5

Brazilian Entrepreneurship Reality: A Trilogy of Imitation, Invention and Innovation

Eric Charles Henri Dorion, Eliana Andrea Severo, Pelayo Munhoz Olea and Cristine Hermann Nodari
University of Caxias do Sul, Caxias do Sul, Brazil

1. Introduction

There are a lot of discussions on the characteristics of the successful businessman, who contributes to development of the economy through wealth creation. There are many authors who talk about such businessman as someone innovative, creator of differences, creative in services or business, or else. For theses reasons it is intended to study the entrepreneurial and innovative dimensions, more precisely in a Brazilian context, discussing innovation from the inside in a business perspective. From this discussion, it is our objective to demonstrate that Brazilian people are either entrepreneurs or inventors but not so innovative. On one hand, there is a clear perception related to new business opportunities but most of them are in an imitation process of existing businesses. On the other hand, Brazil is offering an extensive network of incubators that create inventors instead of entrepreneurs.

This chapter shows an extended bibliographic research about different concepts that various authors have related to entrepreneurship and innovation in order to consequently, discuss such concepts, comparing them to data from researches on Brazilian entrepreneurs about innovativeness of their business.

Pirich et al. (2001) mentions that observing innovation jointly with entrepreneurship are consequent on three key elements: economical conditions and encouraging incentive of business behavior; sophistication and efficiency in generating and spreading knowledge and the proper capability of companies, employees, and individuals.

The ANPROTEC (2006) literature demonstrates that entrepreneurship and innovation refer to a stimulus or support in the creation process of new ventures; it also refers to the preparation of people to act in new market shares, proposition of new ways to take profit of regional potentialities as well as local qualities to create new products and services, involving a community to discuss forms of economical empowerment for its region and create a favorable environment to emerge creative ideas that may generate in new businesses.

Schumpeter (1934) mentions that entrepreneurship behavior is a configuration of competitiveness in search of combinations of elements that generate innovation. For

Drucker (1985), innovation is a specific instrument for entrepreneurs in a way to explore changes as an opportunity for a different business or services. Entrepreneurs must deliberatively look for innovation sources, changes and their symptoms, which indicate opportunities so that innovation can happen and be successful.

Throughout times, Schumpeter's (1934) point of view became predominant: the entrepreneur is the engine to move the economy forward, the agent of innovation and changes, able to trigger economical growth. This is very important, because it means that communities, through their entrepreneurial activity, may have the initiative to lead and coordinate efforts for their own economical growth. There is a possibility to change economical and social stagnation curve by inducing innovative activities, capable of joining economical and social values (Dolabela, 1999:54).

The entrepreneur is the agent of creative destruction process. It is a fundamental impulse to start and keep on going the capitalist engine, constantly creating new products, new markets, and, implacably, overcoming old methods less efficient and more expensive (Schumpeter, 1934).

Innovation emerges to entrepreneurs as advantages from the point of view of economical prosperity. It allows developing new products or services for the market as well as it stimulates interest in investing in newborn businesses.

This chapter initially presents various concepts throughout time related to entrepreneurship and innovation. Then it discusses imitation as a form of entrepreneurship from many authors' points of view and afterwards, it presents the challenges for entrepreneurship in Brazil. It shows figures related to new businesses, their importance for the economy in this country and after that presents some data related to innovation in the industry.

It has the objective to confront the profile of the most common behavior in Brazilian industry. As a result of various researches realized, it is possible to demonstrate that Brazilian entrepreneurs are either, in most cases, in a deliberate imitation process of existing businesses, or engaged in an incubating process based on product invention, still with a poor innovative profile. These conclusions allow discussing entrepreneurship concepts presented by several authors that mostly tend to characterize the entrepreneur as someone who is primarily active but not necessarily very creative, innovative.

2. Theoretical thoughts of entrepreneurship thru time

The Word "entrepreneurship" means to deliberate about practices, to propose them and put them into execution, to try it on. The first definition of an entrepreneur as a broker is Marco Polo, who tried to establish commercial routes to the Far East (Hisrich & Peters, 2001).

In the XII century, an entrepreneur was someone who used to incite fights. Later in the XVII century, it meant someone who was responsible for and coordinator of a military action. Only by the end of the XVII century and beginning of the XVIII century, the word referred to someone who created or ruled enterprises. The following Table shows the evolution of the theory of entrepreneurship and of the entrepreneur.

Evolution of the theories on entrepreneurship and on the entrepreneur	
Middle Age	Person in charge of projects for large scale production
XVII Century	Person who would take risks for profit (or loss) in a contract of fixed value with the government
1725	Richard Cantillon – a person who takes risks is different from the one who offers capital
1803	Jean Baptiste Say – enterpriser's profits are separate from the capital profits
1876	Francis Walker – he distinguished between the ones who would support founds and receive from taxes and the ones who would gain from management abilities
1934	Joseph Schumpeter – the entrepreneur is an innovative person and develops technology that has not been tested yet
1961	David McClelland – the entrepreneur is someone dynamic who takes moderate risks
1964	Peter Drucker – the entrepreneur maximizes opportunities
1975	Albert Shapero – the entrepreneur has initiative, organizes some social and economical mechanisms and takes risks
1980	Karl Vesper – the entrepreneur is differently perceived from the point of view of economists, psychologists, businessmen or politicians
1983	Gifford Pinchot – the intra entrepreneur is an entrepreneur who acts inside an organization
1985	Robert Hisrich – entrepreneurship is the process of creating something different and with value, spending time and necessary efforts to do so, assuming corresponding financial, psychological, and social risks, and receiving the consequent rewards of economical and personal satisfaction

Source: Hisrich & Peters (2001)

Table 1. Development of the theory of entrepreneurship and of the entrepreneur

The economists understand entrepreneurship is motivated in the comprehension of its interlink to the economical system. Thus, they understand entrepreneurs are responsible for detecting and making a good use of opportunities; foreseeing profit and (re) acting to some risks (Filion, 1991; Paiva Jr. & Cordeiro, 2002). Schumpeter believes the entrepreneur is responsible for a process he called creative destruction, the fundamental impulse to trigger and keep on working in the capitalist economy. This person, according to the author, should constantly create new products, new production methods, new markets, implacably overcoming old methods that are less efficient and more expensive.

