

Abstract. *Without a unanimously accepted definition, the subject of academic entrepreneurship looks chaotic and the studies are hardly linked in order to provide a powerful theoretical framework, which would foster new researches. This paper intends to bring some light to the current debates relating to the ways in which academics can act entrepreneurially by surveying the literature and suggesting a definition, which allows it to be distinguished from other forms of entrepreneurship. The proposed definition is meant to cover all the angles by looking at value producing activities for external actors as the main basis for entrepreneurial academic initiatives. The definition is then used as the main pillar on which to build a distinct characterization of academic entrepreneurship and to disentangle this notion from the knot in which many entrepreneurship threads have been entangled: academic, commercial, social, scientific entrepreneurship and intrapreneurship.*

Keywords: academic entrepreneurship, scientific entrepreneurship, commercial entrepreneurship, social entrepreneurship, definition.

TOWARDS A CONCEPTUAL DELIMITATION OF ACADEMIC ENTREPRENEURSHIP

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1. Introduction

Under the academic entrepreneurship umbrella there have been inserted numerous activities that have in common the characteristic of being performed by an actor who is dissatisfied with the current situation and is actively working towards changing it. A review of the discussions concerning these behaviors will reveal great discrepancies amongst those concerned with the topic. As a result, the concept did not manage, so far, to inspire a common ground on which to base a new field of studies, the studies of entrepreneurial activities of academic personnel (Johannisson, 2009). Without a unanimously accepted definition, the subject looks blurry and the studies are hardly linked, in order to provide a structured theoretical framework, which would foster new researches. This paper intends to bring some light to the current debates relating to the ways in which academics can act in an entrepreneurial manner, by surveying the literature and suggesting a definition, which allows it to be distinguished from other forms of entrepreneurship, such as social, scientific, intra-organizational or commercial.

Entrepreneurship can be viewed as either opportunity seeking, as money seeking, as a value creating or proactive activity and so on. The definitions included in the present discussion are concerned with the results of the activity which, based on its outcome, is fitted into the entrepreneurial category or not. They do not take a process view of what academic entrepreneurship means, they simply look at the final result of some activity considered mostly a black-box in which institutional and personal inputs go in and an entrepreneurial result comes out. They are also biased in favor of successful attempts at being entrepreneurial inside the academia and fail to account for those activities, which are entrepreneurial but leave no visible traces in the form of tangible results. The proposed definition is meant to cover all these angles by looking at the intention to create value and not only at the results and by talking about value producing activities for external actors as the main basis for entrepreneurial academic initiatives.

The definition is then used as the main pillar on which to build a distinct characterization of academic entrepreneurship and to disentangle this notion from the knot in which many entrepreneurship threads have been entangled: academic, commercial, social, scientific entrepreneurship and intrapreneurship. The analysis is based on the framework proposed by Austin et al. (2006), which describes four domains of differences: context, people and resources, opportunity identification and deals. Thus, the concluding part of the paper will take academic entrepreneurship through all these domains pointing out the areas of interest in establishing a clear image of this subject as a stand-alone field of study worthy of its own specific literature and treatment.

2. Towards a definition of academic entrepreneurship

When the term academic entrepreneurship was first released, it referred simply to an extension of business entrepreneurship to academia, a mere differentiation between companies founded based on academic knowledge and the

others. As its popularity grew and more and more disciplines and institutions got involved in entrepreneurial activities, it started to borrow the discourse of social entrepreneurship, which is also a rising thread of inquiry in social sciences today. Based on the different views of entrepreneurship, the scholars involved in the study of academic entrepreneurship can be integrated into three main categories expressing the extensiveness of the definitions they use: commercial definitions, knowledge transfer definitions and value creation definitions. These categories will be briefly presented in the following sections as an introductory background for the proposed definition of academic entrepreneurship.

