Applying Critical Discourse Analysis to Explore the Italian Universities Orientation towards the Entrepreneurial Model

Abstract. This paper is aimed to discuss the actual commitment of Italian universities towards their third mission of economic and social development, providing an innovative perspective of analysis. We apply Critical Discourse Analysis to assess how Italian universities engagement with the stakeholder community is interpreted, implemented, communicated and disseminated within and outside the academic organizations. One of the most significant points in the evolution of organizational studies is the growing interest in language, whose construction is a key, alternative to traditional, to understand the organizational and inter-organizational phenomena. Critical Discourse Analysis is based on the assumption that language is not neutral with respect to organizational and inter-organizational dynamics, but it contributes to their production. In management studies, discourse analysis is a new heuristic strategy for those who are interested in the processes of social construction of organizational phenomena that have as their central element the text.

Critical Discourse Analysis tries to unite, and determines the relationship between, three levels of analysis: (a) the actual text; (b) the discursive practices; and (c) the larger social context that bears upon the text and the discursive practices.

We made our survey focusing on the texts published by each one of the 84 Italian universities on their websites. The first level of analysis was a lexical-statistical study of the texts with the main aim of observing the adopted terminology (vocabulary). At a second level, and on the basis of the previously performed analysis, we employed multidimensional statistic techniques, in order to study the discursive practices. Discourse study starts from concordances analysis, that deals with the identification of some local contexts containing word-types of specific interest. The final result is the reconstruction of the major sense behavior models. At a macro level, an exploratory study of the social context has been realized in order to link the texts and the discursive practices to the background conditions.

Such analysis partially contributed to fill a gap in the literature, that is the study of the entrepreneurial university model from the discursive profile in the specific Italian context.

1. Introduction

Over the last decades a third mission has been recognised to universities: contributing directly to social and economic development through the capitalisation of their knowledge. Such evolution process, from the traditional teaching and research university to the "entrepreneurial university" (Etzkowitz, 1983), has been analysed by a relevant body of literature and several empirical evidences have been provided to discuss the role of knowledge-producing institutions in triggering innovation and sustaining local development all over the world. This paper aims to provide an innovative perspective of analysis, applying Critical Discourse Analysis (CDA) as a framework to assess the actual commitment of Italian universities towards their third mission.

As previous analyses illustrate (Piccaluga, 2001; Cesaroni et al., 2005; Piccaluga and Balderi, 2006; NETVAL, 2008, 2009, 2010; Napolitano and Riviezzo, 2008; Riviezzo and Napolitano, 2010; CNVSU, 2011), only in recent years Italian universities have been moving towards the valorisation of their scientific knowledge and the promotion of an entrepreneurial culture. From being quite varied and in some cases openly hostile, the achieved results provide now support for the existence of a greater acceptance of and a more positive attitude towards entrepreneurship across science departments. It is evident, in fact, that over the last years Italian universities increased their ability to attract external funding (CNVSU, 2011); most of them created a technology transfer office (Riviezzo and Napolitano, 2010); the number of spin-offs greatly increased (NETVAL, 2010); about one-sixth of the professors took part in technology transfer processes and 6% obtained a patent (CNVSU, 2011).

Empirical evidence is typically focused on the organizational and educational implications of the entrepreneurial model. There is no example of studies aiming at understanding "how much" this new mission is part of the strategic posture and identity of the university. In order to try to give an answer to this question we apply CDA, looking at the discursive practice inside Italian universities as a way to understand the organization commitment towards the third mission. As noted by Mumby and Clair (1997), in fact, «organizations exist only in so far as their members create them through discourse. This is not to claim that organizations are 'nothing but' discourse, but rather that discourse is the principal means by which organization members create a coherent social reality that frames their sense of who they are».

One of the most significant points in the evolution of management studies is the growing interest in language, whose construction is a key, alternative to traditional, to understand the organizational and inter-organizational phenomena (Phillips et al., 2008). In the last decades much attention has been paid to the relationship between language and social reality and a crucial role has been played by CDA, that emerged as an established field of research encompassing a variety of approaches towards the social analysis of discourse (Fairclough and Wodak, 1997). Since discourse is a "social practice", it both influences and is influenced by social structure. In this perspective, CDA sees discourse as a link between a micro level, that is the cognitive processes underlying everyday language use, and a macro level, made up of all the dynamics characterizing social structures (Fairclough, 1992). What emerges clearly is the dialectical nature of such relationship: discourse is socially conditioned but at the same time it forms situations, social identities and systems of knowledge and belief, thus contributing to transform social reality. Based on these assumptions, CDA scholars do not narrow their focus to the study of text, rather extend their investigation to the social context that exercises constraints on discourse (Van Dijk, 1998). In doing so, they use discourse as an intermediate element between «a collection of texts and the social practices through which they were produced, distributed, and interpreted» (Phillips et al., 2008).

CDA has been applied to a wide range of studies, mostly concerned with social problems and political issues (such as gender inequality, immigration, racism, political discourses, media discourses). As emphasized earlier, in recent years CDA has been increasingly applied also in the fields of organization and management research and a remarkable contribution has been offered by Phillips, Sewell and Jaynes (2008), that provided support for the existence of a relationship between

language and the formulation and implementation of strategy. In management studies, therefore, discourse analysis is a new heuristic approach for those who are interested in the processes of social construction of organizational phenomena that have as their central element the text.

We apply CDA in order to understand the role of the third mission within the strategy of Italian universities, focusing on the texts produced and published on their web-sites, on the discursive practices they adopt and on the macro social context. Such analysis is aimed to partially contribute to fill a gap in the literature, that is the study of the entrepreneurial university model from the discursive profile in the Italian context.

In the next section a brief review of the literature is presented on the entrepreneurial university, both from the theoretical and the discursive perspective. Then, the methodology we used is discussed and the results of the three levels of analysis are illustrated. Conclusions and implications of the study are finally explained.

