

From Entrepreneurship to Entreprenology

Louis Jacques Fillion

HEC, The University of Montreal Business School

Montreal, Quebec, CA H3T 2A7

Phone: 514-340-6380 Fax: 514-340-6382 e-mail: chaire.entrepreneurship@hec.ca

Abstract

This paper presents a summary of research on entrepreneurs and discusses the trends in the development of the field. It begins by introducing the pioneers of the domain, Cantillon, Say and Schumpeter. The contribution of economists such as Knight, Hayek, Penrose, Kirzner and Casson are mentioned. A second section presents the contributions of the behaviorists and the characteristics most commonly attributed to entrepreneurs. From the 1980s onwards, the field of entrepreneurship exploded and was assimilated into almost every soft science discipline. Two separate trends - one applied, the other theory-based - began to emerge. Thus, the paper postulates that the field is in the process of dividing into two separate entities: entrepreneurship, the applied aspect, and entreprenology, the theoretical aspect.

Introduction

More than 1000 publications now appear annually in the field of entrepreneurship, at more than 50 conferences and in 25 specialized journals. This paper does not attempt to cover all the components of the field of entrepreneurship. Its goal is to describe and discuss the core elements of current knowledge on entrepreneurs and to suggest some trends. It presents a summary of a more detailed text on the subject (Julien, 1997, chapter 4).

The World of the Entrepreneur

People working in the field of entrepreneurship are convinced that there is a remarkable level of confusion surrounding the definition of the entrepreneur. We prefer the term "difference". Researchers tend to perceive and define entrepreneurs using the premises of their own disciplines. Taken from this standpoint, the confusion is perhaps not as great as people would have us believe, because similarities in the perception of the entrepreneur emerge within each discipline. For example, the economists have associated entrepreneurs with innovation, whereas the behaviorists have concentrated on the creative and intuitive characteristics of entrepreneurs. We will look more closely at these two standpoints in the following sections.

The Economists

First, we must qualify the popular belief that entrepreneurship originated from the science of economics alone. A careful reading of the first two authors usually identified as the pioneers of the field - Cantillon (1755) and Say (1803; 1815; 1816; 1839) - reveals that they were interested not only in the economy but also in the managerial aspects of enterprises, business development and business management. Cantillon was basically a banker who, today, would be described as a venture capitalist. His writings reveal a man seeking business opportunities, with a concern for shrewd, economic management and obtaining optimal yields on invested capital.

Vérin (1982) examined the origin and development of the term “entre-preneur”, revealing that it acquired its current meaning in the 17th century. Although the term was used before Cantillon, it is clear, as Schumpeter (1954: 222) pointed out, that Cantillon was the first to offer a clear conception of the entrepreneurial function as a whole.

Jean-Baptiste Say was the second author to take an interest in entrepreneurs. He regarded economic development as the result of venture creation, and hoped the English Industrial Revolution would spread to France (Say, 1815, 1816). Cantillon and Say regarded entrepreneurs as risk-takers basically because they invested their own money. In Cantillon’s view, entrepreneurs bought a raw material - often a farm product - at a certain price, in order to process it and resell it at an uncertain price. Entrepreneurs were therefore people who seized opportunities with a view to making profits, and assumed the inherent risks. Say drew a distinction between the entrepreneur and the capitalist, and between their profits (Say, 1803; 1827: 295; 1815; 1816: 28-29; Schumpeter, 1954: 555). In doing so, he associated entrepreneurs with innovation. He viewed entrepreneurs as change agents. He himself was an entrepreneur, and became the first to define the boundaries of what an entrepreneur, in the modern sense of the term, actually is. Schumpeter (1954) admitted that a major part of his own contribution was to tell the Anglo-Saxon community about the world of the entrepreneur as described in the writings of Jean-Baptiste Say. As Say was the first to lay a foundation for the field, we have described him as the father of entrepreneurship (Filion, 1988).

It is perhaps interesting to note that what Say did was basically to draw together two major trends of thought of his time: that of the physiocrats and that of the Industrial Revolution in Great Britain. He was a great admirer of Adam Smith (1776), whose ideas he brought to France, and of the English Industrial Revolution (Say, 1816). In fact, he tried to establish a framework of thought that would enable the Industrial Revolution to move across the Channel to France. He applied the liberal thinking proposed by Quesnay, Mercier de La Rivière, Mirabeau, Condorcet, Turgot and other physiocrats as a means of developing farming, to the entrepreneur.

However, it was Schumpeter who really launched the field of entrepreneurship, by associating it clearly with innovation.

“The essence of entrepreneurship lies in the perception and exploitation of new opportunities in the realm of business ... it always has to do with bringing about a different use of national resources in that they are withdrawn from their traditional employ and subjected to new combinations.”

(Schumpeter, 1928)

Not only did Schumpeter associate entrepreneurs with innovation, but his imposing work shows the importance of entrepreneurs in explaining economic development.

