey	1996	ECON J, V106	16	The borrower's curse: Optimism, finance and entrepreneurship
EISENHARDT	Schoonhoven	1996	ORGAN SCI, V7	14	Resource-based view of strategic alliance formation: Strategic and social effects in entrepreneurial firms
SANDERS	Nee	1996	AM SOCIOL REV, V61,	17	Immigrant self-employment: The family as social capital and the value of human capital
BATES		1997	RACE SELF-EMPLOYMENT	14	Race, self-employment, and upward mobility: An illusive American dream
REYNOLDS		1997	SMALL BUS ECON, V9	15	Who starts new firms? - Preliminary explorations of firms-in-gestation
BLANCHFLOWER	Oswald	1998	J LABOR ECON, V16	49	What makes an entrepreneur?
FAIRLIE		1999	J LABOR ECON, V17	14	The absence of the African-American owned business: An analysis of the dynamics of self-employment
DUNN	Holtz-Eakin	2000	J LABOR ECON, V18	16	Financial capital, human capital, and the transition to self-employment: Evidence from intergenerational links
HAMILTON		2000	J POLIT ECON, V108	30	Does entrepreneurship pay? An empirical analysis of the returns to self-employment

4.3.8.4.02   What I perceive as being significant in both of the sub-*aliran* of small businesses and the self-employed is the high degree of interaction with other sub-*aliran*. Several articles appear in both sub-*aliran* and a number also appear in the ethnic /

immigrant sub-*aliran* that are discussed in section 4.3.10 below. I suggest that these sub-*aliran* could be considered more 'extroverted' while some of the other sub-*aliran*, such as those relating to the corporate or to the organization, tend to be more 'introverted'. As discussed in section 4.3.8.3.06, this level of introversion or extroversion could relate to the relative ease of studying the small business and also by means of their traditional status these sub-*aliran* have a more natural fit into the discipline of entrepreneurship. Those introverted sub-*aliran* may have some crisis of identity with other disciplines such as the management and organizational studies discipline; this can relate to the more overtly constructed nature of some of the corporate sub-*aliran*. Or it can relate to new domains or sub-*aliran* that are developing within the discipline such as strategic entrepreneurship, discussed as a new frontier, in section 4.3.11.

4.3.8.4.03   Before looking at the strategic entrepreneurship sub-*aliran* I first look at the sub-*aliran* of gender and ethnic / immigrant since these, the latter in particular, share a number of interstices with the small business and self-employed sub-*aliran*.

4.3.9 Gender – a minor sub-*aliran*

4.3.9.00   The gender sub-*aliran* in the discipline of entrepreneurship is small, as shown in Graphic 4u. Seemingly, the discipline considers entrepreneurship to be fairly gender neutral. Given its size and seeming low level of significance, this sub-*aliran* is not further discussed here.

Graphic 4u	*Gender sub-aliran*				
BOWEN		1986	ACAD MANAGE REV, V11	16	The female entrepreneur; A career development perspective
KALLEBERG	Leicht	1991	ACAD MANAGE J, V34	27	Gender and organizational performance: Determinants of small business survival and success.
BRUSH		1992	ENTREP THEORY PRACT, V16	19	Research on women business owners: Past trends, a new perspective and future directions
REYNOLDS		1997	ENTREPRENEURIAL PROC	14	The entrepreneurial process: Economic growth, men, women, and minorities

4.3.10 Ethnic / immigrant sub-*aliran*

4.3.10.00   On the other hand, when compared to the gender sub-*aliran*, the ethnic / immigrant sub-*aliran* is a comparatively large and active sub-*aliran*. Maidique's comment on the ease of study of small businesses together with the 'apparency' and ease of identification of ethnic business could be reasons why this domain has attracted much study.

4.3.10.01   I have positioned the two sub-*aliran* of ethnicity / race and immigrancy together into one sub-*aliran*. The main reason is that, even though they could be considered separate sub-*aliran* with immigrancy being more related to displacement and race / ethnicity being more related to genetic or cultural issues, the *aliran* has seemingly bought them together. This is probably a reasonable assumption as most immigrants studied in the sub-*aliran* have some ethnic association. However, where such an assumption could fail is if the ethnic entrepreneurs being studied are second or third generation immigrants, in which case the issues of displacement are probably not connected to their ethnicity.

4.3.10.02   As can be seen from Graphic 4v, which lists the articles and texts in this sub-*aliran*, the ethnic / immigrant sub-*aliran* emerged as part of a sociological discourse or part of the sociological discipline, starting with Light's [1972] (63) text 'Ethnic enterprise'. I contend that it became part of the discipline of entrepreneurship with Light and Bonacich's [1988] (44) text on 'Immigrant entrepreneurs' that focused on the Korean ethnic migrants in Los Angeles. It could be argued that Light's [1972] article would qualify for inclusion as one of the original texts in the discipline. However, as pointed out by Desman [1999] in his delightfully entitled article 'Enterprising persons: The sociopathology of entrepreneurs and professional criminals', the 'enterprising person' may not necessarily fit the profile of a 'classic' entrepreneur. Collins and Moore's [1964] (30) text, 'The enterprising man', probably fits into the same typography of not quite being entrepreneurship, but being part of the discourse. Again, the horizontal scale in Graphic 4r helps to delineate the 'enterprising person' from the entrepreneur and the entrepreneurial firm. This placement of

'enterprising' as being more in the discourse supports my contention that the sub-*aliran* emerged as part of the discipline with Light's [1988] text.

Graphic 4v	Sub-aliran on ethnic / immigrants				
LIGHT		1972	ETHNIC ENTERPRISE AM	63	Ethnic enterprise in America: Business and welfare among Chinese, Japanese and Blacks.
BONACICH		1973	AM SOCIOL REV, V38	32	Theory of middleman minorities
LIGHT		1979	INT J COMP SOCIOL, V20,	19	Disadvantaged minorities in self-employment
BONACICH	Modell	1980	EC BASIS ETHNIC SOLI	35	The economic basis of ethnic solidarity; Small business in the Japanese American community
LIEBERSON		1980	PIECE PIE BLACKS WHI	14	A piece of the pie: Blacks and white immigrants since 1880
WILSON	Portes	1980	AM J SOCIO V86	27	Immigrant enclaves: An analysis of the labor market experiences of Cubans in Miami.
WILSON	Martin	1982	AM J SOCIO V88	17	Ethnic enclaves: A comparison of the Cuban and Black economies in Miami.
LIGHT		1984	ETHNIC RACIAL STUD, V7,	30	Immigrant and ethnic enterprise in North America
PORTES	Bach	1985	LATIN JOURNEY CUBAN	44	Latin journey: Cuban and Mexican immigrants in the United States
WALDINGER		1986 - 1988	EYE NEEDLE IMMIGRANT	26	Through the eye of the needle: Immigrants and enterprise in New York's garment trades
BORJAS		1986	J HUM RESOUR, V21	28	The self- employment experience of immigrants
PORTES		1987	SOCIOL PERSPECT, V30	13	The social origins of the Cuban enclave economy of Miami
SANDERS	Nee	1987	AM SOCIOL REV, V52	21	Limits of ethnic solidarity in the enclave economy
LIGHT	Bonacich	1988 - 1997	IMMIGRANT ENTREPRENE	44	Immigrant entrepreneurs: Koreans in Los Angeles
MIN		1988	ETHNIC BUSINESS ENTE	16	Ethnic business enterprise: Korean small business in Atlanta
EVANS		1989	AM SOCIOL REV, V54	16	Immigrant entrepreneurship; Effects of ethnic market – size and isolated labor pool
PORTES	Jensen	1989	AM SOCIOL REV, V54	16	The enclave and the entrant: Patterns of ethnic enterprise in Miami before and after Mariel.
ZHOU	Logan	1989	AM SOCIOL REV, V54,	16	Returns on human capital in ethnic enclaves – New York City Chinatown
WALDINGER	Aldrich	1990 - 1992	ETHNIC ENTREPRENEURS	80	Ethnic entrepreneurs: Immigrant business in industrial society
ALDRICH	Waldinger	1990	ANNU REV SOCIOL, V16	39	Ethnicity and entrepreneurship
REDDING		1990	SPIRIT CHINESE CAPIT	17	The spirit of Chinese capitalism
BUTLER		1991	ENTREPRENEURSHIP SEL	18	Entrepreneurship and self-help among black Americans: A

					reconsideration of race and economics.
ZHOU		1992	CHINATOWN SOCIOECONO	14	Chinatown: the socioeconomic potential of an urban enclave,
LIGHT		1995	RACE ETHNICITY ENTRE	39	Race, ethnicity and entrepreneurship in urban America
PORTES		1995	EC SOCIOLOGY IMMIGRA	15	The economic sociology of. immigration
BARRETT	Jones, McEvoy	1996	URBAN STUD, V33, P783	17	Ethnic minority business: Theoretical discourse in Britain and North America
FAIRLIE	Meyer,	1996	J HUM RESOUR, V31	23	Ethnic and racial self-employment differences and possible explanations
SANDERS	Nee	1996	AM SOCIOL REV, V61,	17	Immigrant self-employment: The family as social capital and the value of human capital
WALDINGER		1996	STILL PROMISED CITY	16	Still the promised city?: African-Americans and new immigrants in postindustrial New York
BATES		1997	RACE SELF-EMPLOYMENT	14	Race, self-employment, and upward mobility: An illusive American dream
REYNOLDS		1997	ENTREPRENEURIAL PROC	14	The entrepreneurial process: Economic growth, men, women, and minorities
FAIRLIE		1999	J LABOR ECON, V17	14	The absence of the African-American owned business: An analysis of the dynamics of self-employment
RATH		1998 - 2000	IMMIGRANT BUSINESSES	14	Immigrant businesses: The economic, political and social environment
BLANCHFLOWER	Oswald, Stutzer	2001	EUR ECON REV, V45	14	Latent entrepreneurship across nations

4.3.10.03   Other high *gravitas* figures in this sub-*aliran* besides Light are Waldinger, Aldrich, Portes, Wilson and Bonacich. Collectively the *gravitas* of this sub-*aliran* makes it significant and it cannot be doubted that some of the works are considered important in the *aliran*. The *savoir* aspects of the prevalent utilization of case studies as discussed in section 4.3.4 done tend to provide credibility to the work. Furthermore the extroversion of the sub-*aliran* and its connected-ness to other sub-*aliran* assist to present a more holistic approach to the discipline, underscoring the importance of the strength of the interstices between the ontologies.

4.3.10.04   However, having sung the above praises of this sub-*aliran,* I do get a sense that there is something of a 'cop-out' in the sub-*aliran*. As discussed in section 4.3.10.00 the ease of study of a small business and the 'apparency' of the ethnic entrepreneur make

it a soft target of study. Yao [in Menkoff, 2002, p234] discusses the 'fetishized notion of culture' and the ethnicity in the sub-*aliran* is in danger of generating the similar stereotypes that Yao discusses. The concept of the hard working immigrant, the 'magic' of the 'guanxi' of the Chinese, Japanese work habits, the difficulties faced by Blacks / African Americans in the United States and so forth, are possibly reinforced by such studies. These possible stereotypes make me question whether these studies are only applicable to specific races / ethnicities. Whether they do contribute to entrepreneurship in general is somehow questionable.

4.3.10.05   I acknowledge the above comment is influenced by my own experience. I could be classified as an ethnic, immigrant business person. While being Caucasian I have moved to non-white parts of the world in South East Asia to conduct business. Assumptions that the colour of my skin and the myth that I have a network of white business people helping my own business, is something that I come across frequently. The reality is that my skin colour, while helping me gain initial contact in some cases, is of little value after that first impression, because I have to work hard to prove my business worth and convince people that my business services will be long term and not just temporary. Furthermore, I see the business network amongst an enclave of similar hued people or people with similar origins as a myth – in my experience I have to <u>work</u> just as hard as anyone else in the same field.