The function of the entrepreneur is to reform or to revolutionize the production pattern by exploring an invention or, more generically, a technological possibility not tested yet, in order to produce new goods or to find another way of producing something that already exists. It may happen through the discovery of new supply sources or new distribution for products, or through the organization of a new industry (live translation from Schumpeter, 1934).

Behaviorists' school refers to psychologists, psychiatrists, sociologists, and others who are specialists in human behavior (Filion, 1991). For them, entrepreneurship is more than increasing production or the *per capita* income because it involves starting and building changes in the structure of the business and of the society. This transformation happens while production increases and there is more wealth to be shared among participants. Entrepreneurship is an efficient method that links science to the market economy, creating new companies and bringing new products or services to the world of business (Hisrich & Peters, 2001).

The modern definition of entrepreneurship described by Filion (2001) covers essential elements of its specific characteristics: An entrepreneur is a person who imagines, develops, and executes visions.

Hisrich & Peters (2001) indicates that even if there is some divergence among concepts related to entrepreneur, there is a common understanding for a specific behavior that includes having initiative, to organize and reorganize social and economical mechanisms to transform resources and situations to take a practical profit and accept risk or failure. Table 2 is a matrix of quotations of these characteristics throughout time.

Date	**Author**	**Characteristics**
1848	Mill	Tolerance to risk
1917	Weber	Origin of formal authority
1934	Schumpeter	Innovation, initiative
1954	Sutton	Search for responsibility
1959	Hartman	Search for formal authority
1961	McClelland	Risk taker and need for realization
1963	Davids	Ambition, desire for independence, responsibility, self-confidence
1964	Pickle	Human relationship, communication ability, knowledge of the technique
1971	Palmer	Risk evaluator
1971	Hornaday & Aboud	Need for realization, autonomy, aggressiveness, power, recognition, innovation, independence
1973	Winter	Need for power
1974	Borland	Internal control
1974	Liles	Need for realization
1977	Gasse	Guided by personal values
1978	Timmons	Self-confidence, target guided, moderate-risk taker, control center, creativity, innovation
1980	Sexton	Energetic, ambitious, positive reverse
1981	Welsh & White	Need for control, responsibility aimer, self-confidence, moderate-risk taker
1982	Dunkelberg & Cooper	Growth guided, be professional, independence

Source: Elaborated by the authors.

Table 2. Matrix of quotations of entrepreneur's characteristics throughout time

GEM (2000) determines entrepreneurship as any tentative of creating a new business or a new enterprise; for example, autonomous activities, a new company or expanding an existing business. These initiatives may come from an individual, from groups of people or from companies that are already established.

Concluding, we may understand that entrepreneurship has various perspective of study, including economical, political, social, cultural and compartmental issues. To Hisrich & Peters (2001), entrepreneurship is a dynamic process of creating more wealth to a region, for the benefit of its own community.

3. Concept of innovation in an academic perspective

Despite a strong consensus in conceptualizing innovation as "something new", there also is a great disagreement about what may be considered "new". Once newness is a situational quality, it is possible to presume innovation is situational as well. If something is new for some sort of environment, it may be seen as innovation, even if it is well known by others (Moreira & Queiroz, 2007).

One of the pioneers and still up to now the most distinguished author in the innovation area, Chris Freeman used to point that one of the problems in managing innovation is the great range of understandings people have of this word, frequently confusing its meaning to invention. Innovation is the process of making new ideas from opportunities and putting them into practice of an extensive use (Plonski, 2005).

For Plonski (2005), confusion happens because of three misunderstandings: *reductionism* (considering innovation only as a technological basis), *enchantment* (considering technological innovation as spectacular), and *mischaracterization* (relaxing on the technological change requisite for the innovation).

By the end of the XIX century and beginning of the XX century, entrepreneurs and managers were not distinguished. So, in order to make a difference between those who never invented anything, but would adapt a new technology in creating products to reach an economical vitality, it was established the notion of entrepreneur as an innovative person (Hisrich & Peters, 2001).

Schumpeter (1934) points out this way: "The function of the entrepreneur is to rebuild or to revolutionize the production pattern by exploring an invention or, more generally, a non-experimented method, in order to produce a new good or a new commercialization for goods, organizing a new sector".

Entrepreneurship, for the economists, is the engine of the economical system. According to Schumpeter, taking profit from new opportunities is connected to innovation.

Entrepreneurs are agents of changes; they make things new and different. One can only call a person entrepreneur if he contributes with something new (Filion, 2001). Schumpeter, Hoselitz, Cole, Gartner, and Dollinger (Paiva Jr & Cordeiro, 2002) conceptualize the practice of entrepreneurship as the act of creating an economical and innovative organization for the purpose of getting profit or increasing under conditions of risks and uncertainty.

The difference between the entrepreneur and the inventor is that the first one uses his creativity connected to his management abilities and business knowledge to identify opportunities to innovate. The inventor does not have the commitment of creating something with economical objectives; his motivation is the creation itself, the discovery, and nothing else (Dornelas, 2003).

4. Innovation profile and its relation with entrepreneurship

With respect to innovation profile, it is known of a strong consensus on understanding its concept as "something new". Nevertheless, there is great disagreement on what can be considered as "new". Since "newness" is a situational quality, it can be presumed that innovation is situational, if something is new for environmental data, it can be considered as innovation. One of the problems in managing innovation comes from the variety of understandings that researchers have on this term, frequently confusing it with the concept of invention. For Plonski (2005), this confusion happens for three reasons: reductionism (to only consider innovation as a technological matter), enchantment (to consider technological innovation spectacular) and un-characterization (to ease the requirement of technological change in an innovation).