In fact, he was not the only one to associate entrepreneurship with innovation. Clark (1899) had done so quite clearly some time before, and Higgins (1959), Baumol (1968), Schloss (1968), Leibenstein (1978) and most of the economists who took an interest in entrepreneurship after him also did the same. The economists were mainly interested in understanding the role played by the entrepreneur as the motor of the economic system (Smith, 1776; Mill, 1848; Knight, 1921; Innis, 1930, 1956; Baumol, 1968; Broehl, 1978; Leff, 1978, 1979; Kent, Sexton et al., 1982). From this standpoint, the economists viewed entrepreneurs as “detectors” of business opportunities (Higgins, 1959; Penrose, 1959; Kirzner, 1976), creators of enterprises (Ely and Hess, 1893; Oxenfeldt, 1943; Schloss, 1968) and risk-takers (Leibenstein, 1968; Kihlstrom and Laffont, 1979; Buchanan and Di Pierro, 1980). Hayek (1937; 1959) showed that the role of entrepreneurs was to inform the market of new elements. Knight (1921) showed that entrepreneurs assumed a risk because of the state of uncertainty in which they worked, and that they were rewarded accordingly by the profits they made from the activities they initiated. Hoselitz (1952, 1968) spoke of a higher level of tolerance that enabled entrepreneurs to work in conditions of ambiguity and uncertainty. Casson (1982) made an interesting attempt to develop a theory linking entrepreneurs with economic development. He emphasized the aspect of resource coordination and decision-making. Leibenstein (1979) had already established a model to measure the level of efficiency and inefficiency in the use of resources by entrepreneurs.

Entrepreneurs are mentioned in economics, but they appear very little - and sometimes not at all - in the classical models of economic development. Where they are present, they are represented by a function. The economists who took an interest in entrepreneurs were usually marginals, as was the case in other disciplines. If we were to summarize the main economic trends of thought on entrepreneurship, we would probably accept the standpoint of Baumol (1993), who proposed two categories of entrepreneurs: the entrepreneur-business organizer and the entrepreneur-innovator. The former includes the classical entrepreneur described by Say (1803), Knight (1921) and Kirzner (1983), and the latter the entrepreneur described by Schumpeter (1934).

It is never easy to introduce elements of rationality into the complex behavior of entrepreneurs. One of the criticisms that can be levelled at the economists is that they have not been able to make economic science evolve. They have also been unable to create a science of the economic behavior of entrepreneurs. Casson (1982) went as far as it was possible to go in terms of what is quantifiable and acceptable in economic science. The economists' refusal to accept non-quantifiable models clearly demonstrates the limits of this science in entrepreneurship. In fact, it was one of the elements that led the world

of entrepreneurship to turn to the behaviorists for more in-depth knowledge of the entrepreneur's behavior.

The Behaviorists

For the purposes of this paper, the term "behaviorists" includes the psychologists, psychoanalysts, sociologists and other specialists of human behavior. One of the first authors from this group to show an interest in entrepreneurs was Max Weber (1930). He identified the value system as a fundamental element in explaining entrepreneurial behavior. He viewed entrepreneurs as innovators, independent people whose role as business leaders conveyed a source of formal authority. However, the author who really launched the contribution of the behavioral sciences to entrepreneurship was undoubtedly David C. McClelland.

McClelland did not define entrepreneurs in the same way as the rest of the literature. His definition was as follows:

"An entrepreneur is someone who exercises control over production that is not just for his personal consumption. According to my definition, for example, an executive in a steel-producing unit in the USSR is an entrepreneur."

(McClelland, 1971; see also 1961: 65)

In fact, McClelland's (1971) work concentrated on managers of large organizations. Although he is strongly associated with the field of entrepreneurship, a careful reading of his writings shows that he never made a connection between the need for achievement and the decision to launch, own or even manage a business (Brockhaus, 1982: 41). McClelland also identified the need for power, but he paid less attention to this aspect in his later work, and it is less well-known. A number of researchers have studied need for achievement, but nobody seems to have obtained conclusive results that associate it with entrepreneurial success (Durand and Shea, 1974; Hundall, 1971; Schrage, 1965; Singh and Singh, 1972).

After McClelland, the behaviorists dominated the field of entrepreneurship for 20 years, until the early 1980s. Their goal was to define entrepreneurs and their characteristics. The behavioral sciences were expanding rapidly, and there was more consensus than in other disciplines on the most valid and reliable research methodologies. The movement was reflected in research on a number of subjects, including entrepreneurs. Thousands of publications described a whole series of entrepreneurial characteristics. The most common are shown in Table 1 below.