2.1. Commercial definitions

The prevailing definitions of academic entrepreneurship start from the idea of for-profit business creation and talk about university spin-offs, the companies started by academia (Shane, 2004; Wright et al., 2009). Some authors have created a more detailed taxonomy and have separated the businesses created by academics on the basis of their own research from those created by other means, talking about general academic entrepreneurship and research-based entrepreneurship (Goel and Grimpe, 2011). Others have looked only at academic businesses set-up using venture capital (Zhang, 2007), while others took into consideration any business created on the basis of intellectual property generated inside universities, irrespective if the entrepreneur was part of the academia or not (Hayter, 2011).

These definitions refer only to pure entrepreneurial intentions, but leave out other means of obtaining money through knowledge transfer that the academia has at its disposal and also the fact that monetary value is just one type of value that can be created through entrepreneurial means. The next two categories of definitions broaden their scope and take the issues mentioned above into consideration.

2.2. Knowledge transfer definitions

The authors who choose to regard academic entrepreneurship as a means of transferring knowledge from the university environment to the market extend the definition so that it includes all the contacts that the academics have with business entities that are the basis of monetary value creation. For example, the US College of Science states on its website that academic entrepreneurship refers to “*using our professional expertise for personal and/or institutional monetary gain*”. Under this paradigm we can talk about soft and hard academic entrepreneurial activities (Phillpott et al., 2011). Those activities which have the more tangible results are introduced in the category of hard activities: patenting, licensing and spin-off formation and they can be viewed as more entrepreneurial in nature and introducing compatibility issues with the traditionally accepted academic role (Louis et al. 1989 cited in Phillpott et al., 2011). At the other end of the spectrum we encounter the softer activities such as

academic publishing, grant seeking and contract research, which are far more acceptable for the academic culture. Under the commercial definition, these do not count as academic entrepreneurial examples.

Academic entrepreneurship can be defined as “*the involvement of academic scientists and organizations in commercially relevant activities in different forms, including industry-university collaborations, university-based venture funds, university-based incubator firms, start-ups by academics, and double appointments of faculty members in firms and academic departments*” (Pilegaard et al., 2010, p. 47). For Mohar et al. (2010) the basis for academic entrepreneurship is organizational creation, renewal or innovation, which can occur either within or outside the university by means of research commercialization.

Referring to the Swedish environment, Klofsten and Jones-Evans (2000) declare that any activity outside the normally accepted duties of academics (teaching and personal research) could be termed entrepreneurial, but they also point that the societal view is constantly changing and, for example, that since 1996 the Swedish Government has been considering the collaborative research with industry as having equal status with teaching and basic research. This suggests that the activities included under the umbrella of academic entrepreneurship depend on what the legislative and societal opinion considers an appropriate academic behavior inside and outside the university. Consequently, this type of definitions is prone to cultural interpretation and may lead to difficulties in comparing the level of academic entrepreneurialism across countries.

2.3. Value based definitions

The third stream of definition embraces the view of entrepreneurship as creation of societal value, without necessarily putting emphasis on monetary value in particular and it will prove particularly worthy of attention as it was developed by scholars belonging to social sciences, one of the fields of study normally seen as remotely situated from the market. This view is mostly encountered in social sciences and humanities related discussions of the entrepreneurial dimension of academic activities and it broadens the scope in order to fit with the realities of these fields of study. For Botes (2005), a scholar concerned with community development in Africa, entrepreneurship is related to risk taking, the ability to see opportunities where others see chaos, and the creation, renewal and enhancement of value not merely for owner, but for all stakeholders. He talks about the engaged university, which builds bridges over the gap between itself and the surrounding community and introduces the discussion of research oriented on needs versus that oriented on strengths. If university research is going to help develop communities then it should be focused on community capabilities, assets and activities required to achieve a desirable standard of living and not on the needs or problems of that community, which could lead to a certain dependency on the university's support. Thus, academic entrepreneurship is

proven by choosing the right methods of research. This paradigm is primarily focused on the means used to obtain a certain results, whereas the others look preponderantly at the results without taking into consideration the means used to achieve them. The debate revolves around the concept of community-based learning, which is achieved when the academic perspective is merged with real-life community-based experiences resulting in something more than simple volunteer activity. As Winfield (2004, p. 9) says, “*the work in the community makes the academic study relevant and the academic study directly informs the work in the community*”. The application of this teaching method leads to what Kingma (2011, p. ix) terms community engagement: “*Faculty, as entrepreneurial thinkers, seek new ways to engage with the community to create value, and this value creation within a local community establishes the university as an anchor institution*”.