2. The entrepreneurial university model: a theoretical and discursive analysis

The evolutionary process of the university towards the entrepreneurial model involves many changes, both in terms of organization and culture and in terms of employed discursive practices and rhetoric. Literature has traditionally emphasized the first aspect, highlighting the organizational innovations and discussing the antecedents and the consequences of such process. Less attention has been given to the implications in terms of texts and discourse practices adopted in order to communicate and implement the new strategy. It seems convenient to deepen the state of the art in the literature with reference to the two different perspectives.

The entrepreneurial university: a theoretical profile

A relevant body of literature has grown over time on the concept of the entrepreneurial university. On the one hand, the interrelated factors leading to the intensification of university-industry collaboration have been clearly discussed. For instance, the growing scientific and technical content of all types of industrial production and the need for new sources of academic research funding created by budgetary stringency beside the prominence of government policies aimed at raising the economic returns of public funded research have been identified as key issues originating the phenomenon (Geuna, 1998). On the other hand, literature describes the organizational innovations set up by universities to accomplish their third mission. It is manifest the heterogeneity from one case to another, as «there is no typical way to be or become an entrepreneurial university» (Martinelli et al., 2008). Etzkowitz (2004) describes the paths of the evolution towards the entrepreneurial university model, starting with the institution of an industrial liaison office, followed by the setting up of a technology transfer office, and, finally, the creation of an incubator. In line with the organizational renewal, many authors highlight the possible parallel evolution, over time, in the nature of relationships between university and industry, from single transactions to longer-term relationships (Bercovitz and Feldman, 2006). Such progression is however influenced by the larger framework in which the relationships take place: the external conditions (the characteristics of the local system of innovation) and the internal conditions (the university environment) both affect the efficiency and thus the evolution of knowledge transfer mechanisms (Etzkowitz, 1998; Powers and McDougall, 2005; Bercovitz and Feldman, 2006).

Manifest change in legal, economic and policy conditions can accelerate the translation of academic research into commercial products. A well-known example is the American Bayh-Dole Act of 1980 (Feldman et al,. 2001; Powers and McDougall, 2005; Lerner, 2005; Bercovitz and Feldman, 2006). Similarly, the characteristics of the local firms, such as dimensions, organizational structure, R&D strategy and investments, play a relevant role in determining the relationship with the university as a strategic partner (Powers and McDougall, 2005; Cesaroni et al., 2005; Bercovitz and Feldman, 2006). In the same way, the public and private funding of R&D activities and the

presence of formal and informal investors, may affect the entrepreneurial activity inside universities (McMillan et al., 1987; Roberts and Malone, 1996).

Not all research universities have been able to generate local economic effects (Feller, 1990). Factors affecting the university environment determine the rate and type of university knowledge production and influence the rate of technological change. In this regard, Gras et al. (2008) propose as determinants of technology transfer mechanisms five bundles of internal resources and capabilities: technology transfer policies and strategies; human capital; stock of technology; resources and capabilities of technology transfer offices; support measures.

To summarize, entrepreneurial university needs to be more widely engaged with the stakeholder community as a part of an organisational learning strategy, and the creation of incubators, technology transfer offices, patent protection arrangements and so on are not as important as opening up and integrating into the university activity-based relationships with the relevant stakeholders in both a formal and informal way. In this sense, it has been argued that entrepreneurial universities «seek to become 'stand-up' universities» (Clark, 1998) and they take «a pro-active stance in putting knowledge to use» (Etzkowitz, 2004).

It must be noted, however, that there are also many authors critiquing the inclusion of this third mission of economic and social development into the university (for example: Slaughter and Leslie, 1997; Hayes and Wynyard, 2002; Barnett, 2003; Bok, 2003). The oppositions to the "McUniversity" (Hayes and Wynyard, 2002) and the "academic capitalism" (Slaughter and Leslie, 1997) are based on the assumption that it conflicts with research mission for the researcher to be involved in translating the scientific results into business opportunities. Conflicts emerge, in fact, between the economic interest in the emerging business and the research idea as a mission in itself. But, as noted by Etkowitz (1998), it can be expected that this new function of economic and social development will be definitely integrated into the university, «with incubators adjoining classrooms and laboratory facilities».

The entrepreneurial university: a discursive profile

As stated by Etzkowitz et al. (2004), «it appears that the 'entrepreneurial university' is a global phenomenon with an isomorphic development path, despite different starting points and modes of expression». Literature has identified clear entrepreneurial university patterns around the world. Clark (1998, 2004), for example, gives examples of entrepreneurial universities from Africa, Latin America, Australia, USA and Europe. Similarly, Etzkowitz (2004) draws his theoretical framework of the entrepreneurial model of the university giving examples from USA, Sweden, Brazil, Italy, Portugal and Denmark. Other European studies (i.g. Klosfer and Jones Evans, 2000; Ranga, et al., 2003; Jacob et al., 2003; Schulte; 2004; Guerrero Cano and Urbano Pulido, 2007; Riviezzo and Napolitano, 2010) provide empirical evidence of the phenomenon from Belgium, Finland, Germany, Ireland, Netherlands, Scotland, Sweden, United Kingdom, Spain and Italy.

All these well-known examples of entrepreneurial universities make it clear that entrepreneurship is deployed by academic leaders as a carrier of key values that they want their external stakeholders to associate with the organization, and their internal stakeholder to both believe in and implement. It follows that new social and discursive practices are imported into the academic domain, as a consequence of the intensified exchange process between universities and their commercial environment. As noted in a previous study (Mautner, 2005a), universities are «deliberately appropriating the language of commercial sector and are giving terms such as 'entrepreneurial' a salient position in their leadership rhetoric, encouraging the modeling of organizational practices, identities and relationships on commercial templates». The transformation process leading to the entrepreneurial university seems to be, therefore, complemented by new discursive practices inside universities, mostly imported from commercial environment, while the norm was the adoption of non-commercial discourse.