Table 1
Characteristics Most Often Attributed to Entrepreneurs
by Behaviorists

Innovators Leaders Moderate risk-takers Independent Creators Energetic Tenacious Original Optimistic Results-oriented Flexible Resourceful	Need for achievement Self-awareness Self-confidence Long-term involvement Tolerance of ambiguity and uncertainty Initiative Learning Use of resources Sensitivity to others Aggressive Tendency to trust people Money as a measure of performance
Blawatt, 1995 Hornaday, 1982 Meredith, Nelson et al., 1982 Timmons, 1978	

All this research produced highly variable and often contradictory results. So far, it has not been possible to establish an absolute scientific psychological profile of the entrepreneur.

In reality, one of the conclusions to be drawn with respect to the characteristics of entrepreneurs can be summarized as the social being. Human beings are products of their environment. A number of authors have shown that entrepreneurs reflect the characteristics of the period and the place in which they live (Ellis, 1983; Fillion, 1991; Gibb and Ritchie, 1981; Julien and Marchesnay, 1996; McGuire, 1964, 1976; Newman, 1981; Toulouse, 1979). Seen from the standpoint of entrepreneurial behavior, entrepreneurship seems first and foremost to be a regional phenomenon.

To conclude this section on the research of the behaviorists in the field of entrepreneurship, it is clear that we have not yet established a scientific profile that allows us to identify potential entrepreneurs with any certainty. However, we know enough about entrepreneurial characteristics to enable would-be entrepreneurs to situate themselves. In fact, the scope of the term “behavior” has been extended, and it is no longer the exclusive province of the behaviorists. Research is tending to move towards other spheres, such as the skills and competencies required for a person to function well as an entrepreneur, and the personal and organizational learning methods required to adjust properly to changes in the activities related to the entrepreneurial trade.

The Explosion of the Field of Entrepreneurship

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.

Table 2 Main Themes of Entrepreneurship Research

- Behavioural characteristics of entrepreneurs
- Economic and demographic characteristics of small business
- Entrepreneurship and small business in developing countries
- 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

The tables of contents of the proceedings of annual conferences such as the Babson conference, entitled *Frontiers of Entrepreneurship Research*, and the ICSB (International Council for Small Business) conference provide some interesting information on the themes most often discussed (see Table 2). Table 2 shows the 25

dominant themes in the field of entrepreneurship. In one of the most complete bibliographies published on this subject, Harold P. Welsch (1992) identified 27 in all.

It is interesting to note that the development of entrepreneurship as a discipline did not follow the same pattern as other disciplines. In fact, large numbers of researchers, each using a culture, logic and methodology established to varying degrees in their own fields, began to take an interest and work in the field of entrepreneurship. The first doctoral graduates in entrepreneurship and small business appeared in the 1980s. Nevertheless, the vast majority of those interested in the field were from disciplines other than entrepreneurship, and the study of entrepreneurship was not their main field of activity. Now, however, more people are devoting time and effort exclusively to entrepreneurship. The number of venture creations is growing, and the share of GNP attributable to small business in all countries is increasing every year. To follow the evolution and needs of their students and clients, many professors are having to learn more about entrepreneurship and small business. Thus, the assimilation and integration of entrepreneurship into the other disciplines, especially the soft sciences and management sciences, is unique as a phenomenon, and has never before occurred to such an extent in the paradigmatic construction of a soft science discipline.

Table 3 shows the main blocks of entrepreneurship research.

Table 3
Entrepreneurship Research

Clients	Subjects	Specialists	Methodologies
Political system	Government policies Regional development	Economists Sociologists	Quantitative
Entrepreneurs Potential entrepreneurs Educators	Entrepreneurial characteristics Entrepreneurial environment	Behaviorists Sociologists Anthropologists	Quantitative and qualitative
Entrepreneurs Potential entrepreneurs Educators Consultants	Business practice Management activities Financing Leadership Strategic thinking	Management specialists	Quantitative Qualitative

It is often said that confusion reigns in the field of entrepreneurship because there is no consensus on the definition of the entrepreneur and the boundaries of the paradigm. However, the reverse may also be true - entrepreneurship is one of the rare subjects that attracts specialists from such a wide range of disciplines, leading them to discuss and

observe what others are doing in related disciplines and question how they are doing it. In fact, the confusion seems greatest if we compare the definitions of the entrepreneur between disciplines (Filion, 1988). On the other hand, if we compare the definitions produced by specialists within the same field, we find a quite astonishing consensus. The economists tend to agree that entrepreneurs are associated with innovation, and are seen as the driving forces of development. The behaviorists ascribe the characteristics of creativity, persistence, locus of control and leadership to entrepreneurs. Engineers and operations management specialists see entrepreneurs as good distributors and coordinators of resources. Finance specialists define entrepreneurs as people able to measure risk. For management specialists, entrepreneurs are resourceful and good organizers, develop guidelines or visions around which they organize their activities, and excel at organizing and using resources. Marketing specialists define entrepreneurs as people who identify opportunities, differentiate themselves and adopt customer-oriented thinking. For students of venture creation, the best elements for predicting the future success of an entrepreneur are the value, diversity and depth of experience and the skills acquired by the would-be entrepreneur in the sector in which he or she intends to operate.