4.3.10.06   In some ways I believe that this concept of 'work' is missing in the discipline of entrepreneurship. Pio [2008] uses the term 'work' in the title of her book 'Sari: Indian women at work in New Zealand'. This text fits into the ethnic sub-*aliran* yet the approach is more conversant with my discussions above regarding the polar scale between 'corporate' and 'small businesses' between the traditional approach to entrepreneurship and the attempted directions to expand entrepreneurship in the 'corporate' sense. Pio's case studies include those from the traditional entrepreneurial field as well as those from a more corporate aspect as well as the social aspects of entrepreneurship. The common theme besides ethnicity and gender is 'work' whether this be a small business person, a teacher, a self-employed person, a person working in a larger firm and so forth. The concept of

entrepreneurship is not defined by shape or size of the vehicle, nor the ethnicity nor gender, but by attitude to capacity for inspired 'work' together with a sense of success that this generates. The US Chamber of Commerce [2006] in its 2006 report 'Work, entrepreneurship and opportunity in 21st century America' also stress the aspects of 'entrepreneurial work'. Amoore [2004] together with Companys and McMullen [2007] follow similar themes, the former introducing the term 'worker-entrepreneur' and the latter tending to interpret work as entrepreneurial action as a response to opportunities.

4.3.10.07   My feeling that as part of the development of the discipline the sub-*aliran* of ethnicity needs to move away from studying the ethnic / immigrants aspects of the small business person or the self-employed. It needs to extend its scope to studies on how ethnic / immigrant linked attributes of work can also have an impact on the corporate domain. The role of ethnic / immigrant attributes in correlation with McClelland's entrepreneurial positions would make an interesting study and by defying traditional approaches to entrepreneurship could make it more akin to strategic entrepreneurship the subject of the next section.

4.3.11 Strategic entrepreneurship – the new frontier?

4.3.11.00   In section 4.3.8.3 I discussed the domains of corporate and small business as being ends of a polar scale. I further discussed the introversion of the corporate domain suggesting that such introversion may be due to some crisis of identity sourcing from a difficulty in delineation between the discipline of entrepreneurship and other disciplines such as management and strategy. In this section I discuss two aspects of the sub-*aliran* of strategic entrepreneurship. Firstly, the discipline seems to be addressing this issue of the difficulty in delineating between the discipline of entrepreneurship and other disciplines such as management and strategy. Secondly, I suggest that this sub-*aliran* could well be a remake of the constructed sub-*aliran* of corporate entrepreneurship, which as discussed earlier did not fit naturally into my heffalump model.

Graphic 4w	The sub-aliran of strategic entrepreneurship – precursors and actual relevant article				
MILLER	Friesen	1982	STRATEGIC MANAGEMENT, V3	35	Innovation in conservative and entrepreneurial firms – 2 models of strategic momentum
BURGELMAN		1983	MANAGE SCI, V29	40	Corporate entrepreneurship and strategic management: Insights from a process study
PINCHOT		1985	INTRAPRENEURING WHY	52	Intrapreneuring: Why you don't have to leave the corporation to become an entrepreneur
EISENHARDT	Schoonhoven	1996,	ORGAN SCI, V7	14	Resource-based view of strategic alliance formation: Strategic and social effects in entrepreneurial firms
BUSENITZ	Barney	1997,	J BUS VENTURING, V12	49	Differences between entrepreneurs and managers in large organizations: Biases and heuristics in strategic decision-making
DESS	Lumpkin, Covin	1997,	STRATEGIC MANAGE J, V18	17	Entrepreneurial strategy making and firm performance: Tests of contingency and configurational models
BARRINGER	Bluedorn	1999,	STRATEGIC MANAGE J, V20,	16	The relationship between corporate entrepreneurship and strategic management
HITT	Ireland, Camp, Sexton	2001,	STRATEGIC MANAGE J, V22	14	Guest editors' introduction to the special issue - Strategic entrepreneurship: Entrepreneurial strategies for wealth creation

4.3.11.01 Based on the *aliran,* the sub-*aliran* of strategic entrepreneurship is insignificant. Only one article by Hitt, Ireland, Camp and Sexton [2001] (14) 'Guest editors' introduction to the special issue - Strategic entrepreneurship: Entrepreneurial strategies for wealth creation', can truly be considered to directly address strategic entrepreneurship in the *aliran*. The other articles listed in Graphic 4w tend to be precursors to the sub-*aliran* of strategic entrepreneurship. Given this insignificance, the question needs to be asked why I am even bothering to discuss this very minor sub-*aliran,* especially when I did not further my discussion into the gender sub-*aliran*. The answer to that question is that I consider it to be a new frontier for entrepreneurship and one that I believe could possibly resolve some of the issues raised in this dissertation.

4.3.11.02 There is no doubt that strategy is significant to the *aliran*. There are 40 appearances of the words 'strategy' or 'strategic' in a quick search of the titles of articles and texts in the *aliran*. However it would seem that this significance is only recently being recognised by academics.

> More recently, management scholars have begun to recognize the value of incorporating entrepreneurship into strategic management research (e.g., Alvarez &

Barney, 2004; Hitt, Ireland, Camp & Sexton, 2001). However, it is not clear how such a link is best established [Foss, Klein, Kor and Mahoney, 2006, p2].

4.3.11.03 As pointed out by Baker and Pollack [2007] there has been resistance to attempts to link the two disciplines of entrepreneurship and strategy.

> Others have expressed such outrage and argued for establishing entrepreneurship as a research domain that is distinct from other social sciences – especially strategy (e.g. Shane and Venkataraman, 2000; Venkataraman, 1997) [Baker and Pollack, 2007, p1].

4.3.11.04 Yet, the process seems to have been part of the natural development of the discipline of entrepreneurship with almost half of the members of the Entrepreneurship Division of the Academy of Management also belonging to the division relating to strategy.

> It appears to us that strategy is succeeding in its takeover of the academic field of entrepreneurship. It is doing this by acquiring entrepreneurship's most important assets – faculty members. Of the entrepreneurship division's 2035 members, 1000 (49.1 percent) are also members of the Business Policy and Strategy (BPS) division [Baker and Pollack, 2007 p1].

4.3.11.05 Hitt, Ireland, Camp, and Sexton [2001] define strategic entrepreneurship as follows.

> *Strategic entrepreneurship* is the integration of entrepreneurial (i.e., opportunity seeking actions) and strategic (i.e., advantage-seeking actions) perspectives to design and implement entrepreneurial strategies that create wealth (Hitt et al., 2001c). Thus, strategic entrepreneurship is entrepreneurial action that is taken with a strategic perspective [p2].

In terms of my heffalump model, the strategic nomination places strategic entrepreneurship within the domains of rational approaches, which makes it akin to the corporate domain I have depicted in Graphic 4r in section 4.3.8.3. and could place strategic entrepreneurship into the upper right hand quadrant of this graphic. The conclusion could be drawn that strategic entrepreneurship shares similarities with corporate entrepreneurship. Indeed Xin [2007] draws the same conclusion. "This paper is an effort of the author to find a linkage between strategic management and corporate entrepreneurship" [Xin Li, 2007, p1]. Barringer and Bluedorn [1999] (16) discussed a similar idea in 'The relationship between

corporate entrepreneurship and strategic management' and may have been the intent behind Burgelman's [1983] (40) initial article on corporate entrepreneurship 'Corporate entrepreneurship and strategic management: Insights from a process study'.

4.3.11.06   I have commented that I do not believe that the construction of the sub-*aliran* of corporate entrepreneurship was successful. Yet as pointed out by Hitt, Ireland, Camp, and Sexton [2001], there are a number of domains where there is a natural fit between entrepreneurship and strategy.

> Hitt et al identify a number of domains in which the integration between entrepreneurship and strategic management occur naturally. These domains include external networks, resources and organizational learning, innovation and internationalization [p480].

I have discussed three of these domains already in this dissertation, namely organizational learning, innovation and internationalization (as in corporate internationalization). This natural fit between the two disciplines is through the interstices between the respective domains in which both disciplines have some commonality. The corporate entrepreneurship sub-*aliran* seemed to fail because it seemingly ignored such natural fit with other interstices and disciplines. It's proponents attempted to create something that ignored these interstices and attempted some overt construction of their own. Maybe, as suggested in section 4.3.11.03, there was internal opposition to entrepreneurship being connected to another discipline as academics sought to 'protect their patch'. In section 4.2.2.03 I commented that the two disciplines of entrepreneurship and strategy could be positioned as being perpendicular to each other, with an overlap. It is possible that such overlap provides the domain for strategic entrepreneurship. In reference to Graphic 4r I suggest that the positioning of strategic entrepreneurship is more likely to be in the right side of the 2 x 2 matrix, in both upper and lower quadrants. In section 4.3.11.05 above I suggested that positioning it in the upper right hand quadrant would make it akin to corporate entrepreneurship, however I believe it is better to position it on the right half to avoid any suggestion that it belongs only in the corporate realm. There is nothing to suggest that small businesses cannot also engage in strategic entrepreneurship as part of being an entrepreneurial firm.

4.3.11.07   The reason that the strategic entrepreneurship sub-*aliran* does not feature more strongly in the *aliran* that I have developed could be due to the factor of time. While there are articles that can be considered to be are precursors to this domain, that are listed in Graphic 4w, seemingly most of the literature on strategic entrepreneurship commences from this century and may not have had sufficient time to be cited and gain *gravitas*. There is a Strategic Entrepreneurship Journal but it only commenced publication in 2007, as a sister publication to the Strategic Management Journal. As such, it is not included in the *episteme* that dates prior to 2006. However the roots and domains of strategic entrepreneurship can be found well entrenched in the *aliran*. Articles and texts on resources can source back to Wernerfelt [1984] (37), Penrose [1959] (89). Organizational learning is a common theme in the *aliran* as discussed in section 4.3.8.1. Strategy can source back to Andrews [1960] (14), Chandler [1962] (32), Mintzberg [1973] (14), Mintzberg [1979] (18), Rumelt [1974] (14), Porter [1980] (89), Porter [1985] (104), to name a few high *gravitas* articles / texts on strategy that feature in the *aliran*. It is this entrenched nature of the sub-*aliran* that makes it, in my opinion, more of a natural fit into the discipline than the overt construction of the corporate entrepreneurship sub-*aliran*.

4.3.11.08   Fitting the strategic entrepreneurship sub-*aliran* into my heffalump model is not so easy. Hitt, Ireland, Camp and Sexton [2001] comment that there are a number of domains in which the two disciplines share a natural integration. Therefore to assign strategic entrepreneurship to one domain or interstices to one domain is unrealistic. As shown by the circle in Graphic 4x I have depicted strategic entrepreneurship as being the large circle falling into a broader pattern than the other sub-*aliran* discussed to date. While this circle does not include innovation, new-ness, etc., at the bottom of the heffalump model, the interstices to these remain through the links to the leader, individual and organization / firm.