A search on the World Wide Web revealed documents confirming such position. In the website of each of the universities already known in literature as the most entrepreneurial a relevant position

has been given to words such as "entrepreneurial" or "enterprising" and, more generally, to the third mission. For example, on the website of the MIT it is possible to read that «the relationship between universities and industry is a key resource of knowledge, above all, in the belief that new knowledge and new discoveries take place involving all that society, and that the movement is never one-way». In this regard, universities have to leave their isolation and relate in an interactive and constructive way with external stakeholders, including businesses. Similarly, in the strategic plan of the University of Oxford a priority is «ensuring that the fruits of the University's research activities are exploited and disseminated for the benefit of society and the economy». The «enhancement of the entrepreneurial spirit, that has helped spawn more than 3,000 companies in high technology and other fields» remains a strategic goal for Stanford University.

Even more explicit are the references to the entrepreneurial activities in other cases. For instance, the vision of the Monash University is «to be a university of progress and optimism», promoting «entrepreneurship and the effective co-operation between university and business». In the profile of the university of Twente it is possibile to read «the enterprising university encourages students to develop an entrepreneurial spirit». Jönköping University has «a distinct focus on entrepreneurship, spanning internationally leading research, relevant education and a range of other inspirational activities». Another well-known "champion" in entrepreneurial activities is the National University of Singapore, that «aspires to be a bold and dynamic community, with a 'no walls' culture and a spirit of enterprise which strives for positive influence and impact through education, research and service». Among the strategic aims of the university there is «to inject a spirit of enterprise into education and research». The strategic plan of the university of Nizhni Novgorod in Russia is titled «towards the entrepreneurial university», with an explicit emphasis given to the new model.

Many interesting examples of discourse practices that explicitly refer to entrepreneurship come from UK. On the University of Warwick website, for example, it is possible to read: «an entrepreneurial attitude is an integral part of the University's make-up». The University of Hertfordshire is «at the vanguard of a new type of emerging university – those that are business-like and business-facing»; it is « an ambitious and entrepreneurial university with an international vision». Another relevant example is the University of Plymouth. With a mission «to be *the* enterprise university», Plymouth is defined «an ambitious, world-class University. By placing enterprise at the heart of everything we do, we will develop an innovative and creative culture that empowers people». And again «our enterprising approach will further develop our reputation as a world-leading University and our enterprise culture will deliver sustained innovation and international impact». One more example is Brunel University, whose mission is «to pursue research and enterprise for the benefit of individual and society».

In sum, there are many significant examples all over the world of universities that deliberately promote and make use of discursive practices with heavy load of commercial connotations, thus giving terms like "entrepreneurial" or "enterprising" a key role in their rhetoric. This is part of the organization strategy and it aims to encourage the modeling of the organization practices, identities and relationships on the new model. Therefore, it seems to be confirmed that the evolutionary process of the university towards the entrepreneurial model involves significant changes also in terms of employed discursive practices and this seems to be an interesting, and until now less explored, aspect to analyse.

3. Objectives and Methodology

This paper is aimed to discuss the actual commitment of Italian universities towards their third mission of economic and social development by applying CDA analytical framework. Most of the existing investigations, in measuring this phenomenon, adopted as indicators the academic entrepreneurship activities (i.e. spin-offs, patents, contracts and so on) or the diversification of the funding base. A new perspective, that seems to have been overlooked in the past, is the analysis of

the discursive practices as a way to assess the organization change towards the new model. Some interesting studies have been found exploring the "marketization" (Fairclough, 1993) of the discourse in higher education institutions as a consequence of the intensified exchange processes between universities and their commercial environment (for example: Fairclough, 1993; Trowler, 2001; Mautner, 2005a). Typically these contributions adopt a critical perspective and make use of some specific samples of discursive repertoire employed by single institutions to discuss how this rhetoric is influenced by the market. Our paper aims to take into consideration the discursive practices of all the Italian institutions, linking such analysis to the specific social context.

The data we used for our analysis have been collected from the World Wide Web. As noted in literature (Mautner, 2005b), despite the wide-spread social relevance of the Web, CDA is still directing relatively little analytic attention to it. Because it is so dynamic and flexible, it reacts with major speed and precision to social change and, furthermore, it is more accessible than print media. But the Web presents the critical discourse analyst not only with opportunities but also challenges, due to its characteristics (i.e. size, dynamic and ephemeral quality, multimodality and so on; for a review on such issues, see Mautner, 2005b). The main risk is that the documents taken from the Web may be too heterogeneous and difficult to compare.

Our first step was, therefore, the construction of the reference corpus, that is «a collection of texts selected and organized in such a way as to meet specific criteria that make them functional to linguistic analysis» (Lenci et al., 2005). The corpus must meet at least two criteria: first, it must have a statistically significant size; second, the texts that make up the corpus must be consistent and comparable. To meet these requirements, but at the same time to avoid a dispersion of information to the detriment of the quality of the analysis, we decided to define strictly the type of texts to be considered. We focused on the texts through which the strategy is set and communicated within and outside the institution. In particular we decided to include in the corpus the following texts: description of university profile and history; shared values and vision; statute; mission statement; social report; research report; Rector's welcome; strategic plan.

The next step consisted in the cutting, pasting and editing of the texts gleaned from the web site of each one of the Italian universities. This turned out to be a rather time-consuming process. Surprisingly, in fact, we found that universities web sites are extremely heterogeneous and not all the documents resulted available for all the universities. In addition, some documents were accessible only via Intranet and not for external visitors. The survey covered all Italian universities, with the exception of the 11 virtual universities (offering virtual classes taught via web), that are basically "teaching universities". Therefore, the survey involved 84 universities.