The field of entrepreneurship has attracted the interest of specialists from almost all the soft science disciplines in the last decade. The apparent confusion basically reflects the differing logic and cultures of these disciplines. It seems likely that, in the coming decade, entrepreneurship will become one of the main gathering points of the soft sciences, because it is one of the rare subjects that has attracted such a large number of specialists from such a wide range of disciplines.

Trends for Theory Building

In every discipline, there is a desire to understand trends and formulate universal laws around which knowledge can be structured. The fields of entrepreneurship and small business are no exception to this. We have reached a point where many people are calling for a robust theory based on universal axioms, such as that which exists in physics, for example. The theory would be based on rigorous quantitative models and would be obtained by means of wide-ranging quantitative research that would incontestably prove the nature of the entrepreneur, entrepreneurial activity and its effects on economic development. At the same time, thousands of teachers are faced every day with the need to produce material to train entrepreneurs for entrepreneurial practice. To do this, they use qualitative methods to develop models and tools that will help actual and potential entrepreneurs to practise their profession competently. This tension between academics who write for other academics on the one hand, and academics who write for practitioners on the other, is strong enough in the field to deserve attention here. This may be the starting point of two complementary disciplines: entrepreneurship, i.e. research where the client is a practitioner, and *entreprenology*, i.e. research where the client is another researcher.

Many attempts at theorizing have been made. The most frequently quoted include: Amit, Glosten et al. (1993), Baumol (1993), Bull and Willard (1993), Bull, Thomas et al. (1995), Bygrave (1989a and b), Casson (1982), Collins and Moore (1970), Covin and

Slevin (1991), Gartner (1985, 1990), Gartner, Carland et al. (1988), Hébert and Link (1982), Hofer and Bygrave (1992), Leibenstein (1968), Low and MacMillan (1988), Peterson and Ainslie (1988), Reynold (1991), Sombart (1928), and Stevenson and Jarillo (1990). Wortman and Birkenholz (1991) summarized and attempted to classify many of these studies. When we look at all these theory-building efforts in the field of entrepreneurship, it becomes clear, as Mulholland (1994) pointed out, that the link established by Schumpeter (1928, 1934) between the entrepreneur and innovation has remained a dominant feature of the discipline, especially among the economists. In an earlier section of this paper we considered the explosion of the field of entrepreneurship and the appropriation of relevant elements by the various soft science disciplines. It is this situation that led to the emergence of such a wide variety of definitions and methods of addressing the subject. For the economists, the innovation-based definition and approach developed by Schumpeter to explain the entrepreneur are sufficient to develop a theory of entrepreneurship (Kirchhoff, 1992, 1994). Julien (1989) has already pointed out the difficulty of aligning economics with the other soft sciences. In fact, when we compare the standpoints of Baumol (1990, 1993) and Casson (1982), the fundamental differences existing even between the economists themselves become obvious.

In the following paragraphs, we will examine the work of some of the authors who have thought about structure and theory in the field of entrepreneurship. Cunningham and Lischeron (1991) suggested that the field of entrepreneurship is being structured around six points: the “great man” school, the psychological characteristics school, the classical (innovation) school, the management school, the leadership school and the intrapreneurship school. Blawatt (1995), using these and other characteristics, proposed that a conceptual model of entrepreneurship should include the performance criterion. He observed that most of the models proposed by the school of personality and others are generally static. He aligned himself with authors who have studied entrepreneurs in the field, and observed that entrepreneurs work in an evolving context where activities and roles change gradually. Entrepreneurs learn from what they do (Collins and Moore, 1970; Filion, 1996), and because the nature of what they do changes, they too must change. They therefore have to learn to play different roles as their business evolves.

Bygrave suggested that what we need most is qualitative field research to understand what entrepreneurs do (1989a). He then (1989b) proposed the chaos theory in physics as an interesting basis for a theory of entrepreneurship, but nevertheless warned that chaos is “no more than a mathematical metaphor because the accuracy of measurements necessary ... are unattainable in process” (1993).

Déry and Toulouse (1996) analyzed the themes addressed and the references used in one of the most frequently-quoted journals in the field of entrepreneurship, the *Journal of Business Venturing*. They observed that more than half the references were books. They made a similar research in the field of strategy, based on an analysis of quotations in the *Strategic Management Journal*. It showed that more than half the references were academic papers. This seems to suggest that the field of strategy is now mature enough for researchers to have reached a certain consensus. In entrepreneurship, according to Déry and Toulouse, we are still in a developing paradigm where no consensus has yet been reached as regards the theoretical construction of the discipline. It may also be that the

field of entrepreneurship is being structured in a different way from the other soft sciences, including strategy. While psychology emerged from philosophy (Miller, 1962), and psychoanalysis from medicine and psychology, the field of entrepreneurship is rooted in practically all the soft sciences and management sciences. Entrepreneurship research addresses both theoretical and practical elements. It would therefore not be surprising if theories were to emerge from sets of applied research. The soft sciences are composed mainly of flexible interpretative models. Any theory of entrepreneurship must be flexible and multidimensional to reflect its multidisciplinary roots.