Graphic 4x	*Positioning the strategic sub-aliran in my heffalump model*

Political Social

Reactive approach opportunism

Risk-Uncertainity   Rational Approach

Learned traits   Learned process   Learning

Strategic Entrepreneurship →

Genetic traits

Organisation

Individual   Ethnicity

Leader

Entrepreneurial Traits

Intuition

Experience

Visionary
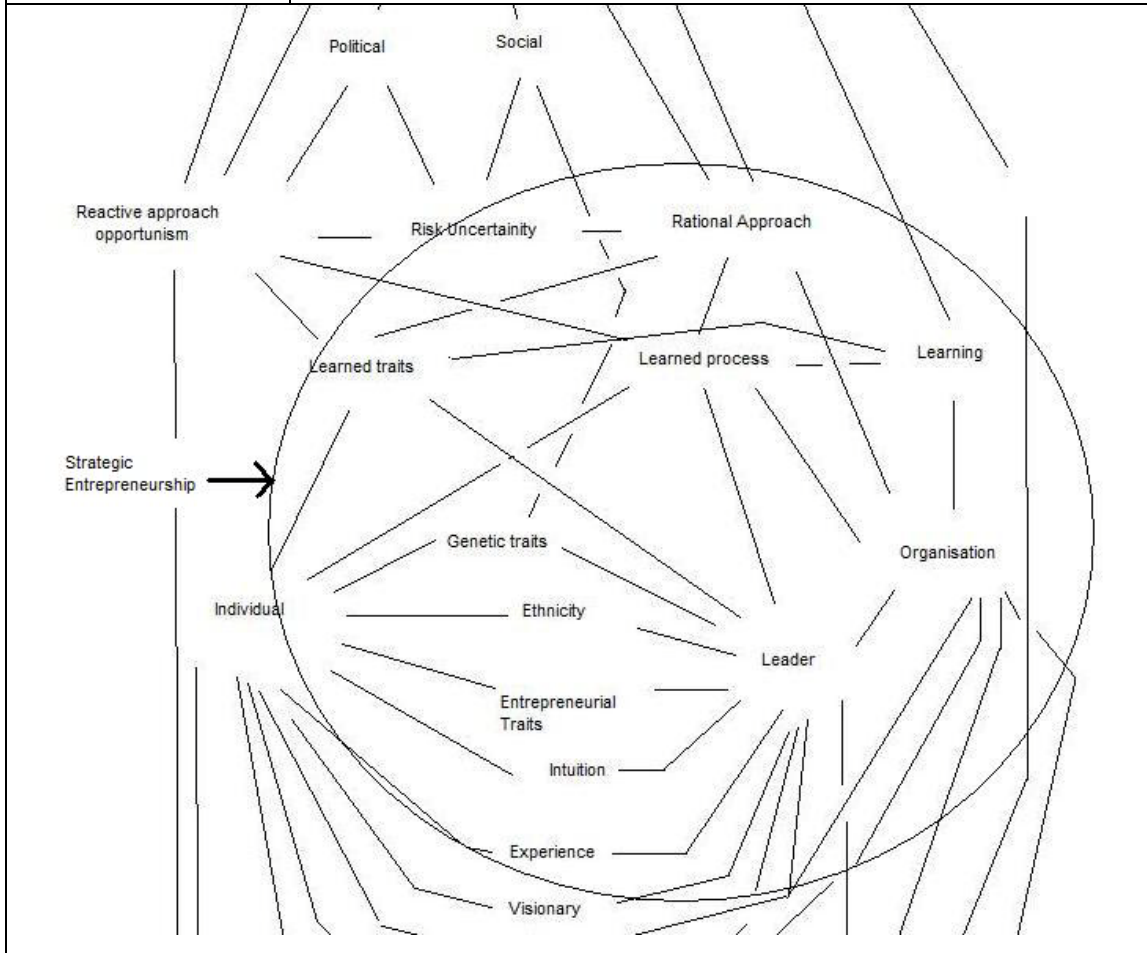
4.3.11.09   Whether this positioning of the strategic entrepreneurship sub-*aliran* is an accurate representation of the position of strategic entrepreneurship or my own particular vision is something that time, and the development of this sub-*aliran* will only tell. If this representation is correct, then as mentioned in section 4.3.11.01 the strategic entrepreneurship sub-*aliran* could possibly resolve some of the issues raised in this dissertation. These issues could include the dichotomy between entrepreneurial traits and the entrepreneurial process with the recognition that in the entrepreneurial firm there is a need for both. As per McClelland, entrepreneurial positions need to be identified and filled with those people with the appropriate traits, whether learned or natural characteristics. The ethnic / immigrant sub-*aliran* could widen its domain to include the study of ethnicity or immigrancy in both the corporate as well as the small business or self-employed

individual domains, thus bringing in Amoore's [2004] concept of worker entrepreneur, with their entrepreneurial work skills in unlimited by the size or sophistication of their business. The corporate domain could become more extroverted, unfazed by the prospect of entrepreneurship being absorbed by the discipline of strategic management.

4.3.11.09   The concept of the continuity of the firm discussed in section 4.3.6.2.06 becomes a goal of management using strategies that can include entrepreneurship.

> Simply put, entrepreneurship has to do with the creation of new ventures and new markets. Strategic management has to do with the survival and growth of firms within their competitive environments [Sarasvathy, 2007, p1].

This meld between strategy, management and entrepreneurship may assist to solve the gray areas in the discipline between the traditional extroverted domains of entrepreneurship and the newer corporate areas that are more introverted. While it is unlikely to resolve the definitional disputes in the discipline it may help to better understand the meaning of the being of entrepreneurship as discussed in Part Five, which comes next.

Part Five: Conclusion

5.0   In this section I look at the outcome of the hermeneutic analysis of the *aliran* developed in Part Four. Firstly I review the discussion of the sub-*aliran* in light of the heffalump model and revise the heffalump model according to some of the findings. Included with this the addition of a 3rd dimension to the heffalump model in order to better appreciate the positioning of the interstices revealed by the *aliran*. Secondly I assess, based upon the findings in Part Four, the question of whether entrepreneurship can be considered to be a dubious discipline. Finally I review the intended contributions of this work and suggest possible avenues of further study.

5.1 Reviewing the heffalump

5.1.00   In this section I review the heffalump model based upon the hermeneutic analysis of the *aliran* developed in section 4.3.

5.1.01   One of the most significant points from the analysis of the sub-*aliran* as it reflects back on my heffalump model is the status between organizations and firms. Initially in the heffalump model I had assumed that these could be treated as the same generic shape and therefore placed these together under organizations. However from the sub-*aliran* analysis it became clear that there was a difference in the way the *aliran* delineates both entities.

5.1.02   This finding is consistent with the works of Wernerfeldt [1984] (37) who looks at the resource based theory of the firm along with Bailey and Waldinger [1991] (17) and Mahoney and Pandian [1992] (14). In particular, Connor [1991] (14) discusses the evolution of the firm compared to traditional industry organisation (IO) models of economics. Alvarez and Busenitz [2001] (16) expanded these theories of the firm to include those self-employed individuals. Coase [1937] (24) originally links the

entrepreneur to the firm, while Chandler, cited by Smith and Miner [1983] (14), have the firm as a precursor to the organisation, which has a more bureaucratic style. However as per my discussion on the 2 x 2 matrix shown in Graphic 4r, this linkage is too simplistic, as linking the firm and the entrepreneur may not always suffice, especially where there are non-entrepreneurial firms.

5.1.03   I believe that the way the *aliran* delineates the difference between the organization and the firm is more of a delineation between the discipline of management and the discipline of entrepreneurship. In broad brush strokes, these differences, as perceived from the *aliran*, are outlined as follows:

- Organizations generally do not, according to the *aliran*, engage in new ventures. (Romanelli [1989] is one of the few exceptions to this generalization suggesting that organizations can be involved in start ups.)

- Organizations tend not to innovate, firms innovate. Seemingly individuals do not innovate either. This exclusion of innovation from the organization is consistent with the ontological domain specifications of the Academy of Management as outlined in section 2.5.4.06.

- There is a low emphasis on learning by the firm. However, there is a strong emphasis on organizational learning. As pointed out by Hitt, Ireland, Camp, and Sexton [2001], organizational learning is one of the common domains between entrepreneurship and strategic management. It may be possible to infer that organizational learning is the way the discipline of management includes some of the aspects of entrepreneurship that would otherwise be excluded.

- Entrepreneurs start firms / small businesses; they do not start organizations.

- Entrepreneurs run small businesses, not organizations. Managers run organizations and are also involved in the management of firms.

5.1.04   The second significant point was the difference emphasis on size. I had initially assumed that corporate related to corporations, but it was clear from the *aliran* that corporate was somewhat linked to size, but not necessarily in effect of being linked to size as in a corporation. Corporate was used more as an approach to ensuring the continuity of the firm which did tend, in such context, to be identified differently to a small business or a self-employed individual.

5.1.05   Corporate issues such as corporate innovation, corporate venturing and corporate entrepreneuring tended to be more introverted when compared to the greater extroversion of the sub-*aliran* on small businesses, self-employed and ethnic / immigrants. I believe this introversion relates again to a disciplinic delineation between entrepreneurship and management disciplines where academics in entrepreneurship are expanding their 'patch' by the inclusion of domains more traditionally associated with the management discipline.

5.1.06   These inclusions may still have certain limitations with studies into traits such as ethnicities or approaches such as reactivity to events, tending to relate more to small businesses or the self-employed, not to leaders in a firm or organization. The study of ethnicity in management or managers' reactions to events are still inclusions in the management discipline. As discussed in section 4.3.10.07 this may be a new field of study in entrepreneurship as well as still being part of management studies. However the *aliran* may already be addressing such issue as will be discussed in section 5.1.10 below when the changes observed from the *aliran* are included in my heffalump model.

5.1.07   Changes to the heffalump model shown in Graphic 4j would include the following:

- Inclusion of a parallel entity of firms next to organizations with strong links between the organization and learning, organization and rational approaches, also strong links between the firm and innovation.

- A greater emphasis between new-ness and firms and a much lower emphasis between new-ness and organizations.

- A greater emphasis between innovation and firms and no interstice between innovation and organizations. Also remove the interstice between individuals and innovation.

- Stress that unemployment / self-employment is key in new small businesses / self-employed individuals.

- Addition of an interstice between reactive approach and individuals as per the discussions on unemployment with self-employment and displacement with immigrancy.

- Inclusion of an 's' in leader to show the intent of corporate aspects such as corporate entrepreneurship.

- Emphasis of the *aliran*'s proclivity towards entrepreneurship as an economic activity rather than a social activity.

5.1.08 These changes are shown the revised Heffalump model in Graphic 5a, with the darker lines indicating those interstices that should have greater emphasis. The domain of strategic entrepreneurship has also been included. This revised model should still be considered a work-in-progress awaiting further research to refine its details.

Graphic 5a	*The Heffalump model revised*
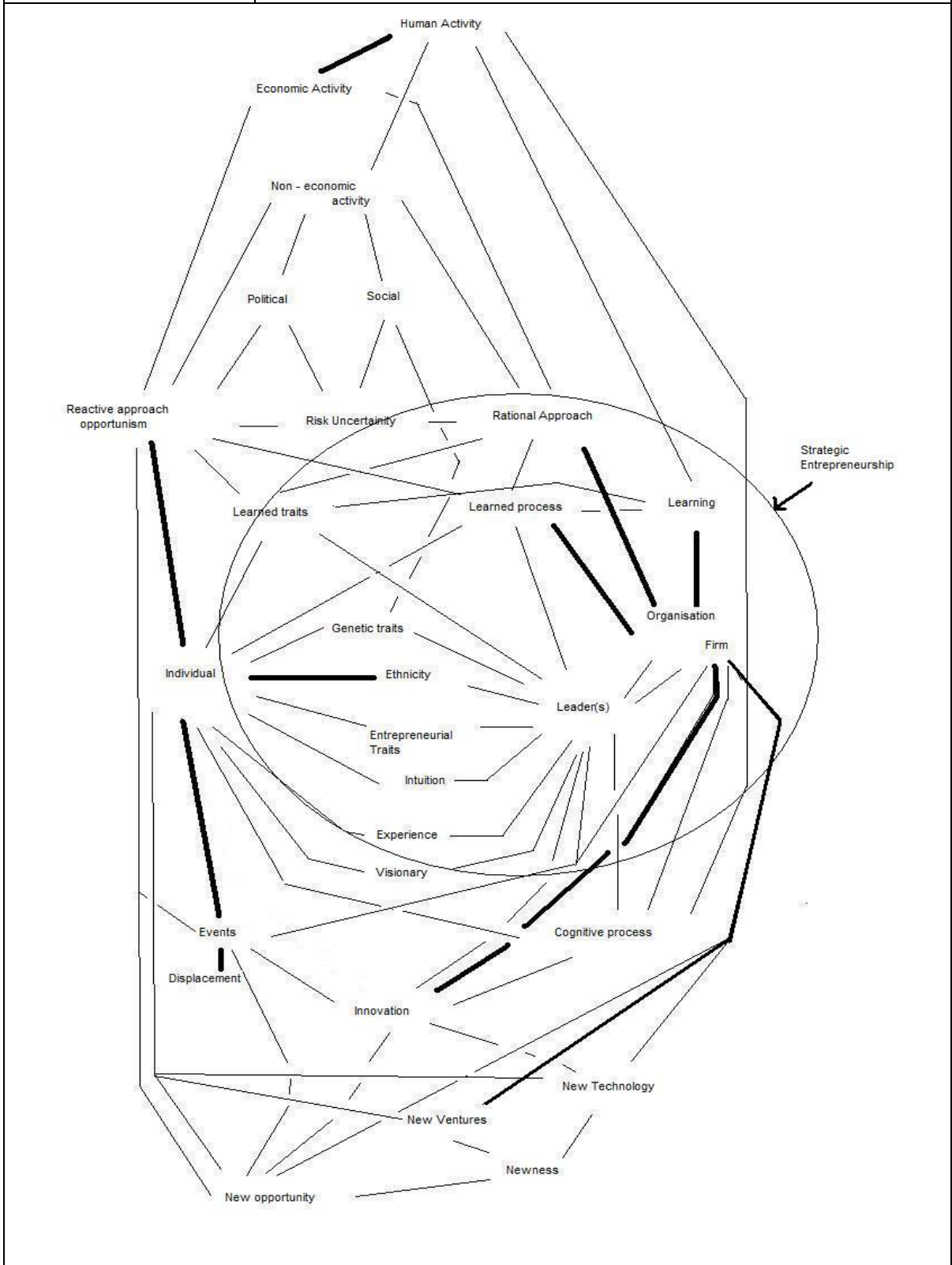
5.1.09   A fascinating aspect of this review of the heffalump model occurs when inserting the 's' after leader, as per the efforts of those constructing the various corporate sub-*aliran*, especially corporate entrepreneurship. This was discussed in section 4.3.6.1.06. The interstices with the traits, such as ethnic traits makes an interesting adjustment with the implication that the ethnic traits, rather than that of a single leader, become the ethnic traits for all of the leaders in the firm. This creates the scenario discussed in section 4.3.5.04 with regards to the innovation sub-*aliran* where the *aliran* showed a prevalence towards 'national systems of innovation' and introduced 'the concept of innovation having an ethnic or national orientation' as exemplified by Nonaka and Takeuchi's [1995] (25) article and Kodama's [1995] text where they respectively discuss the Japanese-ness of the company, and the Japanese-ness of innovation, as being a significant factor in achieving success.