Once such large corpus has been compiled, a statistical-lexical analysis of the texts was conducted through linguistic and statistical processing. From a linguistic point of view, we tried to go into the structures of language and words used; from a statistical point of view, we tried to process linguistic data in order to bring to light relevant and not immediately detectable phenomena. These stages of analysis required the involvement of a researcher with specific linguistic skills and the use of a software for automatic analysis of textual data. As noted in the literature (for example, Van Dijk, 2000), such corpus linguistic methods, based on software, present text in a way that allows the analyst to identify and evaluate the collocational behaviour of many more occurrences of key terms than would otherwise be possible.

A first phase of the analysis consisted in the pre-treatment of the corpus, with the aim of standardizing and lexicalizing the texts in order to obtain the whole vocabulary adopted. Such phase allowed us to go on with a lexical analysis of the vocabulary, considering some important lexical-metric measures characterizing it both in statistical and linguistic terms. Then the extraction of lexical information from the corpus was aimed to identify and assess the frequency and the distribution of single word-types. Finally, the analysis of the structures of language and words used within the texts was completed with a lexical comparison with a list of commercial words, in order to characterize the vocabulary in terms of its resemblance with the one adopted in the market.

The following steps of the analysis were focused on the discourse as the area where text takes on a sense. In this phase, the aim was to study the general context of the different co-occurrences of words, reconstructing the major sense behavior models. Discourse study started from concordances analysis, that deals with the identification of some local contexts containing word-types of specific interest. Such analysis was qualitative and was based on fragments of texts extracted from the corpus, containing specific word-types. The aim was the analysis of the rhetoric and the comment of the discursive practice.

Coherently with the CDA methodology, the text and discourse analysis was preceded by the analysis of the social context. Moving from the theoretical background discussed before, the main environmental and internal conditions that may play a role in influencing the organizational transformation of universities towards the entrepreneurial model have been identified and commented. In particular, the economic, politic and legal framework has been analysed. Furthermore, the kind of rhetoric prevailing in the society about the entrepreneurial university topic has been assessed through the discursive analysis of some articles gleaned from a search in the database of the five most popular Italian newspapers.

In the next section the results of the analysis at the macro, meso and micro level are discussed.

4. Results

The results of our investigation are presented separately with reference to the three levels of analysis – that is social context (macro level), text (micro level) and discourse (meso level).

Social Context Analysis

As noted by Etzkowitz (2002), the transition from the research university to the entrepreneurial university originated in US during the late 19th century mostly as a consequence of the lack of a formal research funding system, that stimulated individual and collective initiatives to obtain resources to support original investigation. The US entrepreneurial university emerged "bottom up" in contrast to Europe, where the introduction of academic entrepreneurship is a more recent "top down" phenomenon (Etzkowitz, 2002). There is in fact a broad consensus concerning the nature of the pressures on knowledge producing institutions throughout Europe to become more entrepreneurial or enterprising: there are pressures to play a role in the local development particularly through the commercialisation of research (European Commission, 2005). There is also pressure to prepare students for a life characterized by greater uncertainty and complexity, encouraging them to consider a career in entrepreneurship (European Commission, 2002, 2006). The Lisbon process in 2000 helped strengthen a growing recognition within higher-education institutions in Europe that they can play a central part in promoting entrepreneurial mindsets and actual entrepreneurship. As a result of such policy commitment, the diffusion of entrepreneurship education and entrepreneurial activities inside universities among the EU member States is growing fast over the last years (European Commission, 2008a).

Within such scenario, the situation in Italy seems to be more difficult. Only in recent years, mostly as a consequence of the above mentioned political pressure, Italian universities have been moving towards the valorisation and exploitation of their scientific knowledge and the promotion of entrepreneurial culture. In this regard, as pointed out earlier, it must be considered that the direction and the intensity of university-industry relationships are determined, on one side, by environment conditions (policy, legal, economic etc.) and, on the other side, by university commitment towards knowledge transfer. The interaction of many external and internal conditions negatively influenced the diffusion of entrepreneurial activities inside the Italian universities.

It is worth to consider, for example, that the share of GDP invested in R&D is traditionally very low in Italy compared to other countries: based on the last available data (European Commission, 2009), it is 1.10%, lower than the EU-27 average of 1.84% and far from the main European and

non-European competitors. The gap with other countries is strictly related to the lower contribution from the Italian business enterprise sector to the financing of R&D: the share of R&D expenditure funded by the business sector in Italy is 43%, lower than EU-27 average of 54.5% (European Commission, 2009). This is mainly due to the structure of the Italian industrial sector, formed to a large extent by micro enterprises. The relative importance of companies employing less than 10 persons in Italy exceeds by far the EU average: 94,6% of the total, with an EU-27 average of 91,8%; 4,8% of the Italian firms are small, employing more than 10 but less than 50 persons, with an EU-27 average of 6,9%; 0,5% are medium, employing between 50 and 250 persons, with an EU-27 average of 1,1%; and just 0,1% are large, employing more than 250 persons, with an EU-27 average of 0,2% (European Commission, 2008b). Furthermore, the role of formal and informal investors (venture capital and business angels) is almost trivial in supporting spin-off activity (Sorrentino, 2006): the total investment in venture capital in Italy for seed and start-up activities is estimated in 0.04 per thousand GDP, with an EU-27 average of 0.21 (European Commission, 2009).

Beside the economic characteristics of the Italian system, also the national policy environment and legal framework do not seem to stimulate the transformation process of the universities towards the entrepreneurial model. Indeed, even if national policies frequently highlight the key-role of universities in the fields of research and higher education, there is no explicit reference to the third mission as part of their identity. Things are completely different in other national contexts. In Denmark, for example, in recent years third mission has been planned and regulated by state law. In Great Britain third mission of universities has been encouraged through several knowledge transfer initiatives such as the Higher Education Innovation Fund, the Higher Education Reachout to Business and the Community Initiative, the University Challenge, the Science Enterprise Challenge. In the United States there are several acts, such as the above mentioned Bayh-Dole-Act, that spur universities not only to knowledge transfer but also – through exploitation and protection of intellectual property – to undertake entrepreneurial activities by their own..