Conclusion

We have seen that entrepreneurship was first identified by the economists as a useful element for understanding development. Subsequently, the behaviorists tried to understand the entrepreneur as a person. However, the field is currently in the midst of an explosion, in that it is spreading into almost every other soft science discipline.

We agree with Mulholland (1994) and Rosa and Bowes (1990) that the field is still dominated by the positivist-functionalists, and that there is an urgent need to open up new perspectives in order to understand what entrepreneurs are and what they do. In light of the above, the field of entrepreneurship can be defined as the field that studies entrepreneurs. It examines their activities, characteristics, economic and social effects and the support methods used to facilitate the expression of entrepreneurial activity. No academic field can allow itself to neglect theory. However, to create a theory of the entrepreneur, it will probably be necessary to separate applied research from theoretical research by establishing a new science, *entreprenology*. This new science could create a theoretical corpus composed of the convergent elements of theoretical studies of entrepreneurs by *entreprenologists* in the various disciplines. Entrepreneurship itself would continue as an applied research field, producing results of interest to practising and potential entrepreneurs. However, several thousand more publications will be published, and perhaps a few more decades will have elapsed, before we finally reach this point.

References

- Amit, R., L. Glosten et al. (1993), "Challenges to Theory Development in Entrepreneurship Research", *Journal of Management Studies*, 30(5), p. 815-834.
- Baumol, W. J. (1968), "Entrepreneurship in Economic Theory", *The American Economic Review*, 58, p. 64-71.
- Baumol, W. J. (1990), "Entrepreneurship: Productive, Unproductive, and Destructive", *Journal of Political Economy*, vol. 98, no 5, p. 893-921.
- Baumol, W. J. (1993), "Formal Entrepreneurship Theory in Economics: Existence and Bounds", *Journal of Business Venturing*, 3, p. 197-210.
- Blawatt, K. (1995), "Defining the Entrepreneurs: A Conceptual Model of Entrepreneurship", *Proceedings of the 12th Annual Conference of the CCSBE* (Canadian Council for Small Business and Entrepreneurship), Thunder Bay, Ontario, October: p. 13-37.

- Brockhaus, R.H. Sr. (1982), "The Psychology of the Entrepreneur", in: Kent et al. (Eds.) (1982), *Encyclopedia of Entrepreneurship*, Englewood Cliffs, N.J.: Prentice Hall, p. 39-57.
- Broehl, W. G. Jr (1978), *The Village Entrepreneur: Change Agents in India's Rural Development*, Cambridge, Mass.: Harvard University Press.
- Buchanan, J.M. and A. Di Pierro (1980), "Cognition, Choice and Entrepreneurship", *Southern Economic Journal*, vol. 46, p. 693-701.
- Bull, I., Willard, G.E. (1993), "Towards a Theory of Entrepreneurship", *Journal of Business Venturing*, vol. 8, no. 3, p. 183-196.
- Bull, I., H. Thomas et G. Willard (Eds.) (1995), *Entrepreneurship. Perspectives on Theory Building*, Oxford: Pergamon Press.
- Bygrave, W. D. (1989a), "The Entrepreneurship Paradigm (I): A Philosophical Look at its Research Methodologies", *Entrepreneurship Theory & Practice*, fall, p. 7-26.
- Bygrave, W. D. (1989b), "The Entrepreneurship Paradigm (II): Chaos and Catastrophes Among Quantum Jumps?", *Entrepreneurship Theory and Practice*, winter, p. 7-30.
- Bygrave, W. D. (1993), "Theory Building in the Entrepreneurship Paradigm", *Journal of Business Venturing*, vol. 8, no. 3, p. 255-280.
- Cantillon, R. (1755), *Essai sur la nature du commerce en général*, London: Fetcher Gylar. Also edited in an English version, with other material, by Henry Higgs, C.B., London: MacMillan (1931).
- Casson, M. (1982), *The Entrepreneur: An Economic Theory*, Oxford: Martin Robertson.
- Clark, J.B. (1899), *The Distribution of Wealth: A Theory of Wages, Interest and Profits*, New York and London: MacMillan.
- Collins, O. F., D. G. Moore, (1970), *The Organization Makers: A Behavioral Study of Independent Entrepreneurs*, New York: Appleton-Century-Crofts (Meredith Corp.).
- Covin, J. G., Slevin, D. P. 1991), "A Conceptual Model of Entrepreneurship As Firm Behavior", *Entrepreneurship: Theory & Practice*, vol. 16, no. 1, p. 7-25.
- Cunningham, J. B., Lischeron, J. C. (1991), "Defining Entrepreneurship", *Journal of Small Business Management*, vol. 29, no. 1, p. 45-67.
- Déry, R., Toulouse, J. M. (1996), Social Structuration of the Field of Entrepreneurship: A Case Study. *Canadian Journal Of Administrative Sciences*. Vol.13, No.4, 285-305.
- Durand, D., Shea, D. (1974), "Entrepreneurial Activity as a Function of Achievement Motivation and Reinforcement Control", *The Journal of Psychology*, 88, p. 57-63.
- Ellis, W.H. (1983), *Canadian Entrepreneurs: Innovators or Manipulators*, paper presented at the 2nd international conference of the International Council for Small Business, Halifax, Nova Scotia, Canada, June 26 to 29. Also in Vesper, K.H. (1982), *Frontiers of Entrepreneurship Research*, Wellesley, Mass: Babson Center for Entrepreneurial Studies, p. 16-24.
- Ely, R.T., Hess, R.H. (1893), *Outline of Economics*, New York: MacMillan.
- Filion, L. J. (1988), *The Strategy of Successful Entrepreneurs in Small Business: Vision, Relationships and Anticipatory Learning*. Ph.D. Thesis, University of Lancaster, Great Britain, (UMI 8919064). (Volume 1: 695 p. Volume 2: 665 p.).
- Filion, L. J. (1990), "Vision and Relations: Elements for an Entrepreneurial Metamodel". Tenth Annual Babson Entrepreneurship Research Conference, Babson College, MA., April 4-6, 1990. Published in: Churchill, N.C. and Bygrave, W.C. (Eds.) (1990). *Frontiers of Entrepreneurship Research 1990*. Proceedings of the Tenth Annual