5.1.10   The 'firm' instead of being shown as an entity separate to the leader becomes an entity defined by, and indistinguishable from, the collective traits of its leaders. This is probably an 'ideal' entrepreneurial firm where all those who are in positions deemed to be entrepreneurial are engaged in entrepreneurial work, when required to do so. The last aspect of timeliness is probably when strategic entrepreneurship is most significant. Such an ideal entrepreneurial firm may not yet exist. As per Stuart and Abetti [1987] (14) it is more than likely that the entrepreneurial leader is still needed, in most firms, to lead and review. However, it does stress that while entrepreneurship is a process there is still the awareness, as per Stewart, Watson and Garland [1999] (15), that entrepreneurial traits are important.

5.1.11   This relativity of the entrepreneurial firm does suggest that an additional dimension can be included into the heffalump model.

5.1.12   The aspects of size and shape could not be included in the heffalump nature due to its two dimensional nature. However virtually the vertical axis of the 2 x 2 matrix of Graphic 4r (depicting the difference between small business and the corporate) could be

placed into the heffalump model as a vertical second dimension to 'firms' to show the difference between firms as small businesses and firms as corporate. This additional dimensionality could also reflect the differences in new ventures and corporate ventures along with the differences between innovation by small businesses and corporate innovation. The addition of self-employed individuals to this vertical axis, without an interstice to innovation, would also visually depict this aspect of the *aliran*.

5.1.13   These changes are shown in Graphic 5b. The horizontal axis of this graphic is the heffalump model viewed from an elevation view and the vertical axis is the vertical axis from the cross model shown in Graphic 4r, with the addition of the self-employed individual. In this graphic I am illustrating two points that sourced from the *aliran*. Firstly the interstice between innovation and corporate, and the interstice between innovation and small firms, but no interstice between innovation and the self-employed individual. Secondly the changing link between ethnicity (or any other trait) and the firm, as the firm become more 'corporate / entrepreneurial' the ethnicity interstice changes from being the ethnicity of the leader(s) to the ethnicity of the firm. A similar point, in reverse, happens between the leader of the small business and the self-employed individual.

5.1.14   The third dimension of time could be virtually introduced to show the effect of time, the possible reduced influence of the organization sub-*aliran* and the beginning emergence of the strategic entrepreneurship sub-*aliran*. This could be best effected by a time series showing different sizes of sub-*aliran* at different points of time. This is a possible area of future research.

Graphic 5b	*Three dimensional positioning of the corporate / small business axis into the Heffalump model*

Corporate

Ethnicity — Leaders(s)

New Ventures

The heffalump model as a plane view

Innovation

Small firms

Self employed individuals
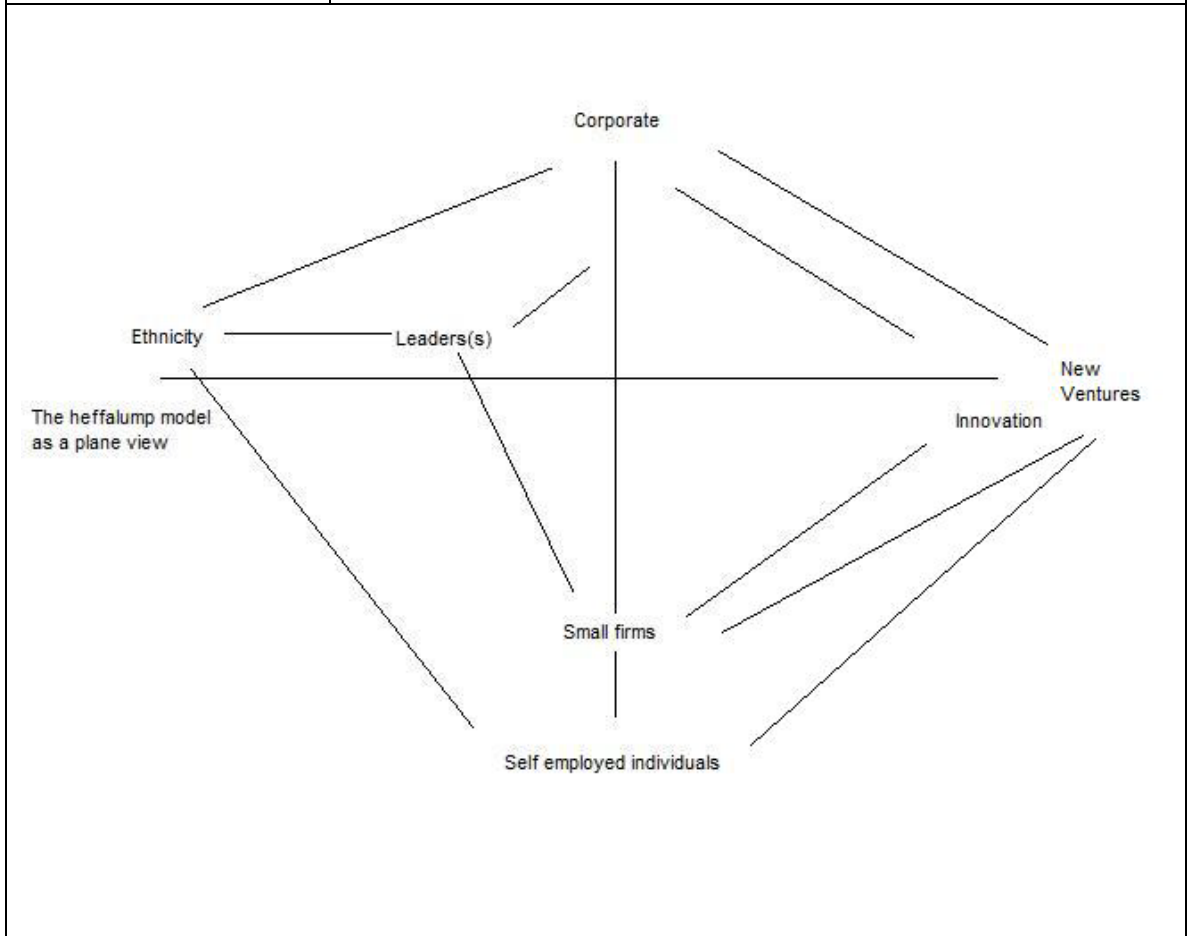
5.2 Can entrepreneurship be considered a dubious discipline?

5.2.00   This section reviews the question of whether the discipline of entrepreneurship could be considered to be a dubious discipline.

5.2.01   In section 4.1.3.05 I discussed the possibility of citation indexes being a measure of disciplinic dubiety. This may be a reasonable assumption given that disciplines could be considered to be the collective *connaissance* knowledge of the journals, articles and texts that are its composition. The collective value of the citations indexes of the journals attached to that discipline could be considered a measure of the dubious or non-dubious nature of the discipline. However, as per my discussion on the study by Biehl, Kim and Wade [2006], I tend to reject the use of citation indexing as a measure of journal 'value' and therefore such indexing could be less than representational of the status of the discipline. I would think that answering the question, on whether the discipline could be considered dubious, could call for a more subjective opinion. As someone who possessing *savoir* knowledge and, with this study, a better appreciation of the *connaissance* knowledge of this discipline, my opinion may have some basis.

5.2.02   I approached this study, as a person who has been entrepreneurial, with a strong degree of scepticism on the way the discipline of entrepreneurship had developed and was developing. Without eating too much humble pie, I admit that my scepticism may have been less than warranted. In part this was due to a better understanding of the role of the *episteme* as a forum for the cross exchange of academic ideas and concepts.

5.2.03   Yes, there are areas in the discipline where there have been overt construction of ontologies, not necessarily by those who initiated them, but more by those, possibly with their own agenda, who have championed these ontologies at later times.

5.2.04   Yes, in the domains of ethnicity / immigrancy there have been instances where soft subjects of study have been taken. Yet these have still contributed in some ways to the overall development and collective knowledge of the *connaissance*. Harder subjects of

study (addressing the introverted as discussed in section 4.3.8.3.06) may need to be taken in the future and these may need to overcome the problems of disciplinary inclusions and exclusions.

5.2.05   Yes, I would still agree with Low [2001] that the discipline is still in its adolescence. But this is more in the way of a wilful teen, eager, maybe too full of itself, and yet to learn from the *savoir* experiences available to it. I have the opinion, particularly reinforced from the emergence of the revised heffalump model, that the direction being taken by the discipline is probably moving in the right direction. Whether it has passed Foucault's point of epistemologization is still indeterminate.

5.2.06   I do believe that there needs to be a greater awareness within the discipline of the relative aspects of ontology, epistemology and *gravitas* and how these apply to the development of the discipline of entrepreneurship. I do also believe that disseminating this dissertation into the *connaissance* knowledge of the discipline could assist in this objective.

5.2.07   From the *aliran* is it possible to infer that the 'being' of entrepreneurship has been clarified? My answer is 'No'. I do not believe that the discipline could pass Heidegger's ontological test, at this point in time. While I am able, in this research, to identify the ontologies from the sub-*aliran,* even though some of the more extroverted sub-*aliran* may fall into several ontologies, I do not believe that it is possible to really clarify, from the *aliran,* the being of entrepreneurship. The elephant is still a heffalump, due in part, I believe, to a lack of objectivity and also a lack of connection to the *savoir*. Low and MacMillan [1998, p146], advised scholars in entrepreneurship that "the field will be better served in the future if the issue of theoretical perspective is addressed directly and unstated assumptions avoided". This lack of objectivity has not been to the benefit of the discipline. The aspects of *gravitas* as discussed in section 2.4.3 are apparently significant in the discipline and as suggested from the *aliran*, in some cases, such *gravitas* has been misplaced.

5.2.08 The 'being' of entrepreneurship is still not clear; my own *savoir* issues of problem – solving (addressed in section 1.3.02); Amoore's [2004] worker entrepreneur (addressed in section 4.3.10.06); and from the *aliran*; introverted corporate ontologies (that suggest a conflict in delineation with management discipline); overt construction of some ontologies; soft subjects of study in ethnic / immigrant ontologies; and the yet-to-be realized potential of strategic entrepreneurship. These findings indicate that, even though the discipline is on the right track, there is still more work to be done before the ontological being of entrepreneurship could be considered to be clarified, and the discipline could be considered to have passed Foucault's point of epistemologization.

5.2.09 In Baudrillard's [1994] terms, I would hesitate to describe the discipline as a simulcrae, but I do not believe that the *connaissance* knowledge currently reflects an accurate simulation of the *savoir* knowledge of, or the *savoir* activities of, entrepreneurship. I would suggest that some disciplinic exclusions do hinder the development of an accurate simulation, especially when the discipline of entrepreneurship comes into conflict with the discipline of management.

5.2.10 Is the discipline dubious? Yes, it is dubious, but that is not a problem. Foucault [cited in Dreyfus and Rabbinow, 1983] also considered clinical medicine to be dubious; however it is possible that technological advances in that area, may have done much to reduce such dubiety. The same is possible in the discipline of entrepreneurship. Being a dubious discipline may be a temporal phase, that as the discipline evolves in the various stages from its emergence and finally passes through adolescence, becomes less of an issue.