Compared to the mentioned countries, Italy seems to be quite late from several points of view. Considering, for example, the discipline of intellectual property rights, inventions realized by professors and researchers cannot be patented by universities, due to the so-called "professor's privilege" that was introduced in Italian legislation in 2001. On the contrary, in most of occidental countries property rights deriving from inventions realized by professors and researchers working for public universities are attributed to such entities, so as they can exploit economically research results and access to funding sources. Therefore, the "professor's privilege" shifts the balance in favor of professors and weakens the position of universities.

More generally, third mission issue is part of a wider process of institutional change that has started in recent years in Italy. Until 1989, public universities were not autonomous: their statutes were trapped by strict national rules, their teaching staffs as well as their education systems were identified according to ministerial provisions, and funding were allocated to specific typology of expenditures. Over the last decade, things have radically changed. One after another, have been recognized: statute autonomy, within a few constraints; financial autonomy, with the possibility to freely allocate resources among different typology of expenditures, including those for staff; teaching autonomy, with the only duty to define study plans within the framework of "course classes" determined at a national level.

Thanks to the recognized autonomy, universities had the opportunity to build their own identity, by identifying their specific vocations and deciding the role to give to the third mission in their strategy. The exercise of such autonomy would have probably required a greater ability of universities to identify innovative organizational structures, which were more open to dialogue with external stakeholders. This process could be further facilitated at a policy level by adopting an ex post evaluation system aimed at measuring universities' effectiveness and efficiency not only in terms of education and research but also with reference to the third mission. On the contrary, as noted by Varaldo (2010), «state funding are allocated thinking about 'teaching universities', while

'research universities' are often neglected, even though they are the only ones that can be attractive to private capital».

Some progress has been made with the last and controversial university reform approved in 2010, which introduced a National Agency for the Evaluation of University and Research System, aimed to act on the criteria for universities' public funding. Therefore, along with the typical parameters related to education activities and research quality, others were introduced in order to analyze university ability to create links with the territory, thus playing a "social" role. As stated by its regulations, among other things the Agency must analyze «process quality, results and products of management, education and research activities, including technology transfer» and especially «the acquisition of external funding, the stipulation of collaboration agreements and the exchange of researchers with public and private subjects». Even though there is no explicit reference to the third mission, what emerges is the intention of "opening" the university to the society. With this aim another innovation was introduced by the new law: the presence in the boards of universities of "external" members coming from civil society and enterprises, that are supposed to represent their expectations and interests, as already done in other European countries. Nevertheless, many observers expressed some concerns about the reform's actual ability to drive universities towards entrepreneurial activities. Furthermore, before the act's passage a strong contrast emerged among political parties, thus meaning that there is still not a shared vision towards this issue.

However, in order to meet the recent legislative changes Italian universities are currently elaborating new statutes that, hopefully, will also address the aspects related to the third mission. Indeed, up to now the potential of autonomy has been only partially exploited within universities, with "virtuous" or "vicious" actions in relation to the characteristics of each institution. Autonomy required, in fact, the spread of a management culture – even before than a practice – that did not exist earlier. It is essential for universities to define a strategy that explicitly recognizes the third mission, whereas entrepreneurial activities can often be ascribed to single individuals or specific organizational units. As argued by Varaldo (2010), «within Italian university system the third mission hard puts to making way and is penalized by ideological traditions and governance structures that sacrifice innovative and entrepreneurial spirit of more open and dynamic environments».

At a level of society as a whole, in Italy debate on the academic issue is very vibrant, even if it is dominated by controversy over professors' recruitment procedures and growing narrowness of state funding, rather than on the new mission of university. A search in the data-bases of the five national most popular newspapers, realized using "entrepreneurial university" as a keyword, revealed the presence of a limited number of articles dealing with this issue. The discourse is mostly concentrated on the delay of our country compared to others and the adopted rhetoric refers to third mission as a possibility that is not being exploited, with negative consequences for the whole national system. Very meaningful, for example, is the title of an article dating back to 2006: «If universities do not know how to listen to the needs of enterprises», in which it is said, inter alia, that: «It happens always more often that companies or associations have negative experiences in dealing with the universities: in our country, in fact, in this field often or almost always there are no integrated systems and each department asks autonomously funding and collaborations». And also: «The biggest challenge that a country like Italy has to face is to ensure that even the smallest business can benefit from improved relations with the universities. It is necessary that universities build a clear strategy of external relations, in order to share resources and interests. By now the success of a university system is measured by the number of research projects concluded with the companies. In other countries this creates a forest of entrepreneurship, that does not exist here». Concerning the difficulties of a dialogue between universities and enterprises, an article dating back to 2003 stated: «Universities have never been very open to the entrepreneurial world, but it is also true that many enterprises are not clear and do not know exactly what they want and what they need». Dealing with the necessity of a turning point towards entrepreneurship as a chance for universities to face the narrowness of government funding, an article dating back to 2010

highlights: «If the severe crisis that interested the entire world economy is not useful to introduce discontinuity elements in the way universities are conceived, lived and organized, as it is happening elsewhere, in Italy its future is fatally compromised».

Most of the examined articles draw on successful experiences. For example, an article dating back to 2008 comments on the initiative of some universities that created mixed work groups including professors and representatives of society (such entrepreneurs, trade unionists, local authorities, NGO) in order to adapt as much as possible the education offer to the external requirements, quoting a Rector's words: «the involvement of social partners within university is getting the first results. It is transferring an entrepreneurial culture within students' curriculum, increasing opportunities for training and internships. The intrusion of enterprises within university is often criticized, but our aim is to train future workers and universities cannot be ivory towers».

Finally it must be pointed out that not all the identified articles consider in a positive way the issue of entrepreneurial university. For example, articles focused on the protests that characterized the recent reform also highlight negative opinions and positions towards the third mission. An article dating back to 2010 states: «students are worried about the reform due to the risk of an excessive 'managerialization' of universities». Almost simultaneously, however, we read in another article of those days: «the industrials association considers the university reform under discussion as 'disappointing' and not able to ensure a 'structural' relationship with the enterprises», thus evidencing how society's opinions towards this issue differ from each other.