However, the definitions encountered so far are either too vague, too relative to social and cultural environments, or too narrow to be of use in the analysis of academic entrepreneurship in different fields of study. In the light of the present discussion we can unite the main ideas spun across the definitions presented thus far to arrive at the following conceptualization of academic entrepreneurship: an individual or collective action conducted by academia members with the view of obtaining value for the market and/or society by engaging with a non-academic community through the means of knowledge creation and sharing.

2.4. Academic entrepreneurship – working definition

Based on the aforementioned definitions and taking into consideration their blind spots, the following definition has been conceived:

Academic entrepreneurship is a practice performed with the intention to transfer knowledge between the university and the external environment in order to produce economic and social value both for external actors and for members of the academia, and in which at least a member of academia maintains a primary role.

This definition includes part of the category of commercial definitions because it stresses the importance of the academic entrepreneur as the one who initiates the transfer of knowledge for business creation and excludes those companies created on the basis of university knowledge but not by academia. Thus, the academic entrepreneur is the initiator of the entrepreneurial practice and it has to remain the main shaper of the practice in order for the activity to fit into what is called academic entrepreneurship. As this is one of the main features that distinguishes academic from corporate entrepreneurship, I consider that it is crucial for it to be present at all times. Consequently, the definition allows for academic entrepreneurial practices to transform naturally into either business or social activities, whenever the academic involvement reduces its intensity, given the scientist(s) withdrawal from activity.

Moreover, by putting an emphasis on value creation and not solely on monetary results, the proposed definition fits nicely with the discourse of the authors from the value creation stream of thought and is wide enough to cover social entrepreneurial activities. Social entrepreneurship is understood as an *"innovative, social value creating activity that can occur within or across the nonprofit, business, or government sectors"* (Austin et al., 2006, p. 2). However, in contrast with social entrepreneurship motivated by the existence of a certain problem in the environment, academic entrepreneurship can be a lot more proactive and anticipate problems, as well as produce results in fields in which there are no apparent social problems.

The definition also stresses the need for the activity to produce value for external actors and not only for academia, thus distinguishing academic from scientific entrepreneurship as a means to achieve a higher rank within one's profession framework. Scientific entrepreneurship refers to the activities performed by academics with the view of gaining professional capital such as a promotion in the university hierarchies (e.g. publishing articles and books, participating in conferences, participating in administrative activities, becoming members of professional communities).

The fact that the definition mentions the creation of value as the intended result of the academic entrepreneurial practices places the assessment of the success or failure of the academic initiative outside the driven by profits economic realm and into the subjective one, in which value is obtained in a transactional mode. Even if the action does not have the intended consequences, it still produces something and that result merits its own investigation. This is especially true for the case of repeated failure of academic entrepreneurial activities (e.g. POSDRU research and courses that do not reach their target population), which must be examined not only through the lens of the half-empty glass, but through the lens which allows us to see that the other half of the glass is always filled with something. Every action has a result, even though it may not be the one intended and in the case of academic entrepreneurship the intention matters as much as the result. This is true because academic entrepreneurship is an emerging field in which there are no certain recipes for success. The field is in continuous formation, and any entrepreneurial attempt brings value to the whole entrepreneurial ideology whether it succeeds or not.