Throughout history, more specifically in the XVIIIth century, Adam Smith relates the accumulation of capital with manufacturing technology; studying the concepts related to technological change, to division of work and, to growth of production and competitiveness. In the XIXth century, List was considered a pioneer to introduce the concept of intangible investment. For him, the condition of a country is the result of the set of all the discoveries, inventions, improvements, up-grades and efforts of all the generations that had lived before us: this forms the intellectual capital of the human race. Marx and Schumpeter analyzed the concept of technology under the perspective of economic development. For Schumpeter (1934), it is necessary to develop ways to combine material and knowledge in order to promote economic development; consequently, it is necessary to introduce new combinations, which are known as innovative processes. At the beginning of the XXth century, there still was no research that distinguished the characteristics of an entrepreneur from the ones of a manager. To differentiate the characteristics of the ones who did not invent from the ones who used new technologies for the creation and the development of new products, to reach economic vitality, it was established the notion of the entrepreneur as innovative (Hisrich & Peters, 2001).

The function of the entrepreneur is to remodel or to revolutionize the production standard exploring an invention or, in a more general way, a non experimented method, to produce a new good or for the commercialization of products, in a new sector (Schumpeter 1934).

For Schumpeter, the proper advantage of new opportunities is associated to innovation. For Drucker (1985), innovation is an act that contemplates the resources with a new capacity to create wealth. "Entrepreneur is an agent of change; it makes new and different things. It can only be called an entrepreneur if it contributes to something new." (Filion, 1992).

Schumpeter, Hoselitz, Cole, Gartner e Dollinger appraise the practice of entrepreneurship as an act of creation of an economic and innovative organization with the intention to get profitability or growth under risk conditions and uncertainty. However, there are some

entrepreneurs who open similar business, whether with the same product or processes, or either in the same region.

Consequently, it can be considered that there is the individual who is, in fact, either an agent of change, as suggested by (Filion, 1992), or there is this other individual who does not opt for change, but more for copying what is already available in the market, without producing something new for its community. Both types can be considered equally as an entrepreneur, considering that both have some of the characteristics of the entrepreneur.

According to Schumpeter (1934), it is proposed three basic phases to define the process of innovation: (i) invention, as a result of a discovery process, new technical principles, potentially opened for commercial exploration but not necessarily carried through; (ii) innovation, as a process of development of an invention for commercial purpose and; (iii) diffusion, as the expansion of an innovation of commercial use, new products and processes.

Pinchot (1985) also indicates the distinction between innovation and invention. Invention consists in the creation of a new concept; but innovation not only demands invention, but the transformation of the invention into a commercial success.

For Schumpeter (1934), inventions are economically irrelevant; considering that innovations are conversions of suitable inventions into consumer's habits and contribute, therefore, to economic development.

The difference between the entrepreneur and the inventor is that the entrepreneur uses his creativity combined with his management abilities and his knowledge of the businesses to identify opportunities to innovate. The inventor does not have any commitment to create something with economic results; his motivation is the creation, the discovery and nothing more (Dornelas, 2003, p. 18).

It is obvious that in joining the attributes of entrepreneurship and innovation to one individual constitutes the best combination for economic growth, because it creates an ideal mix which results in the opening of new enterprises focused on innovation, which creates exclusive and new market demands. Innovation constitutes one constant challenge for the organizations, considering the inherent risks and the advantages that it can generate. The risks are the consequences of the consumption of resources without getting returns, or even worse, not to spend and not to be prepared duly for the future challenges (Dorion et al., 2008).

In this sense, Paiva Jr. & Cordeiro (2002) defines the entrepreneur as being a person who initiates a business or a person who operates and develops it. For them, the entrepreneur is the person who destroys the economic order already existing thru the introduction, in the market, of new products/services, with the creation of new forms of management or thru the exploration of new resources, materials and technologies.

When there is a surplus of information in a specific process, imitation becomes a convenient heuristic resource. Considering the epistemological sense of the concept of imitation, imitation itself does not consist in a worthless resource; to the contrary, it represents the fundaments of learning and language, contributing to social cohesion and is the natural mechanism for both inspiration and aspiration. It can also be considered a rational economic option (Bonabeau, 2004).

In a research carried through in one hundred of the 500 companies who demonstrated the most important growths in the United States, in 1989, it points out that 71% of the ideas of the entrepreneurs refer to current modifications from their previous work environment. On the other hand, only 4% of the entrepreneurs discover, through systematic research, opportunities (Bhide, 1994).

Then, innovation constitutes an effort to produce an intentional and focused change in the economic or social potential of the enterprise (Drucker, 1985). It consists in the creation and the lucrative use of new technologies, new products, new services, new systems and new forms of operation (Pinchot &Pellman, 2000). As mention Simantob & Lippi (2003), to innovate is to have an idea that its competitors do not have yet and to implant it successfully. Innovation is part of the strategy of the companies: its focus is the economic performance and the creation of value.

The Organization for Economic Co-operation and Development (OECD), in Becker & Cunha (2006), differentiates technological innovation from innovative activity. The first one refers to new products and processes launched in the market or existing product or process significant improvements. The second one consists in organizational policies and practices directed (i) to research activities and development (it refers to creative and systematic activities which aims at increasing knowledge supply); (ii) to industrial engineering (with the objective of acquiring or modifying equipment, tools, quality control, methods and standards, and produce new products or to adopt new process); (iii) to production (modifications of product and process); (iv) to marketing of new products (launching of these products in the market, its adaptation and commercialization); (v) to acquisition of intangible technology (register of patents, licenses, know-how and services of technological content and also the acquisition of equipment and machines of technological content introduced thru the innovations of the company); and (vi) design activities (definition of procedures, operational and technical specifications and production of new product or adoption of new processes, and the activities of design related to new product or process).

Simantob and Lippi (2003) mention that technological innovation consists in the development or in the improvement of a process or a service that already exists. It differs from the concept of invention, which refers to the creation of inexistent intellectual capital that may not have still any economic consequence. According to Moreira & Queiroz (2007), "in more recent studies, technological innovation is defined by the introduction in the market of a product (good or service) technologically new or substantially improved or by the introduction in a company of a productive process technologically improved or new". Technological innovation may result from new technological developments, new combinations of existing technologies or the proper use of knowledge acquired in a company.