Based on these few examples it emerges that, even if university third mission is not a central theme within academic debate, considerable political and social pressure and expectations exist towards university, that is increasingly required to exercise an active role in the local development dynamics. Within this scenario it seems particularly interesting to investigate how universities deal with this issue and how they communicate it to their internal and external stakeholders. To this aim, we carried out a lexical-metric and qualitative analysis of documents through which organization's strategy and vocation are both defined and communicated.

Text analysis

At the micro level, our analysis was focused on the text collected from 84 Italian Universities' official websites. As pointed out earlier, specific websites' partitions have been selected with the twofold objective to not scatter too much the analysis, thus producing negative implications from a qualitative point of view, as well as to concentrate on the most relevant documents, through which the strategy is defined, implemented and communicated. A statistical-lexical analysis, based on lexical-metric measures, allowed us to study the vocabulary and characterize it both in statistical and linguistic terms. Some of the adopted lexical-metric measures are: the lengths (in words) of corpus (N), defined as the total number of word-token it is made up of (in our case 1,609,788); the size of corpus vocabulary (V) intended as the total number of different word-types (74,126 in our corpus); the lexical richness index (V/N) (0.046 in our corpus). It emerges clearly that corpus has a high dimension, significant on a statistical basis, and the texts it is made up of are highly comparable. Indeed, the value of lexical richness index is close to 0, thus denoting a low lexical richness, that is a large group of word-types frequently repeating within the corpus; thereby, a high homogeneity of texts was also found. The two requirements of corpus size and texts comparability were met, therefore it was possible to go on with the linguistic analysis.

Next step was to identify the frequency and the distribution within the collected documents of single word-types, in order to verify the use of some words or lemmas clearly related to university's third mission, that is how recurrent they are. More specifically, we calculated the TF-IDF (Term Frequency Inverse Document Frequency) index, a kind of "weight" given to each word-type based on its frequency and distribution among the collected texts. Thus, it was possible to identify the most significant document forms, namely the ones that characterize them more and that are the most relevant in statistical terms.

The TF-IDF index was calculated on the entire corpus vocabulary. Once it was calculated, the vocabulary was sorted by decreasing TF-IDF values and three value ranges representing as many frequency bands (high, medium, low) were identified. Within the overall list, therefore, we selected word-types of interest, that are those ones directly related to university entrepreneurial activities. In particular, we focused our attention on the following words/lemmas: third parties; enterprise creation; entrepreneurial culture; entrepreneur; entrepreneurial; enterprise; market; labor market; spin-off; third mission; technology transfer; entrepreneurial university; research exploitation.

Such analysis pointed out that the weight assigned to the word-types considered as the most relevant for the purpose of this study is extremely limited. In fact, all of them fall into the low frequency band, with the exception of "research exploitation" word-type, which is collocated in the medium frequency band. For example, the word-type with the highest index (the word "Department") has a TF-IDF value of 2.4. All the word-types quoted above have values below 0.5 and surprisingly some word-types, like "third mission" or "entrepreneurial university", have a value close to 0. Therefore, it is possible to affirm that to these lemmas is not given any weight within the corpus, at least in statistical terms.

We then tried to figure out if this condition is generalizable to the entire corpus or it is specific to some types of documents. To this aim an analysis of specificities was performed by examining the frequency and the distribution of the most interesting word-types within the single documents collected for each university (Table 1). Such analysis allowed us to identify any terminological differences in the same documental collection and to highlight whether and how much a word is typical or speficic of a sub-text.

Table 1 – Total occurrences of selected word-types for single documents

Lemma	Total Occurrences	Band	Profile	Values	Statute	Mission	Social report	Research report	Rector's welcome	Strategic plan
Research exploitation	259	Medium	7	27	61	24	57	67	1	17
Technology transfer	217	Low	4	0	37	23	38	110	1	4
Enterprise	133	Low	9	3	10	25	26	49	5	6
Market	91	Low	7	3	10	4	22	40	2	3
Spin-off	70	Low	2	0	11	0	9	47	1	0
Labor market	66	Low	7	0	11	4	15	16	5	8
Entrepreneurial	45	Low	3	0	8	4	8	19	1	2
Third mission	4	Low	0	0	0	1	1	1	0	1
Third parties	4	Low	1	0	0	0	0	3	0	0

The lemma "research exploitation", "enterprise", "market" appear with a different occurrences distribution in all eight sections. The other lemma appear only in some sections but not in others. For example, "technology transfer" appears frequently in the section dedicated to the research report, but is almost totally absent in the strategic plan or in the profile of the University and never appears among the shared values. The word-type "third mission", with a total occurrence of 4, appears only once in the mission section and once in the strategic plan, whereas it would have been natural to find a much larger number of word-token in these sections. Because of its low overall incidence it was not even possible to conduct this kind of analysis on the word-type "entrepreneurial university".

Based on such results, we can say that the lemma related to the innovative mission of university, if they are present, are used in quite institutional sections (first of all, statute and research report), which are very often elaborated according to precise regulations. Their presence is instead less effective in the documents that have a greater strategic value (such as mission statement and the strategic plan). It would therefore emerge a tendency to answer to external pressures and satisfy institutional stakeholders' expectations rather than a concrete orientation of the organizations towards the implementation of the third mission.

The analysis of the vocabulary used in the corpus was finally completed with a lexical comparison, in order to verify if the language adopted by Italian universities is changing and if it is getting closer to market language. For comparison a list of words taken from some glossaries available on-line was considered; in particular, words were extracted from a marketing glossary, from an economics glossary and from a finance glossary. Words were then unified in one list, after the elimination of any duplicate (thus obtaining a total of 2,459 words). By comparing this list with the one composed by corpus word-types taken from the vocabulary, taking into account the calculation of TF-IFD and the categories semantically relevant (made up of 6,470 words), it emerged that the two lists have in common only 131 words. These results confirm that corpus language is quite far from the languages commonly adopted in market interactions.