5.2.11 Entrepreneurship is primarily, as per my heffalump model, about human activity. As such, it resides in less-than-objective realms. But academic approaches to the study of such domains need to retain their objectivity, i.e. good academic form, in order for the discipline to evolve past adolescence. The *gravitas* inherent in the discipline should be applied in that direction rather than in the overt construction and preservation of 'patches' and attempting to generate additional definitions of entrepreneurship. The acceptance that

the discipline is indeed dubious may reinforce the need for this objectivity and as such the term dubious can be rehabilitated. Just as Gadamer rehabilitated the term prejudice, it should also be possible to rehabilitate the term dubious to be a positive rather than a negative. Some recognition of the dubious nature of the discipline may already be apparent. As per Shane and Venkataraman [2000] (117) 'to date, the phenomenon of entrepreneurship has lacked a conceptual framework'. This article is the most highly cited article in the *aliran* and its meteoric rise to that position within a short time span could indicate a recognition of the dubious nature of the discipline and bring forth further works that better position the discipline for future study.

5.2.12   Being dubious presents a greater challenge as well as placing a greater emphasis on credibility. Rather than postulating theories and adding more definitions to an otherwise overcrowded field, academics could be 'advised' (in a manner similar to Low and MacMillan's [1998] (80) advice) to study the *savoir* aspects of the subject and draw conclusions from this aspect that in turn inform those interested in and carrying out entrepreneurial work.

5.3 Contributions and future research

5.3.00   As discussed in section 1.1.3, this dissertation had several intentions.

a) to illustrate the dictonous issue of the rapidly growing academic discipline of entrepreneurship, that is apparently facing adolescent type growing pains.

b) to create a model, or series of models, that delineates the relationship between the concepts of ontology and epistemology, along with offering definitions as to the boundaries of discourse, discipline and what is termed ontic knowledge.

c) to develop the concepts of *savoir* and *connaissance* knowledges.

d) to apply Foucault's concept of the *episteme* as a strategic apparatus in a piece of research, incorporating Gadamer's [1989] use of the term 'prejudice' as a positive, to show how the flow of knowledge is influenced by the particular *episteme* and maybe influenced by the prejudices.

5.3.01   I believe that these intentions have been successfully implemented. The models developed have application as tools for emerging disciplines like knowledge management which to date have few definitive conceptual models. The concepts of the *episteme*, the parameters of acceptability of knowledge within such *episteme*, and the prejudices associated with such acceptance could be utilised. This dissertation not only offers such conceptual models, it also applies such models in a piece of research.

5.3.02   What has also emerged from this research is the greater applicational value of the *aliran* when compared to the *episteme*. There is also the possibility to create a dimensional model of this *aliran* to visually depict the features and interstices of this *aliran*. While such dimensionality has not been fully shown in this work, it provides an arena of future research.

5.3.03   What has further emerged from this work is the aspect of *gravitas* and the practical influence of such *gravitas* on the ontological inclusions and exclusions as shown from the *aliran*. This is an aspect that needs to be addressed by the discipline for its future with regards to the evolution of the ontology of strategic entrepreneurship where the current introversion of the corporate ontologies are perceived to need to become more extroverted, with more interstices between the ontologies of entrepreneurship and strategic management. As mentioned in section 5.1.10, there is the need to position the 'entrepreneurial firm where all those who are in positions deemed to be entrepreneurial are engaged in entrepreneurial work, when required to do so.' This positioning provides a nice link between the past and the future, from the works of McClelland [1965] to Amoore's [2004] worker entrepreneur, to the potential for strategic entrepreneurship through the timeliness of entrepreneurial work.

5.3.04   Also from my own *savoir* positionality, the significance of *savoir* knowledge (as per Foucault's Triangle) being the source of the flow of power to *connaissance* knowledge cannot be under-estimated. In my opinion research needs to be more orientated towards practice, with theories being derived from the *savoir* and developed in the *connaissance*.

5.3.05   Based upon this dissertation I would also like to see the future development of a real three dimension model of the *aliran*. Such development and the dissemination of this model of the *aliran* into academia is dependant upon the use of technological tools, such as 3D modeling software currently available in the commercial realm, and the acceptance of the product of these tools into academia.

Appendix One: The high *gravitas* articles in chronological sequence extracted from the Web of Science *episteme,* that formed the basis to the *aliran*. See section 3.2.3.03 for details on table composition.

Name first author	Co-author(s)	Year	Short Title	T/J	VC1 (500) 2006 2005	VC2 (500) 2005 2002	VC3 (500) 2002 1997	VC4 (500) 1997 1983	Bal (161) 1983 1956	Total (2161)
CANTILLON		1755 – 1999	ESSAI NATURE COMMERC	T	8	5	10	6	2	31
SMITH		1776 – 1980	WEALTH NATIONS	T	1	3	4	8	2	18
SAY		1803 – 1971	TREATISE POLITICAL	T	5	4	5	3	1	18
MARSHALL		1890 – 1965	PRINCIPLES EC	T	10	15	7	2	6	40
WEBER		1904 – 2004	PROTESTANT ETHIC SPI	T	5	8	11	12	5	41
SCHUMPETER		1911 – 2004	THEORY EC DEV	T	79	68	86	69	29	331
KNIGHT		1921	RISK UNCERTAINTY PRO	T	29	17	29	17	7	99
SCHUMPETER		1934 – 1995	CAPITALISM SOCIALISM	T	30	42	34	38	1	145
SCHUMPETER		1934 – 1982	BUSINESS CYCLES	T	4	9	8	11	3	35
COASE		1937	ECONOMICA, V4	JNW	7	5	6	3	3	24
BARNARD		1938	FUNCTIONS EXECUTIVE	T	3	2	5	5	2	17
SIMON		1945 – 1997	ADM BEHAV	T	5	6	4	1		16
HAYEK		1945,	AM ECON REV, V35	JNW	14	12	9	4	1	40
VON MISES		1949 – 1996	HUMAN ACTION TREATIS	T	6	3	4	5	2	20
DRUCKER		1950 – 1974	PRACTICE MANAGEMENT	T	3	1	4		8	16
HIRSCHMAN		1951 – 1968	STRATEGY EC DEV	T		1	2	5	8	16
MARCH	Simon	1958 – 1993	ORGANIZATIONS	T	6	9	9	12	2	38
PENROSE		1959 – 1995	THEORY GROWTH FIRM	T	19	20	33	12	5	89
ANDREWS		1960 – 1987	CONCEPT CORPORATE ST	T	5	2	6	1		14
BURNS	Stalker	1961 – 1968	MANAGEMENT INNOVATIO	T	2	3	5	14	3	27
MCCLELLAND		1961 – 1976	ACHIEVING SOC	T	26	18	23	36	27	130
ROGERS		1962 –	DIFFUSION	T	7	7	10	7		31

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		1995	INNOVATION							
KUHN		1962 – 1996	STRUCTURE SCI REVOLU	T	11	8	9	4	1	33
ARROW		1962	RATE DIRECTION INVEN	T	9	9	10	2	1	31
CHANDLER		1962	STRATEGY STRUCTURE	T	8	3	6	9	6	32
HAGEN		1962,	THEORY SOCIAL CHANGE	T		1	4	9	15	29
CYERT	March, James	1963 – 1992	BEHAVIOR AL THEORY FI	T	9	15	16	8	3	51
BARTH		1963	ROLE ENTREPREN EUR SO	T	2	1	1	2	8	14
BECKER		1964 – 1994	HUMAN CAPITAL	T	18	6	12		1	37
COLLINS	Moore	1964	ENTERPRIS E MAN	T	2	3	6	12	7	30
STINCHCOMB E		1965 – 1970	HDB ORG	T	23	19	24	9	1	76
MCCLELLAND		1965	J PERS SOC PSYCHOL, V1	JE	4	2	5	2	1	14
OLSON		1965	LOGIC COLLECTIV E ACT	T	3	2	6	3		14
BERGER	Thomas	1966 – 1967	SOCIAL CONSTRUC TION	T	5	6	2	1		14
POLANYI		1966 – 1967	TACIT DIMENSION	T	5	7	1	1		14
ROTTER		1966	PSYCHOL MONOGRAP HS, V80	J	8	4	5	4	1	22
LAWRENCE	Lorsch	1967 – 1969	ORG ENV MANAGING DIF	T	2	3	3	10	3	21
GLASER		1967 – 1999	DISCOVER GROUNDED TH	T	10	11	3	7		31
NUNALLY	Bernstein	1967- 1978	PSYCHOME TRIC THEORY	T	15	12	14	17		58
KOTLER		1967 – 2003	MARKETIN G MANAGEM ENT	T	3	3	5	4		15
SMITH		1967	ENTREPREN EUR HIS FIR	T		3	5	6	2	16
THOMPSON		1967	ORG ACTION	T	5	7	5	12	7	36
WEBER		1968 – 1978	EC SOC	T	9	3	5	4	1	22
BAUMOL		1968	AM ECON REV, V58	JE	7	5	6	16	4	38
LEIBENSTEIN		1968	AM ECON	JE	2	7	7	9	4	29

			REV, V58						
MCCLELLAND		1969	MOTIVATING EC ACHIEV	T	2	1	4	9	2	18
HORNADAY	Aboud	1971	PERS PSYCHOL, V24	J	7	3	6	15		31
KILBY		1971	ENTREPRENEURSHIP EC	T	2	4	7	13	10	36
ALCHIAN	Demsetz	1972	AM ECON REV, V62	J	3	2	10	4	2	21
CHILD		1972	SOCIOLOGY, V6	J	5	6	13	9	1	34
GREINER		1972	HARVARD BUS REV, V50	J	7	10	4	5	1	27
LIGHT		1972	ETHNIC ENTERPRISE AM	T	6	8	26	23		63
BONACICH		1973	AM SOCIOL REV, V38	J	4	6	9	13		32
GRANOVETTER		1973	AM J SOCIOL, V78	J	17	21	5	5		48
KIRZNER		1973	COMPETITION ENTREPRE	T	31	23	23	26	8	111
MINTZBERG		1973	CALIFORNIA MANAGEMEN, V16	J	2	3	4	4	1	14
RUMELT		1974 – 1989	STRATEGY STRUCTURE E	T	5	1	3	9		18
TVERSKY	Kahnemann	1974	SCIENCE, V185	J	5	2	7	1		15
HAIR		1975 – 1999	MULTIVARIATE DATA AN	T	12	10	3	6		31
SHAPERO		1975	PSYCHOL TODAY, V9	J	5	3	9	7	2	26
WILLIAMSON		1975	MARKETS HIERARCHIES	T	5	8	20	15	1	49
JENSEN	Meckling	1976	J FINANC ECON, V3	J	9	10	11	5	1	36
BIRCH		1977 – 1979	JOB GENERATION PROCE	T	6	5	8	8	1	28
TIMMONS	Spinelli	1977 – 2003	NEW VENTURE CREATION	T	16	21	21	10	2	70
ARMSTRONG		1977	J MARKETING RES, V14	J	5	7	9			21
CHANDLER		1977	VISIBLE HAND MANAGER	T	1	5	6	12	1	25
COOPER	Bruno	1977	BUS HORIZONS, V20	J	5	1	4	9		19

		1977	J MANAGE STUD, V14	JN W	4	2	5	5	1	17
DEVRIES		1977	J MANAGE STUD, V14	JN W	4	2	5	5	1	17
HANNAN	Freeman	1977	AM J SOCIOL, V82	J	7	10	14	7	1	39
HANNAN	Tuma, Groeneveld	1977	AM J SOCIOL, V82	J						
JOHANSON	Vahlne	1977	J INT BUS STUD, V8	J	14	11	5	1		31
KHANDWALLA		1977	DESIGN ORG	T	1	4	10	5	1	21
MEYER	Rowan	1977	AM J SOCIOL, V83	J	14	11	7	5		37
MEYER	Rowan	1977	AM J SOCIOL, V83	J						
ARGYRIS	Schon	1978 – 1996	ORG LEARNING THEORY	T	5	8	6	6		25
LUCAS		1978	BELL J ECON, V9	J	16	9	7	6		38
MILES		1978	ORG STRATEGY STRUCTU	T	8	3	17	9	1	38
PFEFFER		1978	EXTERNAL CONTROL ORG	T	7	13	11	8	1	40
ALDRICH		1979	ORG ENV	T	4	7	3	8	1	23
BIGGADIKE		1979	HARVARD BUS REV, V57	J	3	3	3	15		24
HECKMAN		1979	ECONOMETRICA, V47	J	7	7	5			19
KIHLSTROM	Laffont	1979	J POLITICAL EC, V87	JN W	18	8	7	6		39
KIRZNER		1979	PERCEPTION OPPORTUNI	T	12	11	5	20		48
LIGHT		1979	INT J COMP SOCIOL, V20,	J	2	5	9	3		19
MINTZBERG		1979	STRUCTURING ORG SYNT	T	2	4	4	7	1	18
WEICK		1979	SOCIAL PSYCHOL ORG	T	2	10	5	8		25
LEWIS		1980 – 1984	PUBLIC ENTREPRENEURS	T	4	5	2	10	1	22
PORTER		1980 – 1984	COMPETITIVE STRATEGY	T	21	15	32	21		89
VESPER		1979 – 1990	NEW VENTURE STRATEGI	T	12	6	19	26	1	64
HOFSTEDE		1980 – 2001	CULTURES CONSEQUENCE	T	21	9	11	9		50
BONACICH		1980	EC BASIS ETHNIC SOLI	T	4	4	13	14		35