In respect to the innovation profile of a manager, authors mention that this professional is associated with the following characteristics: (i) he attracts, stimulates and give autonomy to the decision process of the team; (ii) he has sense of urgency to resolve problems with high degree of uncertainty; (iii) he has tolerance to risk, but he always measures the return on investment; (iv) he knows how to take risk with responsibility and persistence; (v) he creates an experimentation culture; (vi) he enhances commitment with any learning process, inside

and outside the company; and (vii) he understands that as part of his work to convince other people to bare a new and good idea to be implemented (Simantob &Lippi, 2003)

The innovation profile of an enterprise shows that up to 30% of its billing comes from products or services launched less than five years. The result of a stimuli for innovation can be seen as a learning aspect (the produced knowledge is stored and shared with the other areas of the enterprise); as content (a new good, service or product); as value (financial and economic profits thru innovation); as behaviour (incorporation of capacities that changes the forms to act and to think of the people); and as entrepreneurial spirit (incentive for innovation projects without raising a concern for immediate success) (Simantob & Lippi, 2003).

Thus, it cannot automatically be attributed to the entrepreneur the practice of innovation, since many entrepreneurs launch their business in the market with some products already in use or, a lot of times, with some ideas identical to unedited management models, as a practice of entrepreneurship and wealth creation. The habit of copying success models is a common practice in Brazilian companies, considering the data on the initial amount of royalties and licenses of US$ 200 million paid in 1992, passed to US$ 3,5 billion in 2001 (Simantob & Lippi, 2003). Drucker (1985), positioning himself as a partisan of the attribute of innovation to the entrepreneur, agrees with the importance of the imitation process of the entrepreneur, meaning that the entrepreneur can make or do something that somebody else has already made. However, the author considers that such imitation process is, in fact, innovative when applied to his development strategy because the entrepreneur understands better what the imitation represents and what can be aggregated from it.

5. Imitations as an entrepreneurship action

It is not possible to necessarily insert to entrepreneurship the practice of innovation, once many entrepreneurs come to the market with similar ideas, or many time these ideas are identical to the inedited model; this way, they do not only undertake action but they also create wealth, despite of not innovating.

The habit of copying successful models is a practice in Brazilian companies. This fact can be demonstrated just facing the amount of royalties and licenses paid: US$ 200 million in 1992 and US$ 3.5 billion in 2001 (Simantob & Lippi, 2003).

Drucker (2002), still considering innovation as an attribute to entrepreneurship, recognizes entrepreneur's imitation as a deliberate strategy. He believes that aggregating the entrepreneur with an innovative profile gives attributes to the same person and constitute the best combination for economical growth. It allies inherent disposition to start new enterprise thru innovations, creating openings in the consuming market fore new demands. Paiva Jr. & Cordeiro, 2002 defines the entrepreneur as a person who starts a business or a person who operates or develops it. To him still, the entrepreneur is a person who destroys the existing economic order for the insertion of new products or services in the market, to the creation of new management patterns, or to exploring new resources, substances, and technologies.

Imitation becomes a convenient heuristic resource when there is too much information to be processed. Imitation is not a despicable resource; for example, it is fundamental to learning

processes, it promotes social cohesion, and it is a natural mechanism to breath in and breath out. Besides, it may also be a rational economical option (Bonabeau, 2004).

In a research held in 100 of 500 companies that a major growth in the United States in 1989, it was pointed that 71% of entrepreneur's ideas were modifications of ideas identified in their former working environment, and only 4% of theses managers discovered new opportunities through a systematic research (Bhide, 1994).

Innovation is an effort to produce an intentional change, focused in the economical or social potential of entrepreneurship (DRUCKER, 1985). Innovation consists in creating and profitably using new technologies, new products, new services, new systems, and new operation forms (Pinchot & Pellman, 2000). It does constitute a central matter for businesses expecting to become more competitive, desiring to develop new knowledge based management strategies about cooperation/alliance for technology products (Dorion et al., 2008).

The Organization for Economic Co-operation and Development (OECD) (Becker & Cunha, 2006) makes a difference between technological innovation and innovative activity. The first means new products and processes inserted in the market or a significant improvement in these same products or processes. The second refers to policies and organizational practices focused on research actions and development (they refer to creative and systematic work that aims to increase the knowledge stock); industrial engineering (acquiring or changing equipment, tools, quality control, methods and patterns, with the objective of manufacturing a new product or adopting a new process); production (changes in product and process); marketing of new products (launching these products into the market, their adaptation and commercialization); acquisition of intangible technology (patent office, licenses, know-how, and services of technological content, as well as acquiring equipment and machines of technological characteristic related to innovations started by the company); and drawing activities (definition of proceedings, technical and operational specifications, for the production of a new product or for the adoption of a new process, and artistic drawing activities related to the new product or process.

According to Moreira & Queiroz (2007), the most recent studies define technological innovation as introducing in the market a product (a good or a service) technologically new or substantially improved, or as introducing in the company a productive process technologically improved or new. Technological innovation may result from new technological development, from new combinations of the existing technology, or from the use of other knowledge acquired by the company.

6. Do Brazilian entrepreneurs imitate or innovate?

Historical factors of the Brazilian industrialization process have contributed to the dominant perception among national companies and businessmen of treating technology as something finished and ready to be applied. This "alienation" ended up in developing a feeling of suspicion related to technological development that has prejudiced the companies and excluded them from world tendency of taking part in international networks of strategic alliances. The protectionist character of the Brazilian industrialization model in substituting importations has de-motivated national sectors that would be beneficiated in being part of technological competition with potential international opponents, once they had a domestic market of great proportions.