Seeing academic entrepreneurship as a practice that happens inside an organizational setting already having other practices in place, suggests that it might also be compared with intrapreneurship, a field that observes the methods used by people working inside large organizations in order to display entrepreneurial skills. This view stresses three main facts: 1) that academic entrepreneurship can be the choice of a rogue academic who decides to take matters in his/her hands without institutional support; 2) that it can be the result of many individuals working together to achieve an entrepreneurial organizational culture; 3) and that irrespective of whether it happens with or without organizational support, it does happen inside an organizational setting, which implies that there are certain norms, regulations that need to be combined with the personal attributes of the persons involved in this type of activity in order to obtain an entrepreneurial result. Thus, the person and the

institutional context matter in equal measures and they both shape each other, making academic entrepreneurship a result of both personal and organizational characteristics.

The main point is that academic entrepreneurship is supposed to transform the ways in which knowledge is created, used and diffused. These practices would contribute to the changes witnessed by Krucken (2003, p. 316): “*Knowledge, so it seems, has become more deeply embedded in society, and the institutional division of knowledge producing sites from their societal environments has become obsolete*”.

3. Academic, commercial and social entrepreneurship

As presented so far, it is clear that academic entrepreneurship combines different elements from commercial, social, scientific and intra-entrepreneurship and thus it needs to be disentangled from these knots and presented as a distinct thread. The change that occurs in the domain of research and knowledge creation as entrepreneurship becomes part of the academic environment is the main pillar on which we can build the distinction among academic, commercial and social entrepreneurship that will be detailed in the next section. This analysis will be based specifically on what sets academic entrepreneurship apart from other types of entrepreneurial activities, focusing on these characteristics and not those of social or commercial entrepreneurship which have been described in other articles (Austin et al., 2006; Archer, 2008; Santos, 2009; Bacq et al., 2011; William and Nadin, 2011). Thus, although academic entrepreneurship has many elements in common with other types of entrepreneurship, the purpose of this section is to clearly indicate the mechanisms at work which make academic entrepreneurship a distinct field of study by presenting the features pertaining to the particular way in which academics tackle issues, such as opportunity identification and creation, context, people and resources and deals they can offer or get. As it follows, we present in figure 1 the context of the larger frame in which academics use the human and material resources they have access to in order to identify and create opportunities and materialize them into deals.

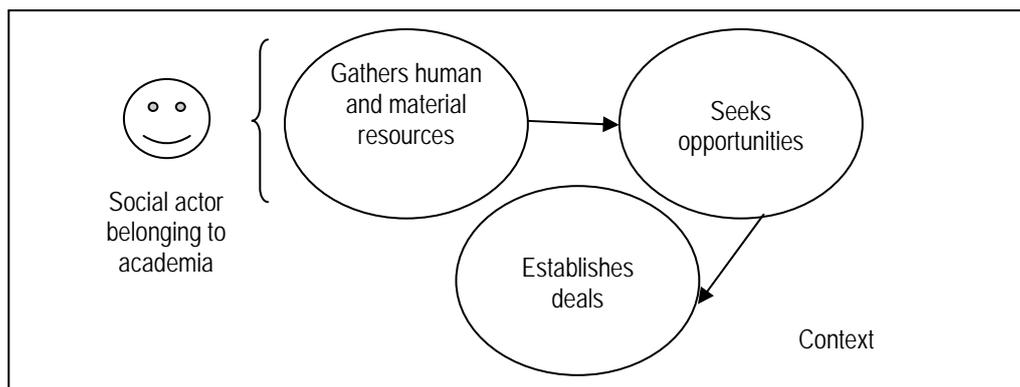


Figure 1. Interaction between the entrepreneurial dimensions analyzed

3.1. Opportunity identification and creation

According to Austin et al. (2006) the difference that makes the most importance lies in the opportunity dimension which enacts the fundamental differences in missions and responses to market failures of the two ends of the entrepreneurial continuum, commercial and social entrepreneurship. Even if academic entrepreneurship can fall inside both categories, it does provide a particular layer in its mission, as it involves the creation and dissemination of knowledge between the university and the external environment. What academic entrepreneurship brings is a new layer in the communication patterns, between the knowledge creation institutions of education and the market/society, a pattern that is based on a continuous dialogue.