BROCKHAUS		1980	ACAD MANAGE J, V23	J	10	7	7	10		34
LIEBERSON		1980	PIECE PIE BLACKS WHI	T	2	2	5	5		14
MAIDIQUE		1980	SLOAN MANAGEMENT REV, V21	J				14		14
SCHERER	Ross	1980	IND MARKET STRUCTURE	T	2	2	7	5		16
WILSON	Portes	1980	AM J SOCIOL, V86	J	1	7	14	5		27
FORNELL	Larcker	1981	J MARKETING RES, V18	J	7	13	4			24
STIGLITZ	Weiss	1981	AM ECON REV, V71	J	5	5	7	1		18
CASSON		1982 – 1999	ENTREPRENEUR EC THEO	T	9	7	27	18		61
BROCKHAUS		1982	ENCY ENTREPRENEURSHI	T	8	9	9	19		45
BRUNO	Tyebjee	1982	ENCY ENTREPRENEURSHI	T	5	5	3	5		18
DIMAGGIO		1982	MEDIA CULT SOC, V4,	J	6	7	8	16	1	38
JOVANOVIC		1982	ECONOMETRICA, V50	J	12	8	12	6		38
MILLER	Friesen	1982	STRATEGIC MANAGEMENT, V3	J	6	8	10	11		35
NELSON		1982	EVOLUTIONARY THEORY	T	20	24	22	13		79
PETERS	Waterman	1982	SEARCH EXCELLENCE LE	T	2	8	13	25		48
ROSENBERG		1982	INSIDE BLACK BOX TEC	T	1	7	1	6		15
SHAPERO	Sokol	1982	ENCY ENTREPRENEURSHI,	T	6	7	18	18		49
WILSON	Martin	1982	AM J SOCIOL, V88	J		3	7	7		17
HEBERT		1982 – 1988	ENTREPRENEUR MAINSTR	T	4	2	5	10		21
KANTER		1983 – 1985	CHANGE MASTERS	T	6	6	12	39	0	63
BURGELMAN		1983	MANAGE SCI, V29	JE	5	2	13	20		40
BURGELMAN		1983	ADMIN SCI QUART, V28	J	8	7	7	21		43
CHURCHILL	Lewis	1983	HARVARD	J	7	11	7	9		34

			BUS REV, V61							
COHEN	Cohen,West, Aiken	1983	APPL MULTIPLE REGRES	T	4	6	9	1		20
DIMAGGIO	Powell	1983	AM SOCIOL REV, V48,	JNW	15	12	9	4		40
FAMA	Jensen	1983	J LAW ECON, V26	J	6	1	4	4		15
FAMA	Jensen	1983	J LAW ECON, V26	J						
FREEMAN	Carroll, Hannan	1983	AM SOCIOL REV, V48	J	5	4	3	4		16
MILLER	Friesen	1983	STRATEGIC MANAGE J, V4	J	6	4	4	7		21
MILLER		1983	MANAGE SCI, V29	JE	20	17	18	20		75
QUINN	Cameron	1983	MANAGE SCI, V29	J	4	5	5	9		23
SMITH	Miner	1983	STRATEGIC MANAGEMENT, V4	J	4	1	2	7		14
PORTER		1985 – 1998	COMPETITIVE ADVANTAG	T	25	27	28	24		104
KINGDON		1984 – 2003	AGENDAS ALTERNATIVES	T	4	5	10	7		26
YIN		1984 – 2003	CASE STUDY RES DESIG	T	32	15	13	3		63
DRUCKER		1984 – 1999	INNOVATION ENTREPREN	T	23	19	24	42		108
BOURDIEU	Nice	1984	DISTINCTION SOCIAL C	T	2	3	5	6		16
BURGELMAN		1984	CALIF MANAGE REV, V26	JE	2	3	6	11		22
CARLAND	Boulton, Hoy, Carland	1984	ACAD MANAGE REV, V9	J	9	3	11	21		44
DESS	Robinson	1984	STRATEGIC MANAGE J, V5	J	5	3	4	2		14
DESS	Beard	1984	ADMIN SCI QUART, V29	J	8	6	8	2		24
GIDDENS		1984	CONSTITUTION SOC OUT	T	11	6	7	4		28
HAMBRICK	Mason	1984	ACAD MANAGE REV, V9	J	13	5	7	2		27
HANNAN	Freeman	1984	AM SOCIOL REV, V49	J	13	10	6	5		34
HISRICH	Brush	1984	J SMALL BUS MANAGE, V22	JNW	3	1	6	5		15
LIGHT		1984	ETHNIC	J		4	12	14		30

			RACIAL STUD, V7,							
MILLER	Friesen	1984	ORG QUANTUM VIEW	T	2	3	10	5	1	21
PIORE		1984	2 IND DIVIDE POSSIBI	T	5	15	9	13		42
RONSTADT		1984	ENTREPRENEURSHIP	T	5	2	4	3		14
TYEBJEE	Bruno	1984	MANAGE SCI, V30	J	1	2	9	4		16
VANDEVEN	Hudson, Schroeder	1984	J MANAGE, V10	J	8	7	3	6		24
WERNERFELT		1984	STRATEGIC MANAGE J, V5	J	12	11	12	2		37
BIRLEY		1985	J BUSINESS VENTURING, V1	JNW	11	15	7	9		42
COOPER		1985	J BUSINESS VENTURING, V1	JNW	2	1	7	10		20
GARTNER		1985	ACAD MANAGE REV, V10	J	26	12	20	15		73
GRANOVETTER		1985	AM J SOCIOL, V91	J	23	33	21	14		91
HAMBRICK		1985	J BUSINESS VENTURING, V1	JNW	4	4	3	4		15
KANTER		1985	J BUSINESS VENTURING, V1	JNW	3	1	6	7		17
KIRZNER		1985	DISCOVERY CAPITALIST	T	7	8	9	6		30
MACMILLAN	Siegel, Subba-narasimha	1985	J BUSINESS VENTURING, V1	JNW	4	6	22	17		49
MACMILLAN	Block, Subba-narasimha	1985	J BUSINESS VENTURING, V1	JNW						
MILLER	Camp	1985	J BUSINESS VENTURING, V1	JNW	2	2	6	6		16
PINCHOT		1985	INTRAPRENEURING WHY	T	5	7	8	32		52
PORTES	Bach	1985	LATIN JOURNEY CUBAN	T	4	5	18	17	0	44
QUINN		1985	HARVARD BUS REV, V63	J	3	1	4	10		18
SEXTON	Bowman	1985	J BUSINESS VENTURING, V1	JNW	2	2	6	9		19
STEVENSON	Gumpert	1985	HARVARD BUS REV, V63	JE	6	10	9	16		41
WILLIAMSON		1985	EC I	T	11	11	20	10		52

			CAPITALIS M							
WALDINGER		1986 – 1988	EYE NEEDLE IMMIGRAN T	T		4	10	12		26
ALDRICH	Auster	1986	RES ORGAN BEHAV, V8	JN W	9	6	5	7		27
ALDRICH	Zimmer	1986	ART SCI ENTREPREN EUR	T	10	21	17	12		60
BANDURA		1986	SOCIAL F THOUGHT ACT	T	7	6	16	1		30
BARNEY		1986	MANAGE SCI, V32	J	5	3	10	3		21
BORJAS		1986	J HUM RESOUR, V21	J	9	1	9	9		28
BOWEN		1986	ACAD MANAGE REV, V11	J	3	1	8	4		16
BROCKHAUS	Horwitz	1986	ART SCI ENTREPREN EUR	T	7	5	12	9		33
BURGELMAN	Sayres	1986	INSIDE CORPORAT E INN	T	3		5	12		20
COOPER	Dunkelberg	1986	STRATEGIC MANAGE J, V7	JE	3	7	7	8		25
COVIN	Slevin	1986	FRONTIERS ENTREPREN E,	T		5	6	6		17
DAVID		1986	AM ECON REV, V75	JN W	7	3	4	1		15
REES	Shah	1986	J APPLIED ECONOMET RI, V1	JN W	10	4	7	4		25
ROMER		1986	J POLIT ECON, V94	J	8	11	3	2		24
ROURE	Maidique	1986	J BUSINESS VENTURING , V1	JN W	4	1	4	5		14
SANDBERG		1986	NEW VENTURE PERFORMA	T		1	11	4		16
TEECE		1986	RES POLICY, V15, P285	J	10	8	9	2		29
TUSHMAN	Anderson	1986	ADMIN SCI QUART, V31	J	14	8	11	5		38
VENKATRAM AN	Ramanujam	1986	ACAD MANAGE REV, V11	J	5	2	8	3		18
ALDRICH	Rosen, Woodward	1987	FRONTIERS ENTREPREN E	T	4	5	5	1		15
BEGLEY	Boyd	1987	J BUS VENTURING , V2	J	10	6	11	7		34

BIRCH		1987	JOB CREATION AM OUR	T	3	7	13	11		34
BLAU		1987	J POLIT ECON, V95	J	10	5	8	1		24
DOIG	Hargrove	1987	LEADERSHIP INNOVATIO	T	1	5	2	6		14
EVANS		1987	J POLIT ECON, V95	J	6	6	2	6		20
LEVIN	Klevorick, Nelson, et al.	1987	BROOKINGS PAPERS EC, V3	J	4	7	5			16
MACMILLAN	Zemann, Subba-narasimha	1987	J BUS VENTURING, V2	J	6	3	13	14		36
MACMILLAN	Day	1987	J BUS VENTURING, V2	J						
MORRIS	Paul	1987	J BUS VENTURING, V2	JE	5	12	6	6		29
PORTES		1987	SOCIOL PERSPECT, V30	J	0	4	3	6	0	13
SANDBERG	Hofer	1987	J BUS VENTURING, V2	J	8	5	8	10		31
SANDERS	Nee	1987	AM SOCIOL REV, V52	J		5	10	6		21
SCOTT		1987	ADM SCI Q, V32	J	2	1	2	9		14
STUART	Abetti	1987	J BUS VENTURING, V2	J	3	2	4	5		14
WORTMAN		1987	J MANAGE, V13	J	5	1	7	16		29
HANNAN	Freeman	1988 - 1989	ORG ECOLOGY	T	5	14	12	10		41
LIGHT		1988 – 1997	IMMIGRANT ENTREPRENE	T	4	9	14	17		44
KATZ	Gartner	1988	ACAD MANAGE REV, V13	J	7	14	9	6		36
ANDERSON	Gerbing	1988	PSYCHOL BULL, V103	J	8	5	1			14
BIRD		1988	ACAD MANAGE REV, V13	J	7	5	8	2		22
COLEMAN		1988	AM J SOCIOL, V94	J	19	16	10	4		49
COOPER	Woo, Dunkelberg	1988	J BUSINESS VENTURING, V3	J	12	9	7	7		35
COVIN	Slevin	1988	J MANAGE STUD, V25	J	2	3	8	3		16
DIMAGGIO		1988	I PATTERNS ORG CULT	T	9	5	6	4		24