There are some indexes on the importance of technological innovation on economical growth and business competitiveness (IBGE, 2003):

a. Technological innovation has been responsible for about 70% of economical growth, and perhaps for 80% to 90% of productiveness gain;
b. Private taxes of return on investments in R&D are around 20% and 30%, while social taxes of these same investments are over 50%.

On the other hand, investments are slow in Brazil. In 1994, Brazil invested 0.7% of its GNP in science and technology; from this sum, 75% are still supported by the government (Guedes & Bermúdez, 2006).

What blocks creativity, according to Filion (2001), is:

a. The belief that there always is a correct answer to a certain problem;
b. The fallacy that the resolution for any problem must be logical;
c. The practical sense limits creativity;
d. Breaking up rules, beliefs or paradigms is innovation in many cases;
e. Observing only one perspective for the problem;
f. Not seeing a connection between mistake and innovation;
g. Think of solutions only on the activities of a certain sector of the company;
h. Non-conventional thought criticized by the colleagues;
i. To be a person who believes to be without any talent or creative intelligence.

To Simantob & Lippi (2003), inhibitor factors for innovation are critics and punishment. Thus, there is a block for the capacity to dare, to risk. The innovator, as well as the entrepreneur, needs to be tolerant with unsuccessful ideas. The companies themselves define their innovative profile. They can see 30% of their income comes from products or services launched less than five years ago (Simantob & Lippi, 2003).

A Mintzberg & Quinn (1992) state that in innovative configuration is the environment what precedes? An innovative environment, according to Simantob & Lippi (2003), is composed of qualified and continuously trained people, clear and transparent communication, without any filter, a good environment for exchanging information, for daring, and for collective recognition. In Table 3 below, it is possible to analyze the nine dimensions of innovative environment proposed by Simantob & Lippi (2003):

Once there are these necessary characteristics so that companies may have an innovative environment, in Brazil it seems that challenges are even greater. A research carried out by IBGE/CEMPRE (SEBRAE, 2006), surveyed that the number of micro companies in the country, between 1996 and 2002, has increased from 2,956,749 to 4,605,607. The accumulated growth of 55.8% passed to a participation in the total number of companies from 93.2%, in 1996, to 93.6%, in 2002. The total number of people occupied in micro companies has gone from 6,878,964 to 9,967,201. With a growth of 44.9% in this period, it increased its participation in total occupation in companies from 31.8% to 36.2%. The number of companies with activities for the same period has increased from 181,115 to 274,009, a growth of 51.3%. The total of people increased from 4,054,635 to 5,789,875, with a growth of 42.8%, showing an evolution from 18.8% to 21.0%. According to this research, micro and small companies corresponded, in 2002, for 99.2% of the total number of formal companies, 57.2% of total jobs, and 26.0% of salary mass. Because of the expressive increase of the

number of jobs generated in in both segments, salary mass presented a real improvement of 57.3% in micro companies and of 37.9% in small companies. Data from this research demonstrates that there are in Brazil a great number of entrepreneurs and they have a major participation in the economical activity of the country.

Challenge and involvement	They come out when people make what let them happy. The natural consequence is a strong complicity to the activity.
Freedom	It conquers autonomy to execute and develop ideas and projects.
Time to create	There is a greater and greater demand for time in the agenda and physical environment proper to have ideas.
Support to create	There is not so much one can do without resources, support or patronage from leaderships, either for investing in uncertain experiment or to recognize a group merit.
Conflict	Sometimes, organizations stimulate good competition. As athletes of a same team, people compete among themselves to look for a better result, but respecting team spirit.
Debates	They are basic ingredient to share ideas and knowledge, respecting opposed points of view.
Humor and joy	They are more natural in informal environments and with few behavior rules.
Trust and sincerity	They are perhaps the most important stimuli to assure the freedom of speech and the consciousness that punishment is something to be avoided.
Tolerance to risk	It expresses clear understanding in accepting mistakes as part of the learning process.

Source: Simantob & Lippi (2003)

Table 3. Nine dimensions to innovative environment

Another research, carried out by the Institute of Economical Applied Research (Ipead), presents, in Table 4 below, that 1.7% of Brazilian industrial companies innovate. Furthermore, the results demonstrate that an innovative company has 16% more chances to be an exporter than the other ones and represents 25.9% of the whole Brazilian industrial income, occupy 13.2% of all jobs generated in the activity, and pay salaries that are 23% higher that the other ones.

The effort of these companies to innovate corresponds to 3.06% of expenses with internal R&D; however, as they represent a minority among Brazilian companies, the total spending by industries with R&D falls to 0.7%, while the average of other countries like Germany and France corresponds to 2.7% and 2.5%, respectively (Arbix et al., 2005).

It is possible to observe from data presented in both Sebrae and Ipead research that although there are a great number of micro and small companies, there also is a practically insignificant percentage of companies which formally innovate in Brazil. It proves these new companies are merely imitator's entities of already existing businesses.

Other researches indicate a correlation between expenses with innovation and R&D and wealth. While England, the United States, Japan, South Korea, France, and Germany invest

around 3% of their GNP in science and technology, Brazil invests around 1%. According to a research realized by *Human Development Report* (UNDP), that established the index of technological development, Brazil, in 2001, occupied the 41st place in the ranking that was headed by Finland, the United States and Sweden. While Brazil has patented 125 technological innovations in 2003, the United States registered 98,663 (Simantob & Lippi, 2003).

Competitive strategy	Number of companies	Participation (%)	
		Profit	Employment
Innovation and product difference	1,199 1,7%	25.9	13.2
Specialization in pattern products	15,311 21.3%	62.6	48.7
Non differentiation for product and smaller productiveness	55,495 77.1%	11.5	38.2
Total	72,005	100	100

Source: Institute of Economical Applied Research (Arbix et al., 2005)

Table 4. Competitive strategy and innovations in companies

According to IBGE (2003), 50% of investment in innovations refers to the acquisition of machines and equipment; only 20% are destined to research and development. In Brazil, only 177 companies made some worldwide innovation in 2003.