Although far from an exhaustive comparison, the analysis seems to point out that language "marketization" (Fairclough, 1993) is not a fulfilled and generalizable phenomenon in Italian universities, unlike other contexts. The language of Italian universities seems rather to remain tied to traditional missions and to non-commercial rhetoric.

Discourse Analysis

At a meso level, the analysis was focused on discourse as the area where text takes on a sense, being affected by the characteristics of social, cultural and politic environment. Discourse study starts from concordances analysis, that deals with the identification of some local contexts containing word-types of specific interest. The term local context refers to a specific set of words adjacent to a predetermined term that serves as a hub. By analyzing the contexts in which the words or lemma identified as the most interesting are used, independently from their frequency, it seems clear that the third mission of the contribution to the local socio-economic development through the exploitation of research results is perceived as something positive, something to aspire to if you haven't got it and to hold on to if you have it. Furthermore it emerges that university is cast in a "serving" role, meeting and responding to needs, rather than actively shaping them.

For example, in the profile of University LIUC of Castellanza it is possible to read: «the changes taking place in the system of Italian companies encourage a closer involvement of our university in entrepreneurial training, development of a corporate culture, production of research on the major themes of Italian economic development, in collaboration with local stakeholders, called to respond to the new perspectives that are opening». Thus, in his speech the Rector maintains: «we want to realize a new university model, that we have called entrepreneurial university ». The entrepreneurial model is presented as an answer to specific demands of society. Likewise, in the strategic plan of University of Milano the activities of technology transfer are emphasized by using the title «toward a modern entrepreneurial university» and explaining that «the University wants to consolidate the undertaken initiatives and to extend in a structured way support and promotion activities on the themes of research results exploitation, development of competences and knowledge as long as technology transfer processes». The "modern" adjective refers to a positive connotation, that is the ability of the university to play its role in the current scenario.

Apart from these sporadic examples, as said above, we did not find a high use of the lemma entrepreneurial university, maybe to testify the desire to avoid negative connotations associated with this expression. More generally, entrepreneurial activities and results on this front seem to be emphasized, but without an explicit reference to the entrepreneurial university "label" and rarely using the one of the third mission. For example, in the University of Padova website it is possible to read: «technology transfer from the academic world to the industrial world is an activity that has greatly developed over the past ten years to get the status of university 'third mission', along with the other two traditional missions of teaching and research». The University of Foggia states: «it must be highlighted that over the past three years the University of Foggia has taken another leap forward in the pursuit of its so-called institutional third mission: protection, promotion and exploitation of research results». The University of Bari Aldo Moro: «initiatives to raise awareness of entrepreneurial culture, in order to enhance research and development of new products, processes

and services realized at the university research facilities led to the creation of three new spin-offs». The University Ca' Foscari of Venezia: «the goal of developing real relationships with the territory and the companies has been the focus of a whole series of activities aiming at support structures for technology transfer, to promote an entrepreneurial culture in research and raise awareness and educate teachers on the aspects related to intellectual property». The University of Ferrara «transfers to society the results of research activities and exploits on the market know-how and technologies internally developed». Among the University of Modena and Reggio Emilia strategic objectives appear: «the strengthening of the ability to forge relationships with enterprises and consortia; the support to patenting activities and the strengthening of the economic exploitation of the rights deriving from its patent portfolio; the spread of an entrepreneurial culture of research and support to spin-off initiatives». In the University of Insubria website is observed: «today more than ever, for universities, it is essential to address the attention to the fallout application of academic research, protecting and exploiting intellectual property (patents) and pursuing technology transfer initiatives to enterprises (spin-off)». One of the best examples of statutes in which a particular emphasis was given to the third mission comes from the University of Camerino, where we read: «university sets the foundation of its research on the public availability of results, through the communication to the scientific community and to the general public», and again: «university promotes the dissemination of research results, knowledge and information through processes of knowledge transfer to the business world. It […] promotes the development of autonomous business initiatives or participated in by students, graduates, researchers (spin-offs and start-ups)».

Very indicative is the co-occurrence found in all the mentioned cases among some word-types considered of interest (such as technology transfer, spin-off, research exploitation). The co-presence of these word-types leads to believe that they have a certain "semantic similarity" in conveying a topic, that is the third mission, even if not explicitly mentioned.

What the extracts given above reveal is that there is a certain enthusiasm in describing university entrepreneurial activities along with its contribution to socio-economic development, but always pointing out that this is not done at the expense of traditional missions. It is probably the perception of "danger" to convey ambiguous messages able to trigger a conflict of interests between traditional missions and the innovative one that encourages universities to carefully include in the discourse explicit references to the entrepreneurial model. This is confirmed by the in-depth analysis of some cases related to universities that, drawing on previous studies on the theme, emerge as strongly involved in entrepreneurial activities. All these universities emphasize the link with the society, technology transfer and, more generally, the support to entrepreneurial culture, though they never refer explicitly to the "third mission" or "entrepreneurial" university model.