The central drive of academic entrepreneurship is linked to the transfer of knowledge in a more direct way between the academic world and the external environment, in which it is activating. Although the university is not profoundly separated from its environment, academics have in the past been accused of having retreated inside an ivory tower, of being distant and not interested in what happens outside the walls of their institutions. The nascent practice of entrepreneurialism amongst academics is said to be the cure to this said aloofness, which was professed by major scholars as Merton (1973) or Humboldt (Albitron, 2006).

Thus, the most important opportunity that should be taken by academic entrepreneurs is that of the dialogue, which increases the dialogic literacy (Bereiter and Scardamalia, 2005) of the academia, and the external actors who get involved. This literacy is defined as *“the ability to engage productively in discourse whose purpose is to generate new knowledge and understanding”* (Bereiter and Scardamalia, 2005, p. 11) and it is considered to be the fundamental literacy for a knowledge environment. Thus, while in the case of commercial entrepreneurship the emphasis is placed on the economic returns provided by a certain activity and in the case of social entrepreneurship on social innovation, in the case of academic entrepreneurship the accent is on producing knowledge for the external partners and the academia through a meaningful dialogue. While social entrepreneurship identifies opportunities by focusing on neglected positive externalities which result from market and state failures (Santos, 2009), entrepreneurs from academia seek opportunities by looking for partners for dialogue that have something to give and something to receive from the academic environment. The knowledge producing dialogue can lead to commercial or social opportunities, or a combination of both, but as long as it remains a mutual exchange of knowledge between the academia and the external partners, it will fit under the definition of academic entrepreneurship.

3.2. Context

The context refers to the general social, economic, legal and political environment, which has a bearing on entrepreneurial activities. In the case of universities, the shift to a knowledge-based economy in which the higher education

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institutions are invited to become part of the triple helix alongside the government and the industry (Etzkowitz, 2003) and to become a mode 2 knowledge producer (Gibbons et al., 1994), all these representing external pressures towards increased academic entrepreneurship. In the United States, The Bayh-Dole act allowed academics to patent their research more easily and thus to sell their inventions to commercial companies (Grimaldi et al., 2011; Aldridge and Audretsch, 2011), while in the UK the researchers have been encouraged to initiate collaborations with private companies (Geuna, 2001), and in France the legislation has been adapted to allow academic scientist to get involved in business creation activities (Shinn and Lamy, 2006).

The emphasis falls on the nature of the action, on its direct approach and lack of mediation: the academic scientist in person goes out of the university and establishes fruitful interactions with his/her environment, as compared to the situation in which only the products of his/her labor (students, research, knowledge) get to the environment and have to be activated by others in order to produce value. As such, academic entrepreneurship is full of potentialities. For once, it can bring new ideas, products and services to the market/society and it can also bring new research avenues for the academic world, while also impacting the learning environment of the students. It represents a very fruitful combination of two worlds, which brings value to both the academic and the external environment in direct ways.

On the other hand it is also a source of potential tensions inside the academia and between the academia and the external actors, which are derived first of all on the different claims on the knowledge, which is produced. The dialogic knowledge creation brings forth issues of intellectual property rights and authorship. The two worlds have different ways of handling knowledge, the academic one is based on knowledge dissemination and use by others as a way to prosper, whereas the business world is based on tight protection of the knowledge through copyrights and trademarks. These issues are most prominent in the case of academic entrepreneurship than in others. But, as Murray (2006) has shown, academics have proven that tensions can be handled at the institutional level by boundary work and by rewriting the rules so as to accommodate the two distinct logics of academic science and commerce. She states that patents have been introduced into the academic world and thus gained a new social meaning and new sanctions were enforced in order to curtail the power of commerce. This happened because patents are both a source of income and a means of limitation of exchange practices among academics.