In Table 5 below, it is possible to observe the index of Brazilian innovations throughout time, divided in classes of number of people occupied by them.

People occupied with innovations	Innovation index 1998-2000 (%)	Innovation index 2001-2003 (%)
Total	31.5	33.3
From 10 to 29	25.3	30.4
From 30 to 49	33.3	34.2
From 50 to 99	43.0	34.9
From 100 to 249	49.3	43.8
From 250 to 499	56.8	48.0
From 500 on	75.7	72.5

Source: IBGE, PINTEC (2003).

Table 5. Indexes of innovation in companies 1998-2000 and 2001-2003

The smaller the company is, the smaller is the index of innovativeness of this same company. It proves once again that Brazilian entrepreneurs do not have an innovative profile, in disagreement with the concept of entrepreneur of most authors mentioned that relate the entrepreneur to a creative and innovative person.

In a research carried out by FAPESP agency, despite of the number of innovative companies in Brazil increased from 22,698, in 2000, to 28,036, in 2003, this increase has not reflected in

the creation of new products or new technological processes yet. A study of technological innovation in Brazilian industry, carried out by the National Association of Research, Development and Engineering of Innovative Companies (Anpei) and presented in the 6th Annual Conference of this organization, shows: "The index of innovative products focused on the internal market has fallen drastically, from 4.1% to 2.7% [of the total products in the analyzed period]", says Roberto Vermulm, professor at Faculty of Economics, Management, and Accounting (FEA) at São Paulo University (USP). According to Vermulm, in Germany or in Italy this index is around 22%. "To be few innovative is still a structural characteristic of Brazilian company", he stated. Innovative processes focused on the internal market also decreased, from 2.8% in 2000 to 1.2% of total processes in 2003.

The Federação das Indústrias do Estado do Rio de Janeiro (FIRJAN) system (2007), using the methodology of Business Week, also presents indexes of innovation for Brazil. It shows that the country dominates important top technologies. That is the case, for example, of petroleum exploration in deep water, aero-spatial technology, and agro-industry. The comparative analysis shows the expense in Brazil with R&D is close to the ones carried out by Russia, India, and China. However, it is worth to point out that it represents only one-third of the amount of investment in South Korea.

While analyzing professional formation in Exact Sciences and Engineering, in absolute terms, in the FIRJAN system Brazil has 56,000 graduate professionals, ahead of Singapore (5,600), of Israel (14,000), and of Taiwan (49,000). In relative terms, that is, considering demographic density of these countries, Brazil graduates less capable professionals to work on essential activities to innovation than any other country, except for China.

Of the three indexes considered by Business Week, the patent office in the United States is the index of technological development in which Brazil has its worse performance, with an increasing close to the one reached by Russia and quite below the performance of India and China. In absolute terms, in 2003, Brazil was the country with the smallest number of patents in the USA. Even worse, considering the index of evolution in the patent office in the period 1993-2003, Brazil has more registers than Israel only, remembering that Israel has an absolute number of registered patents greater that Brazil does.

It is observed that, despite the environment was not favorable to innovation in the last two decades; Brazilian industry could improve and get results in areas with significant investment, such as energy, agriculture and stock growth, and aero-spatial research.

7. Clue on Brazilian business incubation entrepreneurs

The process of transformation of an idea into a sustainable company is sufficiently complex. It evolves from the preparation and qualification of the titular of the idea, the planning of this new company and the determination of the choices through the necessary decisions for its continuity up to the articulation of the environment where the company is involved, in order to provide the necessary resources for the implementation of the practice of an imaginative conception. Furthermore, the appearance of an idea from repeated experiences may be reached as long as there is in the incubator a common and continuous effort to understand the nature of lived processes and to identify opportunities to improve these processes (Dorion et al., 2008). According to data, it is favourable to associate intelligence generation from a manager's of incubator point of view.

Evaluating the profile of the managers of the incubators, under the optics of the entrepreneurship and innovation, there are great similarities with the managers of the incubated companies, which must facilitate the tuning and the harmony in communication, in the establishment of projects and the flow of discussions.

Intra-entrepreneurship constitutes a strong and important characteristic for the managers of incubators. However, by having only one citation referring to this characteristic, this does not mean that the managers do not have it, since, in the elapsing of the interviews, it was asked to the participants to cite entrepreneur's characteristics and knowing that the answers were open and represented the most noticeable and remembered characteristics from the participants.

In respect to the evaluation of the incubated companies and its collaborators, the profile is, in its majority, of technicians, which are constituted of researchers of specific areas that develop studies on ideas for the construction of innovative solutions. The most present citations consisted in the expressions: "to look for new", "to search other alternatives", "to create new solutions for old problems". This indicates the direct link with characteristics related to innovation. This way, the incoming ones to the incubator have innovative characteristics, understanding that business incubators are disseminators of these practices, but will not develop innovative profiles.

The characteristics that have been perceived are innovation, search of opportunities, disposal to take risks, creativity, initiative, knowledge of the product, the necessity of achievement and pro-activity. Among the cited characteristics, were observed the attitude of independence, the ability to lead with situations and the capacity of learning, as mentioned by Filion (1992); determination and devotion pointed out as characteristics of the entrepreneur by Dornelas (2003) and the proper business commitment and the adaptability, cited by Timmons & Spinelli (2007).

Amongst the entrepreneur's characteristics, leadership of the actors could not be identified. Also, market knowledge was not in accordance with the behaviour of the participants, since many had only an ideal of a product and perceived thru being incubated the possibility of transforming it into reality, not possessing knowledge, and not having an interaction with the segment that they were to participate in.

Moreover, Filion (1992) detaches that the entrepreneurs are involved on a long term basis. From data collection, it was possible to perceive that a vision of the future is mainly linked to the product itself to be developed, showing that there is no indication from the participants of any constructed vision of the future for their business. In some cases, it was demonstrated that the companies were basically a vehicle to create a product, fruit of an idea, or an invention, known in the market; considering the fact that the benefits of entrepreneurship only reinforced the initial idea, but did not enhance the proper action.