- Babson College Entrepreneurship Research Conference, Babson Park, MA: Center for Entrepreneurial Studies, Babson College, p. 57-71.
- Filion, L. J. (1991) *Vision et relations: clefs du succès de l'entrepreneur*, Montreal, Qc: Éditions de l'entrepreneur, 272 p.
- Filion, L. J. (1996), "Différences dans les systèmes de gestion des propriétaires-dirigeants, entrepreneurs et opérateurs de PME. *Canadian Journal of Administrative Sciences*, Vol.13, No.4, December: 306-320.
- Gartner, W. B. (1985), "A Conceptual Framework of Describing the Phenomenon of New Venture Creation", *Academy of Management Review*, vol. 10, no. 4, p. 696-706.
- Gartner, W. B. (1990), "What are we talking about when we talk about entrepreneurship?", *Journal of Business Venturing*, vol. 5, no. 1, p. 15-29.
- Gartner, W. B., Carland, J. W. et al. (1988), "'Who Is an Entrepreneur?' Is the Wrong Question", *American Journal of Small Business*, 12(4), p. 11-39.
- Gibb, A., Ritchie, J. (1981), "Influence on Entrepreneurship: A Study Over Time", in *Bolton Ten Years On*, Proceedings of the U.K. Small Business Research conference held November 20 and 21 at the Polytechnic of Central London.
- Hart, M.M., Stevenson, H.H., Dial, J. "Entrepreneurship: A Definition Revisited". In Bygrave, W.D., Bird, B.J. et al. (Eds.), *Frontiers of Entrepreneurship Research 1995*, Center for Entrepreneurial Studies, Babson College, pp. 75-89.
- Hayek, F.A, von (1937), "Economics and Knowledge", in *Economica*, New Series, 4 (13-16), p. 33-54. (Presidential Address to the London Economic Club, November 10, 1936). Reprinted in: Hayek, F.A. (1959) *Individualism and Economic Order*, London: Routledge and Kegan Paul, p. 33-56.
- Hayek, F.A, von (1959), "The Use of Knowledge in Society", *American Economic Review* (1945), 35, p. 519-530. Also in: *Individualism and Economic Order* (1959), London,: Routledge and Kegan Paul; Chicago: University of Chicago Press (1948), 1957). See also: "The Meaning of Competition", 1949, in *Individualism and Economic Order*, 1959: p. 92-106.
- Hébert, R. F., Link, A. N. (1982), *The Entrepreneur: Mainstream Views and Radical Critiques*, New York: Praeger.
- Higgins, B. H. (1959), *Economic Development: Principles, Problems, and Policies*, New York: Norton.
- Hofer, C. W., Bygrave, W. D. (1992), "Researching Entrepreneurship", *Entrepreneurship: Theory & Practice*, vol. 16, no. 3, p. 91-100.
- Hornaday, J.A. (1982), "Research About Living Entrepreneurs", in Kent, C.A., Sexton, D.L. et al. (Eds.) *Encyclopedia of Entrepreneurship*, Englewood Cliffs, N.J.: Prentice Hall, p. 20-34.
- Hoselitz, B. F. (1952), "Entrepreneurship and Economic Growth", *American Journal of Economic Sociology*, p. 97-106.
- Hoselitz, B.F. (Ed.) (1968), *The Role of Small Industry in the Process of Economic Growth*, Japan by Miyohai Shinohara, India by Douglas Fisher. The Hague, Paris: Mouton.
- Hundall, P.S. (1971), "A Study of Entrepreneurial Motivation: Comparison of Fast - and Slow - Progressing Small Scale Industrial Entrepreneurs in Punjab, India", *Journal of Applied Psychology*, 55, 4, p. 317-323,
- Innis, H.A. (1930) *The Fur-Trade in Canada: An Introduction to Canadian Economic History*, Toronto: University of Toronto Press (see also the revised edition of 1956).