Academic entrepreneurship also comes with its own ideological and ethical problems. Its detractors sustain the view that it is a perverse intrusion of the market inside the 'ivory tower' of the academia where knowledge teaching and producing was done autonomously and for truth's sake in the past. And these are also voices from inside the academia, which hold that this shift has meant giving over the reins of the research to business and communities. Thus, neither academic nor commercial entrepreneurship have escaped the scrutiny of the public without them being

discovered to have some dark spots. In the case of social entrepreneurship, the context seems to be much more favorable and it receives a more generalized support.

Regarding the external context, which is outside of the decision of academic entrepreneur, an important dimension is represented by the legal environment, which limits or enlarges their entrepreneurial possibilities. As an example, in France, the academic scientist who starts a business can be involved in it just for a limited period of time and there are other constraints as well stemming from the fact that a large number of academics especially in Europe are employed in state universities and have to obey the laws concerning civil servants (Manifet, 2008).

The development of academic entrepreneurial activities is mostly dependent either on state or commercial money, making it highly sensible to the economic conditions or to how the commercial entrepreneurial activities are doing. However, by having many different sources of financing, academic entrepreneurship is, perhaps, able to be more flexible and adaptive than other types of entrepreneurship. The fact that the main goal is to produce and use knowledge allows entrepreneurial academics to shift between commercial and social practices according to the characteristics of the external environment.

But in the case of academic entrepreneurship there is another context which has great bearing on the successful implementation of the entrepreneurial intention and that is the organizational context of the higher education institution in which the potential entrepreneur works. Although there are cases of commercial entrepreneurship, which is born inside already established firms, there is also the distinct possibility of beginning the entrepreneurial practice outside the framework of an already existing organization. The same is true for social entrepreneurship. But, if in these cases it is just a possibility, in the case of academic entrepreneurship the existence of an already formed set of ideas and practices is axiomatic. The academic entrepreneur is already part of an organizational culture and she has already been socialized in respect to certain practices, which may make the entrepreneurial shift harder or easier depending on the entrepreneurial orientation of the university. For example, the university could have an in-house transfer office, a business incubator and could provide entrepreneurship courses to the academia outside business studies in order to promote the linkage between society/market and them (Păunescu, 2007a).

3.3. People and resources

Academics who want to become involved in entrepreneurial activities seem to be disadvantaged by their lack of business and community connections and by their lack of access to funds. Whereas commercial entrepreneurs have at their disposal well known avenues for obtaining financing for their ideas and social entrepreneurs work closely with the philanthropic sector, the average academic only has direct access to his/her peers and the students enrolled in the institution he/she is affiliated to.

Academic entrepreneurship is based on relations of trust, reciprocity and mutual understanding between two fields, which often seem to interact poorly. As Krucken (2003) notes, most people belonging to the industry believe that academics use a difficult language and don't understand the problems found in the real world, whereas academics see them as only profit-seeking and narrow minded people.

However, the academics also have access to the resources of their institutions and to the connections established by it and can transform that capital into financial capital or people capital, such as in employees or partners for their initiatives. The access to these institutional resources comes with certain constraints and demands, in the form of financial rewards or image promotion required by the university. Also, the academic has to maintain the close connection with the institution he/she was affiliated at the start of the initiative to remain inside the academic entrepreneurship paradigm and to continue to have access to resources. The need to remain involved in academic activities puts time constraints on the entrepreneurial ones, as the academic can't put aside his/her teaching and university research aside.

3.4. Deals

Deals involve the exchange of value. The value transactions in social entrepreneurship differ from commercial entrepreneurship in kind, consumers, timing, flexibility, and measurability (Austin et al., 2006, p. 14). Thus, we use the same dimensions in order to discuss the deals made by academic entrepreneurs. These are linkages with the external partners directly involved in the practice, with the higher education institution and with any other group of stakeholders involved such as students, parents and governmental agencies.

The kind of value promoting the link between the entrepreneur and the people with which he/she works can be based on the exchange of financial rewards or intellectual rewards such as those obtained by being involved in activities which create values, which can then be used in order to be entrepreneurial in a scientific way and further the academic career. The motivations of the academic entrepreneur are born out of the difference between the academic and the external environment which provides them with new problems and different perspectives related to their research work.