DOSI		1988	J ECON LIT, V26	J	3	4	6	4		17
DUBINI		1988	J BUSINESS VENTURING, V4	JNW	5	4	3	3		15
DUNNE	Roberts, Samuelson	1988	RAND J ECON, V19	J	5	2	5	5		17
GARTNER		1988	AM J SMALL BUSINESS, V12	JNW	20	11	14	12		57
KAZANJIAN		1988	ACAD MANAGE J, V31	J	8	11				19
KEATS	Hitt	1988	ACAD MANAGE J, V31	J	2	3	6	3		14
LIEBERMAN	Montgomery	1988	STRATEGIC MANAGE J, V9	J	5	9	6	3		23
LOW	Macmillan	1988	J MANAGE, V14	J	12	15	25	28		80
LUCAS		1988	J MONETARY ECON, V22	J	4	6	4	1		15
MIN		1988	ETHNIC BUSINESS ENTE	T		2	8	6		16
VONHIPPEL		1988	SOURCES INNOVATION	T	3	5	5	5		18
BARTLETT		1989 – 1998	MANAGING ACROSS BORD	T	6	5	4	4		19
KANTER		1989 – 1990	WHEN GIANTS LEARN DA	T	2	5	6	10	0	23
AMSDEN		1989	ASIAS NEXT GIANT	T	3	6	4	5		18
BANTEL	Jackson	1989	STRATEGIC MANAGE J, V10	J	10	1	4	1		16
BARRETO		1989	ENTREPRENEUR MICROEC	T	3	1	7	3		14
BIRD		1989	ENTREPRENEURIAL BEHA	T	6	3	15	10		34
BORJAS		1989	J POLIT ECON, V97	J	7	1	7	4		19
BYGRAVE		1989	ENTREPRENEURSHIP THE, V14	JNW	8	4	9	13		34
BYGRAVE		1989	ENTREPRENEURSHIP THE, V14	JNW						
COOPER	Woo, Dunkelberg	1989	J BUS VENTURING, V4	JE	5	4	4	6		19
COVIN	Slevin	1989	STRATEGIC MANAGE J,	J	17	15	28	9		69

Author	Co-author	Year	Source	Type						Total
			V10							
DIERICKX	Cool	1989	MANAGE SCI, V35	J	7	4	7			18
EISENHARDT		1989	ACAD MANAGE REV, V14	J	30	14	7	5		56
EISENHARDT		1989	ACAD MANAGE REV, V14	J						
EVANS	Jovanovic	1989	J POLIT ECON, V97	J	30	14	23	10		77
EVANS	Leighton	1989	AM ECON REV, V79	J	35	27	32	12		106
EVANS		1989	AM SOCIOL REV, V54	JE	3	4	6	3		16
GARTNER		1989	ENTREP THEORY PRACT, V13	JNW	5	7	4	4		20
GARTNER		1989	ENTREPRENEURSHIP THE, V14,	JNW	5		10	8		23
JAFFE		1989	AM ECON REV, V79	J	3	9	4	1		17
JARILLO		1989	J BUS VENTURING, V4	JE	6	3	8	4		21
JENNINGS	Lumpkin	1989	J MANAGE, V15	JE	1	1	6	6		14
MCDOUGALL		1989	J BUS VENTURING, V4	JE	8	5	4	2		19
PORTES	Jensen	1989	AM SOCIOL REV, V54	J	1	2	9	4		16
ROMANELLI		1989	ADMIN SCI QUART, V34	J	5	6	7	3		21
STEVENSON	Roberts, Grousbeck	1989	NEW BUSINESS VENTURE	T	1	1	2	10		14
ZHOU	Logan	1989	AM SOCIOL REV, V54,	J	1	2	7	6		16
WALDINGER	Aldrich	1990 – 1992	ETHNIC ENTREPRENEURS	T	4	23	32	21		80
STRAUSS		1990 – 1998	BASICS QUALITATIVE R	T	11	7	3	3		24
GREENE		1990 – 2003	ECONOMETRIC ANAL	T	12	10	6			28
ACS	Audretsch	1990	INNOVATION SMALL FIR	T	7	5	9	4		25
ALDRICH		1990	ENTREP THEORY PRACT, V14	JNW	1	3	2	9		15
ALDRICH	Waldinger	1990	ANNU REV SOCIOL, V16	JE	7	11	13	8		39
BATES		1990	REV ECON STAT, V72	J	10	9	11	5		35
BAUMOL		1990	J POLIT ECON, V98,	JE	10	13	14	12		49

CHANDLER	Takashi	1990	SCALE SCOPE DYNAMICS	T	9	5	6	1		21
COHEN	Leventhal	1990	ADMIN SCI QUART, V35,	J	32	18	14	4		68
COLEMAN		1990	FDN SOCIAL THEORY	T	8	14	8	2		32
COVIN	Slevin, Covin	1990	J BUS VENTURING, V5	J	5	7	6	3		21
COVIN	Slevin	1990	J BUS VENTURING, V5							
DUCHESNEAU	Gartner	1990	J BUS VENTURING, V5	J	6	2	5	4		17
EISENHARDT	Schoonhoven	1990	ADMIN SCI QUART, V35	J	13	13	12	3		41
EVANS	Leighton	1990	SMALL BUSINESS EC, V2	JNW	7	6	1	3		17
GARTNER		1990	J BUS VENTURING, V5	JE	9	5	11	6		31
GUTH	Ginsberg	1990	STRATEGIC MANAGE J, V11	J	8	3	20	12		43
HENDERSON	Clark	1990	ADMIN SCI QUART, V35	J	6	5	2	4		17
HOLMES		1990	J POLIT ECON, V98	JE	5	3	5	4		17
JOHANSON	Vahlne	1990	INT MARKET REV, V7	JNW	10	9	3	1		23
JOHNSON		1990	ENTREPRENEURSHIP THE, V14	JNW	3	5	4	5		17
KOHL	Jaworski	1990	J MARKETING, V54	J	2	10	6	1		19
KURATKO	Montagno, Hornsby	1990	STRATEGIC MANAGE J, V11	J	2	1	5	7		15
NARVER	Slater	1990	J MARKETING, V54	J	4	9	8	1		22
NORTH		1990	I I CHANGE EC PERFOR	T	15	13	7	3		38
PORTER		1990	COMPETITIVE ADV NATI	T	7	6	5			18
POWELL		1990	RES ORGAN BEHAV, V12	J	4	7	10	3	0	24
PRAHALAD	Hamel	1990	HARVARD BUS REV, V68	J	4	4	5	3		16
REDDING		1990	SPIRIT CHINESE CAPIT	T	6	3	3	5		17

ROMER		1990	J POLITICAL EC, V98	J	9	4	5	1		19
ROURE	Keeley	1990	J BUS VENTURING, V5	J	3	2	7	3		15
SAHLMAN		1990	J FINANC ECON, V27	J	5	11	4			20
SAXENIAN		1990	CALIF MANAGE REV, V33, 5	J	2	8	4	3		17
SENGE		1990	DISCIPLINE ART PRA	T	6	6	3	5		20
STARR	MacMillan	1990	STRATEGIC MANAGE J, V11	J	7	9	7	7		30
STEVENSON	Jarillo	1990	STRATEGIC MANAGE J, V11	JE	14	10	16	13		53
WADE		1990	GOVERNING MARKET EC	T	4	3	4	4		15
AJZEN		1991	ORGAN BEHAV HUM, V50	J	6	3	5			14
ARONSO		1991	SELF EMPLOYMENT LABO	T	3	5	9	2		19
BAILEY	Waldinger	1991	AM SOCIOL REV, V56	J	1	6	7	3		17
BARNEY		1991	J MANAGE, V17	J	35	29	26	3		93
BARNEY		1991	J MANAGE, V17	J						
BUTLER		1991	ENTREPRENEURSHIP SEL	T	2	3	7	6		18
BYGRAVE	Hofer	1991	ENTREP THEORY PRACT, V16	JNW	5	4	10	4		23
CHELL		1991	ENTREPRENEURIAL PERS	T	7	6	7	4		24
CONNER		1991	J MANAGE, V17	J	5	2	6	1		14
COVIN	Slevin	1991	ENTREP THEORY PRACT, V16	JNW	13	6	17	6		42
DAVIDSSON		1991	J BUS VENTURING, V6	JE	6	4	8	1		19
DIMAGGIO	Powell	1991	NEW I ORGANAL	T	11	7	4			22
DUBINI	Aldrich	1991	J BUS VENTURING, V6	J	7	13	6	3		29
HUBER		1991	ORGAN SCI, V2	JNW	5	8	4	1		18
KAISH	Gilad	1991	J BUS VENTURING, V6	J	6	3	3	4		16

KALLEBERG	Leicht	1991	ACAD MANAGE J, V34	J	7	7	11	2		27
KRUGMAN		1991	GEOGRAPHY TRADE	T	8	8	4	2		22
MARCH		1991	ORGAN SCI, V2	JNW	13	11	9	1		34
MILES	Arnold	1991	ENTREPRENEURSHIP THE, V15	JNW	1	6	5	3		15
MURPHY	Shleifer, Vishny	1991	Q J ECON, V106	J	5	5	4	1		15
REYNOLDS		1991	ENTREP THEORY PRACT, V16,	JNW	4	3	7	1		15
ROBERTS		1991	ENTREPRENEURS HIGH T	T	8	17	17	2		44
ROBINSON	Stimpson, Huefner, Hunt	1991	ENTREP THEORY PRACT, V15	T	2	3	7	4		16
SHAVER	Scott	1991	ENTREP THEORY PRACT, V16	JNW	13	7	6	3		29
STOREY		1991	SMALL BUSINESS EC, V3	JNW	7	5	3	1		16
TSAI	MacMillan, Low	1991	J BUS VENTURING, V6	J	1	6	5	6	0	18
ZAHRA		1991	J BUS VENTURING, V6	JE	10	6	14	7		37
BELLONE	Goerl	1992	PUBLIC ADMIN REV, V52	JE	3	2	4	5		14
BRUDERL	Preisendorfer, Ziegler	1992	AM SOCIOL REV, V57	J	6	3	7			16
BRUSH		1992	ENTREP THEORY PRACT, V16	JNW	7	6	5	1		19
BRUSH	Van Der Werf	1992	J BUS VENTURING, V7	JE	9	7	12	1		29
BURT		1992	STRUCTURAL HOLES SOC	T	21	22	12	3		58
CHANDLER		1992	J BUSINESS VENTURING, V7	J	3	3	6	3		15
COOPER	Gascon	1992	STATE ART ENTREPRENE	J	6	1	10	8		25
GARTNER	Bird, Starr	1992	ENTREP THEORY PRACT, V16	JNW	9	4	8	3		24
HANNAN	Carroll	1992	DYNAMICS ORG POPULAT	T	4	7	8	2		21
KOGUT	Zander	1992	ORGAN SCI, V3	J	10	5	6	2		23

LARSON		1992	ADMIN SCI QUART, V37	J	6	11	7	6		30
LUNDVALL		1992	NATIONAL SYSTEMS INN	T	8	5	3	1		17
MACMILLAN	Katz	1992	J BUS VENTURING, V7	JE	1	4	5	5		15
MAHONEY	Pandian	1992	STRATEGIC MANAGE J, V13	J	2	4	8			14
MCGRATH	MacMillan, Scheinberg	1992	J BUS VENTURING, V7	JE	5	8	16	6		35
NOHRIA	Eccles	1992	NETWORKS ORG STRUCTU	T	4	7	3	2		16
OSBORNE	Gaebler	1992	REINVENTING GOVT	T	5	6	7	4		22
REYNOLDS	Miller	1992	J BUS VENTURING, V7	JNW	5	4	2	4		15
ROBINSON	Long	1992	J SMALL BUSINESS ENT, V10,	JNW	6	5	3	1		15
ZHOU		1992	CHINATOWN SOCIOECONO	T	1	6	5	2		14
ALDRICH	Wieden-mayer	1993	ADV ENTREPRENEURSHIP, V1,	T	7	7	5	1		20
AMIT	Glosten, Muller	1993	J MANAGE STUD, V30	JE	6	2	8	3		19
ANDERSEN		1993	J INT BUS STUD, V24	J	6	6	3			15
BAUMOL		1993	ENTREPRENEURSHIP MAN	T	7	9	5			21
BAUMOL		1993	J BUS VENTURING, V8,	JE	2	7	3	2		14
BLOCK	Macmillan	1993	CORPORATE VENTURING	T	6	5	9	6		26
BULL	Willard	1993	J BUS VENTURING, V8, P183	JE	2	5	8	3		18
BYGRAVE		1993	J BUS VENTURING, V8, P255	JE	4	5	6	2		17
CHANDLER		1993	J BUS VENTURING, V8	J	3	7	6			16
COOPER		1993	J BUS VENTURING, V8	JE	5	4	8	2		19
GRABHER		1993	EMBEDDED FIRM SOCIOE	T	5	5	6	1		17