- Innis, M.Q. (Ed.) (1956), *Essays in Canadian Economic History* (Harold Adam Innis). Toronto: University of Toronto Press.
- Julien, P.A. (1989), "The Entrepreneur and Economic Theory", *International Small Business Journal*, vol.7, no. 3: p. 29-38.
- Julien, P.A., Marchesnay, M. (1996), *L'entrepreneuriat*, Paris: Economica.
- Julien, P.A. (Ed.) (1997), *The State of the Art in Small Business and Entrepreneurship*. London: Avebury. To be published in the Fall.
- Kent, C.A., Sexton, D.L., Vesper, K.H. (Eds.) (1982), *Encyclopedia of Entrepreneurship*, Englewood Cliffs, N.J.: Prentice Hall.
- Kihlstrom, R.E., Laffont, J.J. (1979), "A General Equilibrium Entrepreneurial Theory of Firm Formation Based on Risk Aversion", *Journal of Political Economy*, vol.87, no. 4, p. 719-748.
- Kirchhoff, B. A. (1992), "Entrepreneurship's Contribution to Economics", *Entrepreneurship: Theory & Practice*, vol.16 no. 2, p. 93-112.
- Kirchhoff, B.A. (1994), *Entrepreneurship and Dynamic Capitalism*, Westfort, Conn.: Praeger.
- Kirzner, I.M. (1976), *The Economic Point of View: An Essay in the History of Economic Thought*, 2nd edition, Kansas City: Sheed and Ward.
- Kirzner, I. M. (1983), *Perception, Opportunity and Profit: Studies in the Theory of Entrepreneurship*, 1st edition 1979, Chicago: University of Chicago Press.
- Knight, F.H. (1921), *Risk, Uncertainty and Profit*, New York: Houghton Mifflin. Also Chicago: University of Chicago Press (1971).
- Leff, N.H. (1978), "Industrial organization and entrepreneurship in the developing countries: The economic groups", *Economic Development and Cultural Change*, vol.26, no. 4, p. 661-675.
- Leff, N.H. (1979), "Entrepreneurship and Economic Development: The Problem Revisited", *Journal of Economic Literature*, 17, (1-2), p. 46-64.
- Leibenstein, H. (1968), "Entrepreneurship and Development", *American Economic Review*, vol. 38, no. 2, p. 72-83.
- Leibenstein, H. (1978), *General X-Efficiency Theory and Economic Development*, London: Oxford University Press.
- Leibenstein, H. (1979), "The General X-Efficiency Paradigm and the Role of the Entrepreneur", in Rizzio, M.J. (Ed.) *Time, Uncertainty And Disequilibrium*, Lexington, Mass: D.C. Heath, p. 127-139.
- Low, M. B., MacMillan. I.C. (1988), "Entrepreneurship: Past Research and Future Challenges", *Journal of Management*, vol.14, no. 2, p. 139-161.
- McClelland, D.C. (1961), *The Achieving Society*, Princeton, N.J.: Van Nostrand. (see also the new introduction to the book, New York: Irvington Publishers (1976).
- McClelland, D.C. (1971), "Entrepreneurship and Achievement Motivation: Approaches to the Science of Socioeconomic Development" in: Lengyel, P. (Ed.) Paris: U.N.E.S.C.O.
- McGuire, J. (1964), *Theories of Business Behavior*, Englewood Cliffs, N.J.: Prentice Hall.
- McGuire, J.W. (1976), "The Small Enterprise in Economics and Organization Theory", *Journal of Contemporary Business*, 5, 2, p. 115-138.