Most of the time, entrepreneurial activities can involve students, as well, and they create a dynamic learning environment. The value exchanged with students is the validation of their studies by practical assessment and also the establishment of future job opportunities through the academic networks, which are set up by entrepreneurial activities (Roşca et al., 2010). The university is interested in promoting entrepreneurship among its faculty members because this implies an increase in image capital and also economic capital, but at the same time, too many entrepreneurial activities can become a threat to the quality of educational activities and also a threat of losing valuable academic scientist to commercial and social enterprises.

The consumers of academic entrepreneurship range from powerful and wealthy commercial companies to poor and agentless communities, which can profit from the empowerment that community-based research brings. This implied heterogeneity is the main issue that sets this type of entrepreneurship apart from the other two discussed here. What brings these consumers together is their ability and willingness to productively interact with academic scientists in order to form mutually beneficial connections.

The efficiency of the dialogue intended to produce and diffuse knowledge is not easily done and the focus is not necessarily on the results, but on the existence of the intention toward entrepreneurial behavior on behalf of academics. Although the universities themselves are the directly interested in promoting this type of behavior, the requirements for society/market linkages are not widely used as promotion criteria inside university ranks which could indicate the elusiveness of the results and the current experimental stage of the field (Păunescu, 2007b).

3.5. Where does this leave academic entrepreneurs?

The answer to this question starts from Carayannis and Formica (2006) who believe that the entrepreneurial scientist has two character profiles: 1) that of homo scientificus, breaking away from convention to search for ground-breaking discoveries, and 2) that of homo economicus, with a special acumen for marketing and sales. Applied to academic entrepreneurs, this framework requires the addition of a third character profile: 3) that of homo empathicus (Rifkin, 2009). Understood in the academic context, homo empathicus refers to the attitude of producing knowledge by participating, not by being objective and detached and also of sharing the knowledge producing activities with others by engagement, interactivity and interdisciplinary. This empathic dimension is entangled with all the activities that a faculty member performs (teaching, research and entrepreneurship), and it is the development of all these characteristics that sets academic entrepreneurs apart from their peers. However, this empathic dimension is crucial in orienting the attention of the academic scientist towards environments governed by different logics such as the commercial, governmental or philanthropic and it is also the ability, which guarantees that once an interaction was initiated it will have large chances of success. The greater the ability of academics to empathize with people belonging to other islands of meaning (Zerubavel, 1991), the better their chances to become successful academic entrepreneurs.

A word of caution is in order before we proceed to analyze the framework in detail. Academic entrepreneurship depends on the existence of the homo scientificus, which is entrepreneurial in a scientific way, but this dimension on its own does not lead to a person becoming an academic entrepreneur under the definition we have adopted. Thus, homo scientificus has to combine with at least another dimension (homo economicus or empathicus) or a combination of these dimensions in order to

induce practices, which are oriented towards the expansion of knowledge in the external environment of the university.

The support for this framework comes from the literature concerned with the motivations and determinants of academic entrepreneurship. The study conducted by Morales-Gualdron et al. (2008, p. 21) in Spanish universities revealed that academic entrepreneurs who set up university spin-offs are primarily motivated by the search for scientific knowledge which the creation of a company facilitates: *"The higher accumulation of knowledge coupled with the desire to apply that knowledge and continue advancing in their development are the elements that 'pull' the actions of these entrepreneurs, and possibly determine most of the decisions they make through their academic careers."* This implies that academic entrepreneurship can be seen as a means to achieve scientific entrepreneurship, being another way to finance research and develop ideas. This view is sustained by the results presented by Shane (2004) in his book regarding the academic entrepreneurs' decision to sell equity or finance through debt their university spin-offs. This need to be in control can be linked to the way in which we defined academic entrepreneurship as a practice performed primarily by a member of the academia, which supposes that the outside influence is not the primary decision factor. Also, the link between academic entrepreneur and his/her homo scientificus side also hints at the need to maintain the university connections because the university is the primary environment in which new research results are disseminated.