HORNSBY	Naffziger, Kuratko, Montagno	1993	ENTREP THEORY PRACT, V17	JN W	3	2	9	1		15
JAFFE	Trajtenberg, Henderson	1993	Q J ECON, V108	J	3	9	3			15
JAWORSKI	Kohli	1993	J MARKETIN G, V57	J	5	5	8			18
KRUEGER	Brazeal	1993	ENTREP THEORY PRACT, V18	JN W	2	8	9	1		20
LARSON	Starr	1993	ENTREP THEORY PRACT, V17	JN W	4	8	4	3		19
LEVINTHAL	March	1993	STRATEGIC MANAGE J, V14	J	9	4	6	1		20
NAMAN		1993	STRATEGIC MANAGE J, V14	JE	9	7	15	1		32
NELSON		1993	NATIONAL INNOVATIO N	T	5	8	8	2		23
PORTES	Sensen-brenner	1993	AM J SOCIOL, V98	J	4	13	7	3	0	27
PUTNAM		1993	MAKING DEMOCRAC Y WORK	T	6	7	6	1		20
VAN DE VEN		1993	J BUSINESS VENTURING , V8, P211	JE	5	4	6	2		17
ZAHRA		1993	J BUS VENTURING , V8	JE	5	8	19	3		35
HAMEL	Prahalad	1994 - 1996	COMPETING FUTURE	T	5	4	14			23
ALDRICH	Fiol	1994	ACAD MANAGE REV, V19	J	18	13	7	2		40
BATES		1994	SOC FORCES, V72	J	1	3	9	2		15
BOYD	Vozikis	1994	ENTREP THEORY PRACT, V18	JN W	6	3	9			18
CHANDLER	Hanks	1994	J BUS VENTURING , V9	J	3	6	10			19
COOPER	Gimeno-Gascon, Woo	1994	J BUS VENTURING , V9	J	19	10	10			39
DYER		1994	ENTREP THEORY PRACT, V19	JN W	7	5	3			15
GIBBONS		1994	NEW PRODUCTIO N KNOWL	T	6	8				14
HOLTZEAKIN	Joulfaian, Rosen	1994	RAND J ECON, V25	J	11	3	8	2		24
HOLTZEAKIN	Joulfaian,	1994	J POLIT	J	11	9	11			31

	Rosen		ECON, V102							
LIGHT		1994	HDB EC SOCIOLOGY	J	2	2	11	1		16
MCDOUGALL	Shane, Oviatt	1994	J BUS VENTURING, V9	J	11	13	4	1		29
MILES		1994	QUALITATIVE DATA ANA	T	10	11	7	5		33
NONAKA		1994	ORGAN SCI, V5, P1	J	9	4	3			16
OVIATT	McDougall	1994	J INT BUS STUD, V25	JE	14	13	8	1		36
REUBER	Fischer	1994	IEEE T ENG MANAGE, V41	J	10	7	4	1		22
REYNOLDS		1994	REG STUD, V28	J	16	11	8	1		36
SAXENIAN		1994	REGIONAL ADV CULTURE	T	18	23	9	2		52
STOPFORD	Badenfuller	1994	STRATEGIC MANAGE J, V15	JE	5	7	16	2		30
STOREY		1994	UNDERSTANDING SMALL	T	20	18	18			56
WEICK		1995 – 2001	SENSE MAKING ORG	T	14	8	1			23
AUDRETSCH		1995	INNOVATION IND EVOLU	T	12	12	12	1		37
BATES		1995	J BUS VENTURING, V10	JE	5	4	4	1		14
COOPER	Folta, Woo	1995	J BUS VENTURING, V10	J	5	7	5	2		19
FUKUYAMA		1995	TRUST SOCIAL VIRTUES	T	7	5	6			18
GATEWOOD	Shaver, Gartner	1995	J BUS VENTURING, V10	J	4	10	8	1		23
GEROSKI		1995	INT J IND ORGAN, V13, P421	J	7	7	4			18
JOHANNISSON		1995	ENTREP REGION DEV, V7	JNW	5	6	3			14
LIGHT		1995	RACE ETHNICITY ENTRE	T	9	12	18			39
NONAKA	Takeuchi	1995	KNOWLEDGE CO JAPANES	T	5	11	9			25
OSBORNE		1995	ACAD MANAGEMENT EXEC, V9	JNW	4	7	3			14

PALICH	Bagby	1995	J BUS VENTURING, V10	JE	5	7	9			21
PORTES		1995	EC SOCIOLOGY IMMIGRA	T	1	8	5	1	0	15
SCOTT		1995	I ORG	T	5	10	5			20
SLATER	Narver	1995	J MARKETING, V59	J	10	9	6			25
ZAHRA	Covin	1995	J BUS VENTURING, V10,	JE	13	11	17	4		45
ANSOFF		1996 – 1987	CORPORATE STRATEGY	T	5	3	2	4	3	17
AUDRETSCH	Feldman	1996	AM ECON REV, V86,	J	9	14	5	1		29
BARRETT	Jones, McEvoy	1996	URBAN STUD, V33, P783	J	1	8	8			17
BLOODGOOD	Sapienza, Almeida	1996	ENTREP THEORY PRACT, V20	JN W	9	8	7			24
CARTER		1996	J BUS VENTURING, V11, P151	JE	7	9	6			22
CHRISTENSEN	Bower	1996	STRATEGIC MANAGE J, V17	J	4	5	7			16
DEMEZA	Southey	1996	ECON J, V106	J	9	1	6			16
EISENHARDT	Schoon-hoven	1996	ORGAN SCI, V7	JE	5	7	2			14
FAIRLIE	Meyer	1996	J HUM RESOUR, V31	JE	12	3	8			23
GRANT		1996	STRATEGIC MANAGE J, V17	J	12	6	2			20
LUMPKIN	Dess	1996	ACAD MANAGE REV, V21	JE	23	28	29	1		81
MCDOUGALL	Oviatt	1996	J BUS VENTURING, V11	J	4	7	2	1		14
SANDERS	Nee	1996	AM SOCIOL REV, V61,	JE	6	3	8			17
SHANE		1996	J MANAGE, V22,	JE	4	6	8			18
UZZI		1996	AM SOCIOL REV, V61	J	4	9	4			17
WALDINGER		1996	STILL PROMISED CITY	T	3	7	6			16
ZAHRA		1996	ACAD MANAGE J, V39	JE	8	6	8			22
BANDURA		1997 – 1998	SELF EFFICACY EXERCI	T	4	6	5			15

BATES		1997	RACE SELF EMPLOYMENT	T	5	6	3			14
BIRKINSHAW		1997	STRATEGIC MANAGE J, V18	JE	11	2	4			17
BURT		1997	ADMIN SCI QUART, V42	T	3	7	5			15
BUSENITZ	Barney	1997	J BUS VENTURING, V12	J	22	12	15			49
CHRISTENSEN		1997	INNOVATORS DILEMMA N	T	15	11	2			28
COVIELLO	Munro	1997	INT BUSINESS REV, V6	JNW	9	7	1			17
DESS		1997	STRATEGIC MANAGE J, V18	JE	2	7	8			17
GIMENO		1997	ADMIN SCI QUART, V42	JE	13	9	3			25
KIRZNER		1997	J ECON LIT, V35	J	9	11	7			27
OVIATT	McDougall	1997	MANAGE INT REV, V37	JNW	6	6	2			14
REYNOLDS		1997	ENTREPRENEURIAL PROC	T	5	8	1			14
REYNOLDS		1997	SMALL BUS ECON, V9	JE	8	6	1			15
TEECE	Pisano, Shuen	1997	STRATEGIC MANAGE J, V18	J	13	14	10			37
UZZI		1997	ADM SCI Q, V42	J	13	11	2			26
VENKATARAMAN		1997	ADV ENTREPRENEURSHIP, V3	J	34	29	14			77
RATH		1998 – 2000	IMMIGRANT BUSINESSES	T	1	10	3			14
BARON		1998	J BUS VENTURING, V13	J	11	13	6			30
BLANCHFLOWER	Oswald	1998	J LABOR ECON, V16	JE	22	14	13			49
CAVES		1998	J ECON LIT, V36,	J	7	4	3			14
CHEN	Greene, Crick	1998	J BUS VENTURING, V13, P295	JE	11	4	5			20
DYER	Singh	1998	ACAD MANAGE REV, V23	J	4	8	6			18
HENDERSON	Jaffe, Trajtenberg	1998	REV ECON STAT, V80	J	2	8	4			14
HURLEY	Hult	1998	J	J	2	10	2			14

			MARKETING, V62							
LANE	Lyles, Salk	1998	MANAGING STRATEGICAL	T	7	5	4			16
MORRIS		1998	ENTREPRENEURIAL INTE	T	6	6	5			17
NAHAPIET	Ghoshal	1998	ACAD MANAGE REV, V23	J	20	8	2			30
ZUCKER	Darby, Brewer	1998	AM ECON REV, V88	J	5	20				25
ALDRICH		1999 – 2000	ORG EVOLVING	T	29	22	4			55
BHIDE		1999 – 2000	ORIGIN EVOLUTION NEW	T	10	11	2			23
REYNOLDS		1999 2007	GLOBAL ENTREPRENEURS	T	55	19	5			79
BARRINGER	Bluedorn	1999	STRATEGIC MANAGE J, V20, P421	JE	2	10	4			16
COVIELLO	McAuley	1999	MANAGE INT REV, V39	JNW	8	6	1			15
FAIRLIE		1999	J LABOR ECON, V17	J	7	4	3			14
GOMPERS	Lerner	1999	VENTURE CAPITAL CYCL	T	6	14	5			25
STEWART	Watson Carland et al.	1999	J BUS VENTURING, V14	J	6	6	3			15
STUART	Hoang, Hybels	1999	ADMIN SCI QUART, V44	J	9	13	4			26
THORNTON		1999	ANNU REV SOCIOL, V25	J	5	9				14
WENNEKERS	Thurik	1999	SMALL BUS ECON, V13	J	8	10	3			21
ZAHRA	Kuratko, Jennings	1999	ENTREP THEORY PRACT, V23	JNW	9	3	7			19
AUTIO	Sapienza, Almeida	2000	ACAD MANAGE J, V43	J	12	15	3			30
BAUM	Calabrese, Silverman	2000	STRATEGIC MANAGE J, V21	J	3	8	3			14
DUNN	Holtz-Eakin	2000	J LABOR ECON, V18	J	11	3	2			16
EISENHARDT	Martin	2000	STRATEGIC MANAGE J, V21	J	8	8	1			17
ETZKOWITZ	Leydesdorff	2000,	RES POLICY, V29	J	12	7				19
HAMILTON		2000	J POLIT ECON, V108	JE	18	10	2			30
MCDOUGALL	Oviatt	2000	ACAD MANAGE J,	JE	11	10	3			24

			V43							
PUTNAM		2000	BOWLING ALONE COLLAP	T	7	6	1			14
SHANE		2000	ORGAN SCI, V11	JE	27	11	2			40
SHANE	Venkat-araman	2000	ACAD MANAGE REV, V25,	JE	60	48	9			117
ZAHRA	Ireland, Hitt	2000	ACAD MANAGE J, V43	J	12	15	3			30
ALVAREZ	Busenitz	2001	J MANAGE, V27	JE	10	6				16
BLANCHFLOW ER	Oswald, Stutzer	2001	EUR ECON REV, V45	JE	10	4				14
DAVIDSSON	Wiklund	2001	ENTREP THEORY PRACT, V25	JN W	13	10				23
HITT		2001	STRATEGIC MANAGE J, V22	J	7	6	1			14
SARASVATHY		2001	ACAD MANAGE REV, V26	J	10	6	1			17
SHANE		2001	MANAGE SCI, V47	JE	8	9	1			18
SHANE		2001	MANAGE SCI, V47	JE						
JACK	Anderson	2002	J BUS VENTURING , V17	JE	12	2				14
SHANE	Cable	2002	MANAGE SCI, V48	JE	16	10	2			28
SHANE		2002	MANAGE SCI, V48	JE						
SHANE	Stuart	2002	MANAGE SCI, V48	JE						
BUSENITZ	West, Shepherd et al	2003	J MANAGE, V29	T	13	5				18
DAVIDSSON	Honig	2003	J BUS VENTURING , V18	JE	15	2				17

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