It is recognized that entrepreneurs are excellent planners; a fact that could not be identified in the research on the profile of the managers of the incubators. To the opposite, it was possible to perceive that the majority of the interviewed, thru their technical profile, did not have any planning established, with a definite plan of actions and when it had, it was the fruit of a business plan, which constitutes a requirement to enter and benefit from the business incubator.

In compensation, the characteristic of innovation of the participants is very high, considering that the sense of urgency to resolve problems with high degree of uncertainty, tolerance to risk and culture of experimentation can easily be identified; but, the profile of the participants does not show relevant characteristics of entrepreneurship, since the designated attitudes as entrepreneur are not necessarily similar to innovation profile. For this reason, the encountering of a profile oriented toward the one of an inventor demonstrate the lack of commitment to create something with economic outputs, understanding that their motivation resides in the creation and in the discovery, nothing more.

8. Conclusion

The study of these concepts allows observing that, on one hand, despite possessing an excellent perception in relation to new business opportunities, the Brazilian entrepreneur does not present, in its essence, an innovative character. This can be confirmed by the statistics who point out the fact that smaller is the company, minor is the probability to be innovative, considering the fact that in Brazil, the representation of micro and small companies reaches 99%.

It is important to mention that, without having still a consensus between the authors of the area, there is a trend in the literature showing that entrepreneurship is related to innovation, creativity and change. In this perspective and by observing the Brazilian context, it is encountered the existence of an entrepreneur who characterizes himself against such theory based proposal, due to the fact that his link with innovative activities is very weak or inexistent.

However, it is possible to perceive in the profile of the Brazilian entrepreneur a high capacity to perceive business opportunities but as imitation of existing enterprises. This can be confirmed, from one hand, by data showing a growth of 50% of the numbers of micro and small companies established in the country between 1996 and 2002 and, on the other hand, by the lecture of an index of only 1.7% of the companies which innovate in its businesses.

In this sense, although the imitation may consist as the most common business alternative for Brazilians wishing to create a new venture, an existing entrepreneurial potential in the country would justify a greater investment in innovation within these organizations. This initiative would make possible the creation of new markets and new offers and would minimize the vulnerability of these companies in front of global competitiveness effects. This context enhance the urgent necessity of these companies to invest in research and development for new products and services, which can occur, for example, through the creation of more structured and active R& D activities.

Finally, this brief analysis of the entrepreneurial and innovative realities of the Brazilian context shows a lack of presence and use of the entrepreneurial potential and its competitiveness on a national scale. Moreover, the existing concepts in the literature which characterize the entrepreneur as somebody who possesses creativity, is innovative and is an agent for change, mischaracterize the Brazilian entrepreneur, since his act mainly relates to imitation business-oriented, having few characteristics related to innovation.

On the other hand, it can be observed that the profile of the managers of the incubators do have entrepreneurship and innovation characteristics, while the profile of the managers of

the incubated companies only possess innovation characteristics. The evaluation of the profile of the managers indicates a distortion between the theoretical and the practical orientations of the incubation process. This occurs because business incubators do focus on ideas that, many times, are deriving from scientific research or inventions that, if transformed into companies, do result in innovations.

As of how innovation can impact on such transition process, the results demonstrate that the managers of the incubators and the director of the incubated companies present a highly innovative profile, but it does not necessarily an entrepreneurial profile. The identification of characteristics, such as the perception of change as a normal phenomenon, the lack of discomfort with new situations, creativity and brainstorming, constitute characteristics which describe the profile of an inventor. But, from the results of this study, they can also demonstrate the ones of a good technician who resolved to commercialize a great idea.

Consequently, as of the identification of the profiles of entrepreneurship and innovation, it can be stipulated that business incubators do focus on the development of the missing entrepreneurial and innovation characteristics identified in this analysis; but in very distinct manners. One aspect to be valued from this research refers to qualification, training, management support, posture to interact with the academic sphere; which will generate results and benefits for both the worlds of business and science; because both professors and researchers from the academic world constitute a good source of learning and development for relevant business management practices. Thru such strategy, it would be possible to develop better managerial abilities and entrepreneurial attitude with the managers of the incubated companies. Such action would allow the conciliation of entrepreneurship and innovation characteristics, from the vision of the actors up to their systemic interaction pattern, generating a dynamic disequilibrium, rule of a healthy economy and reality of the economic theory.

9. References

Anprotec. (2006). *Associação Nacional de Entidades Promotoras de Empreendimentos de Tecnologia Avançada*. 19.08.2006 Available from http://www.anprotec.org. br

Arbix, G.; Salerno, M. & De Negri, J.A. (2005). Internacionalização com foco na inovação tecnológica e seu impacto sobre as exportações das firmas brasileiras. *Revista Dados*, Vol. 48(No.1): 395-442.

Becker, G.V. & Cunha, N.C.V. (2006). Competências organizacionais: desvendando a inovação em empresas de manufatura. *Proceedings of 24th Simpósio de Gestão da Inovação Tecnológica*. Associação Nacional de Pós-Graduação e Pesquisa em Administração, Gramado, Brazil, october of 2006, CD ROM.

Bhide, A. (1994). *How entrepreneurs craft strategies that work*. Harvard Business Review on Entrepreneurship.

Bonabeau, E. (2004). *The perils of the imitation age.* Harvard Business Review.

Dolabela, F.(1999). *Oficina do empreendedor: a metodologia de ensino que ajuda a transformar conhecimento em riqueza*. São Paulo: Cultura.

Dorion, E.; Pavoni, E.T .& Lazzari, F. (2008). Strategic cooperation for technology products through knowledge-based management learning: a case study on Randon Implements S/A, Caxias do Sul (Brazil). *International Journal of Technology Marketing*, Vol. 3(No 4): 342-357.

Dornelas, J.C.A. (2003). *Empreendedorismo corporativo: como ser empreendedor, inovar e se diferenciar em organizações já estabelecidas.* Rio de Janeiro: Elsevier.