On the other hand, Landry et al. (2007) discovered that focusing on user needs leads to greater implication in knowledge transfer activities in the case of natural sciences and engineering university researchers. Moreover, Olmos-Penuela et al. (2011) have extended this conclusion to humanities and social sciences academia concluding that the common variable positively related with the engagement in the different knowledge transfer activities analyzed was the focus on the social utility of the research. Also, those activities, which increase social capital such as professional mobility, prior business experience, consulting activities have been shown to contribute to the promotion of academic entrepreneurship (Krabel et al., 2009; Mosey and Wright, 2007; Goel and Grimpe, 2011).

Based on which dimension manifests more prominently, we can analyze which type of entrepreneurship the member of academia is involved in: if the homo economicus is the primary decision making actor than the activity will fit into the commercial entrepreneurial practices, whereas if the homo empathicus is the one providing the drive behind the intent, then it is a socially entrepreneurial practice. Nonetheless, what this framework reinforces is the idea that all three-character profiles coexist in the same person and that they can choose to manifest in one situation in a certain degree and in another situation in a totally different combination. These idiosyncratic manifestations are influenced by personal characteristics and existing cultural features (Tuunainen and Knuuttila, 2009).

4. Conclusions and future research

The first goal that the proposed definition accomplishes is to refocus attention on the members of the academia, which are actually involved in the entrepreneurial process, moving the discourse from management techniques to actual practices. According to Brătianu and Stanciu (2010) the management of the entrepreneurial university is concerned with the preservation and enrichment of the national and universal culture, with the training and formation of specialists and the fulfillment of the requirements of the society they belong to. As such, academic entrepreneurship is presented as a parallel view of the same phenomena also described by the concept of entrepreneurial university, a view that emphasizes inductive analyses of entrepreneurial activities rather than deductive ones. Starting from concrete examples, this definition allows the researcher to achieve the desired level of generalization through the extrapolation of common points, whereas maintaining a certain degree of flexibility of the analysis. What future research should strive is to better understand the dynamics between individual initiatives and institutional policies and to elucidate the means through which these two forces are allowed to combine instead of cancelling each other.

Moreover, the same as Austin et al. (2006), we can conclude that there is no totally commercial entrepreneurship and no totally social entrepreneurship even in the academia, and that all entrepreneurial practices have to combine elements of both. The definition that we have presented shifts the focus from results to means, by clearly stating that academic entrepreneurship implies some kind of knowledge transfer between the university and the society. The knowledge getting produced in these interactions should be seen as the primary concern of academic entrepreneurship research as we need to uncover the mechanisms which allow this knowledge to be produced in the first place and then to be used, so that it creates value both inside and outside the university. Consequently, what needs to be investigated further is the change in cultural features which allows contemporary academic entrepreneurs to become more socially aware and engaged, meaning more *homo empathicus* and if these are the same features which allowed them in the past to become more *homo economicus*. By turning their look inside-out through entrepreneurial means, the academics are bound to establish a new paradigm for seeing education as a public good, because today, with the private benefits brought for the individual and the increased number of those who have access to it, it is difficult to regard education as a public good (Stejar, 2011).

Academic entrepreneurship is an unruly subject, which defies the boundaries between concepts and requires a treatment not based on any previous knowledge. It is an uncanny practice that is best viewed in its own merits and not as a part of either commercial or social entrepreneurship. It is meant to create an uncomfortable sensation in the researcher that seeks to explore the nature of these activities as they span across different fields of knowledge and produce their specific results. Stretching

the conceptual limits, we could say that academic entrepreneurship resembles the uncanny as described by Freud “*a feeling of something not simply weird or mysterious but, more specifically, as something strangely familiar.*” (Royle, 2003, p. vii) The familiarity is provided by the societal context, which seems to be fraught with discussions regarding academic entrepreneurship and the entrepreneurial universities and by the fact that we have already been acquainted with commercial and social entrepreneurship. However, this does not represent a clear case of either and it can be thus called uncanny.

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