Consider the case of Polytechnic of Milano, that has 20 spin-offs, more than 50 patents and a long tradition in knowledge transfer. Its mission and the other strategic documents state: «it is fundamental to strengthen the link between research activities and the enterprises community»; and also: «university mission is evolving and integrating with a strong sensitivity and a push toward technology transfer and local development». Such activities are identified as a strategic priority, but this is not much stressed in the adopted rhetoric. Similarly the Polytechnic of Torino, that thanks to one of the best university incubators in the world supported more than 100 business start-ups over the past decade, is defined by the Rector as «a Research University in the round, where education and research integrate in order to meet concretely the needs of socio-economic system and, above all, students' instances». Another illuminating example is provided by the Scuola Superiore Sant'Anna of Pisa, that has 50 patents, 27 spin-offs, 60 collaboration agreements and a research self-financing of 92%. The University strategic plan points out «the desire to be given a key-role in stimulating social and economic growth». Among the shared values fall the «interactive dynamics with the external environment», thus meaning to promote the ability to receive and interpret stimuli, instances and expectations coming from its stakeholder. Therefore university «must become 'more pertinent' to the emerging needs of society and industry, but without losing its independence and autonomy». It seems evident the desire to emphasize that the pursuit of third mission cannot

absolutely "damage" the quality of traditional ones. The University of Padova, with 119 patents and 48 spin-offs, also achieved remarkable results in terms of entrepreneurial activities. Nevertheless this issue did not receive particular emphasis in the analyzed sections of its official website. In the profile it is stated: «a serious policy aimed at supporting technology transfer activities to enterprises and boosting patents and inventions has started in order to link the university to the economic and industrial development of the country», with a certain emphasis given to the results, rather than to the pursued strategic orientation. Finally, it is possible to consider the case of the University of Bologna, that is one of the Italian universities with the strongest tradition in entrepreneurial activities, as evidenced by its 13 spin-offs and more than 80 patents. As stated in its vision: «as a public academic institution, it aims to improve research, teaching and knowledge transfer to the society, in its local, national and international articulations». The strategic plan points out: «the duty of a public university is to contribute to the interpretation and transformation of the surrounding reality. This function, rather than be seen as an autonomous 'third mission', is inherent to the two fundamental functions: scientific research and educational vocation».

Based on the analysis of discursive practices, we found out the use of a positive but "cautious" rhetoric, that exalts the new role of university in the society, but at the same time does not weaken its traditional purpose. We also verified that the entrepreneurial model and the third mission represent something more than research commercialization. On the contrary, they are considered as signs of a change that is communicated to the staff, the students and the other stakeholders. The main objective is to promote behavioral, cultural and emotional changes toward this issue, by exalting the positive aspects of the emerging socio-economic commitment of university and exorcising the negative consequences. The proximity to enterprises and business world is a recurring topic to cancel the image of the university as an "ivory tower" isolated from the society. Meanwhile, the deep focus on the traditional missions of research and education regularly accompanies the description of the activities related to research results' exploitation, as if to reassure stakeholders that the university is not "emptied" of its traditional role in society.

5. Conclusions and Implications

Compared to previous studies focused on the evolutionary process of the university towards the entrepreneurial model, this paper provides an innovative perspective of analysis proposing CDA as a valuable framework to discuss the organization commitment towards the third mission of economic and social development. Furthermore, this study is not based on specific samples of discursive repertoire employed by single institutions, but it involves all the Italian universities with the aim to understand in which measure the discursive practices are influenced by and are influencing the implementation of the third mission in the Italian context.

Our results seem to suggest that the new mission of the university does not represent yet a central theme in the discourse, neither in the social context nor within the universities. Other aspects of the university sphere seem to be at the heart of the public debate, such as the professors' recruitment procedures and the growing narrowness of state funding. Within the universities, the weight given to the third mission is very limited, at least in terms of statistical-lexical results. Looking at the rhetoric employed, it is possible to affirm, however, that: at a social level considerable political and social pressure and expectations exist towards university, that is increasingly required to exercise an active role in the local development dynamics, even if there are different positions about the entrepreneurial activities within academic institutions; at a university level there is some caution in using a rhetoric that celebrates the third mission and there is no evidence of a deliberated appropriation of a commercial vocabulary, as it has been showed in other contexts.

These results indicate that the organizational change within Italian universities affected the discursive practises only partially. Nevertheless, we know that an organizational change is going on, as it is testified by the entrepreneurial results achieved by many universities.

A possible explanation is that the process of transformation of universities towards the entrepreneurial model is still ongoing in Italy and it has not yet involved the discursive profile of the organizations just because Italian universities, in most cases, have not yet developed a deliberate strategy on their third mission. As we know from the literature (Clark, 1998; Etzkowitz, 2004), the transformation process from the traditional university to the new model takes some time. There are typically three different stages to the development of the university as an entrepreneur (Etzkowitz, 2004). At the beginning of this organization learning process, the academic institution takes a strategic view of the opportunities to get more involved with the environment and gains some ability to set its own priorities. In a second phase, the academic institution takes an active role in commercialising the intellectual property arising from the research activity. Finally, the academic institution takes a proactive role in improving the effectiveness of its regional innovation environment, often in collaboration with industry and government actors. It seems possible to affirm that quite all the Italian universities have overcome the first phase, while most of them are now in the second phase, actively engaged in commercialising the intellectual property and supporting the spin-offs creation. Very few of them already reached the third phase, with a clear strategic vision that gave them a key role in their regional innovation environment. It means that most of the Italian universities still are not ready to deploy entrepreneurship as a key value associated with the organization.

But there is also another possible interpretation of our results. The rhetoric used by universities deliberately avoids the reference to the entrepreneurial model with the aim of moving away the possible negative connotations that are associated to it. In this regard, it is possible to believe that Italian universities aim to avoid any kind of "marketization" of their discourse, in order to dissipate any uncertainties about their traditional role in the society. In this case, it would be necessary to accelerate the transformation process, not only from the organizational point of view but also from the cultural one.

As we discussed before, the speed of such evolutionary process is conditioned by the background conditions. In Italy some important changes have been recorded recently, for instance in the legal framework. It is possible to imagine that such changes will be reflected in the future choices of universities on the third mission. In this regard, it would be very interesting to make a replication study once the revision process of the rules (i.e. statute) and governance systems (i.e. board management) of universities will be concluded. The theme of the third mission, at that time, will be probably perceived differently and major implications there will be also for the discursive practices and the rhetoric employed. This prove could help to understand if the actual situation is just a matter of time needed to promote the change or if it responds to a precise discursive choice.

Acknowledgment

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