Drucker, P.F. (1985). *Innovation and entrepreneurship.* New York: Harper & Row.

Drucker P.F. (2002). *The discipline of innovation.* Harvard Business Review on the innovative enterprise. Harvard Business School Press.

Filion, L.J. (1991). *Vision et relations : clef du succès de l' entrepreneur.* Montréal Chaire d' entrepreneurship McLean/Hunter, Montreal, HEC.

Filion, L.J. (1992). Bolton twenty years on. The Small Firm in the 1990s. *Revue Internationale PME*, Vol.5(No.3): 171-189.

Filion, L.J. (2001). *Compétence métier et vision chez lês dirigeants: réflexions sur le devenir de l' entrepreneur.* Document non publié. Chaire d' entrepreneurship McLean/Hunter, Montreal, HEC.

Firjan (2007). *Federação das Indústrias do Estado do Rio de Janeiro.* 14.07.2007 Available from http://www.firjan.org. br

Gem. (2001). *Global Entrepreneurship Monitor: Entrepreneurship in Brazil* - 2000: National Report. Curitiba: IBQP.

Guedes, M. & Bermúdez, L.A. (2006). *Parques tecnológicos e incubadoras de empresas em países em desenvolvimento: lições do Brasil.* Brasília: ANPROTEC: SEBRAE.

Hisrich, R. D. & Peters, M. P. (2001). *Entrepreneurship.* 5. New York: McGraw-Hill.

Ibge. (2003). Instituto Brasileiro de Geografia e Estatística. *As micro e pequenas empresas comerciais e de serviços no Brasil.* Rio de Janeiro: IBGE.

Mintzberg, H. & Quinn, J.B. (1992). *The strategy process.* Englewood Cliffs, New Jersey: Prentice Hall.

Moreira, D.A. & Queiroz, A.C.S. (2007). *Inovação organizacional e tecnológica.* São Paulo: Thomson Learning.

Paiva Jr., F.G. & Cordeiro, A.T. (2002). Empreendedorismo e espírito empreendedor: uma análise da evolução dos estudos na produção acadêmica brasileira. *Proceedings of 26th Encontro Nacional da Associação Nacional de Pós-Graduação e Pesquisa em Administração.* Associação Nacional de Pós-Graduação e Pesquisa em Administração. Salvador, Brazil, setember of 2002, CD ROOM.

Pinchot, G. (1985). *Intrapreneuring: why you don't have to leave the corporation to become an entrepreneur*. Harpercollins.

Pinchot, G. & Pellman, R. (2000). *Intrapreneuring in action:* A Handbook for Business Innovation. Berrett-Koehler Publishers.

Pirich, A.; Knuckey, S. & Campbell, J. (2001). *An interface between entrepreneurship & innovation - New Zealand SME's perspective. Prepared for DRUID Nelson & Winter Conference 2001.* Aalborg University, Denmark.

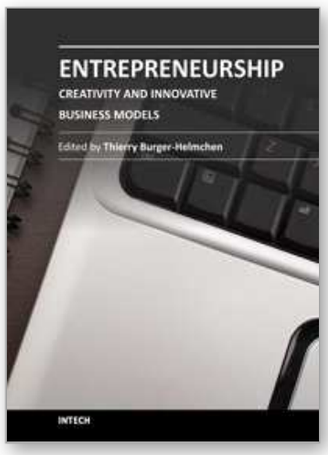
Plonski, G.A. (2005). Bases para um movimento pela inovação tecnológica no Brasil. *São Paulo em Perspectiva*, Vol. 19(No. 1): 25-33.

Schumpeter, J.A. (1934). *The theory of economic development.* 1 ed. Cambridge: Harvard University Press.

Sebrae. (2006). *Serviço Brasileiro de apoio às micro e pequenas empresas.* 13.08.2006 Available from http://www.sebrae.com.br

Simantob, M. & Lippi, R. (2003). *Guia valor econômico de inovação nas empresas*. São Paulo: Globo.

Timmons, J.A. & Spinelli, S. (2007). *New venture creation: entrepreneurship for the 21st century.* New York: McGraw-Hill, Irwin.



Entrepreneurship - Creativity and Innovative Business Models
Edited by Prof. Thierry Burger-Helmchen

ISBN 978-953-51-0069-0
Hard cover, 190 pages
Publisher InTech
Published online 29, February, 2012
Published in print edition February, 2012

What are the differences between an entrepreneur and a manager? According to Schumpeter, the main difference lies in the entrepreneur's ideas, creativity, and vision of the world. These differences enable him to create new combinations, to change existing business models, and to innovate. Those innovations can take several forms: products, processes, and organizations to name a few. In this book, an array of international researchers take a look at the visions and actions of innovative entrepreneurs to be at the source of new ideas and to foster new relationships between different actors to change the existing business models.

How to reference
In order to correctly reference this scholarly work, feel free to copy and paste the following:

Eric Charles Henri Dorion, Eliana Andrea Severo, Pelayo Munhoz Olea and Cristine Hermann Nodari (2012). Brazilian Entrepreneurship Reality: A Trilogy of Imitation, Invention and Innovation, Entrepreneurship - Creativity and Innovative Business Models, Prof. Thierry Burger-Helmchen (Ed.), ISBN: 978-953-51-0069-0, InTech, Available from: http://www.intechopen.com/books/entrepreneurship-creativity-and-innovative-business-models/brazilian-entrepreneurship-reality-a-trilogy-of-imitation-invention-and-innovation

INTECH
open science | open minds

InTech Europe
University Campus STeP Ri
Slavka Krautzeka 83/A
51000 Rijeka, Croatia
Phone: +385 (51) 770 447
Fax: +385 (51) 686 166
www.intechopen.com

InTech China
Unit 405, Office Block, Hotel Equatorial Shanghai
No.65, Yan An Road (West), Shanghai, 200040, China
中国上海市延安西路65号上海国际贵都大饭店办公楼405单元
Phone: +86-21-62489820
Fax: +86-21-62489821

IntechOpen