- Meredith, G.G., Nelson, R.E., Neck, P.A. (1982), *The Practice of Entrepreneurship*, Geneva: International Labour Office.
- Mill, J.S. (1848), *Principles of Political Economy with Some of Their Applications to Social Philosophy*, in two volumes. 9th edition, London: Longman, Green (1886).
- Miller, G.A. (1962), *Psychology: The Science of Mental Life*, Harmondsworth, Middlesex, England: Penguin Books (1982).
- Mulholland, R. (1994), *Approaches to Entrepreneurship Research*, in Mount, J. (Ed.), *Proceedings of the 11th Annual Conference - Canadian Council for Small Business and Entrepreneurship*, Winnipeg, October 27-29, p. 122-133.
- Newman, P.C. (1981), *The Acquisitors*, Toronto: McClelland and Stewart.
- Oxenfeldt, A.R. (1943), *New Firms and Free Enterprise: Pre-war and Post-war Aspects*, Washington, D.C.: American Council on Public Affairs.
- Penrose, E.T. (1959), *The Theory of the Growth of the Firm*, Oxford: Basil Blackwell, New York: Wiley.
- Peterson, R., Ainslie, K., Ed. (1988), *Understanding Entrepreneurship*, Dubuque, Iowa, Kendall/Hunt.
- Pinchot, G. (1985), *Intrapreneuring*, New York: Harper D. Row.
- Reynold, P. (1991), "Sociology and Entrepreneurship: Concepts and Contributions", *Entrepreneurship Theory and Practice*, vol. 16, no. 2, p. 47-70.
- Rosa, P., Bowes, A. (1990), *Entrepreneurship: Some Lessons of Social Anthropology*, E.C.S.B. 4th Workshop on Research in Entrepreneurship, University of Cologne.
- Rosenberg, N., Birdzell Jr., L.E. (1986), *How the West Grew Rich*, New York: Basic Books.
- Rotter, J.B. (1966), *Generalised Expectations for Internal Versus External Control of Reinforcement*, American Psychological Association (Psychological Monographic, generalities et appl. 80, no. 1, entire no. 609).
- Say, J.B. (1803), *Traité d'économie politique: ou, simple exposition de la manière dont se forment, se distribuent et se consomment les richesses*, Translation: *Treatise on Political Economy: On the Production, Distribution and Consumption of Wealth*, Kelley, New York: 1964 (1st edition: 1827).
- Say, J.B. (1815), *De l'Angleterre et des Anglais*, Paris: Arthur Bertrand.
- Say, J.B. (1816), *England and the English People*, 2nd edition (1816), by John Richter, London: Sherwood, Neely et Jones. Translation of preceding title (1815).
- Say, J.B. (1839), *Petit volume contenant quelques aperçus des hommes et de la société*, 3^e Edition completely revised from manuscripts left by the author, and published by Horace Say, his son, Paris: Chez Guillaumin, Libraire.
- Schloss, H.H. (1968), "The Concept of Entrepreneurship in Economic Development", *Journal of Economic Issues*, June, p. 228-232.
- Schrage, H. (1965), "The R&D Entrepreneur: Profile of Success", *Harvard Business Review*, November-December, p. 56-69.
- Schumpeter, J.A. (1928), "Der Unternehmer", in Ludwig Elster et al. (Eds.) (1928) *Handwörterbuch der Staatswissenschaften* (4th edition: Jena 1928: 483). Reference in: Hartmann, H. (1959) "Managers and Entrepreneurs: A Useful Distinction", *Administrative Science Quarterly*, 3, 3, p. 429-451.

- Schumpeter, J.A. (1934), *The Theory of Economic Development*, published in German (1912), 1st edition in English: Cambridge, Mass.,: Harvard University Press 1934, also: Cambridge, Mass.: Harvard Economic Studies, volume 46, London: Oxford University Press.
- Schumpeter, J.A. (1954), *History of Economic Analysis*, Edited by Elizabeth Boody Schumpeter, New York: Oxford University Press, also: London: George Allen & Unwin (6th edition, 1967).
- Singh, N.P., Singh, K. (1972), "Risk-taking Among Agricultural and Business Entrepreneurs of Delhi", *Psychologia*, 15, p. 175-180.
- Smith, A. (1776), *An Enquiry Into the Nature and Cause of the Wealth of Nations*, London: Edwin Cannan. Also: London: Methuen (1950), Irwin (1963). Re-edited in two volumes. See esp.: edition by James E. Thorold Rogers. Oxford: Clarendon Press (1869).
- Sombart, W. (1928), *Le bourgeois - Contribution à l'histoire morale et intellectuelle de l'homme économique moderne*, Paris, Petite bibliothèque Payot.
- Stevenson, H. H., Jarillo, C. (1990), "A Paradigm of Entrepreneurship: Entrepreneurial Management", *Strategic Management Journal*, 11 (Summer), p. 17-27.
- Timmons, J.A. (1978), "Characteristics and Role Demands of Entrepreneurship", *American Journal of Small Business*, 3, 1, p. 5-17.
- Toulouse, J.M., (1979), *L'entrepreneurship au Québec*, Montreal: Les Presses HEC et Fides.
- Vérin, H. (1982), *Entrepreneurs, entreprises, histoire d'une idée*, Paris: Presses universitaires de France.
- Weber, M. (1930), *The Protestant Ethic and the Spirit of Capitalism*, translated by Talcott Parsons, London: Allen & Unwin.
- Welsch, H. P. (1992), *International Entrepreneurship and Small Business Bibliography*, Paul University, Chicago.
- Wortman, M., Birkenholz, W. (1991), "Entrepreneurship Research on a Global Basis: An Empirically Based Model", 36th Annual World Conference ICSB, Vienna, *Proceedings Volume 1*, p. 67-77.