



# Managing Innovation: The Networked Form of University in the XXI Century

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**Abstract:** In the last decades, universities have deeply changed their role and mission in order to become entrepreneurial institutions able to compete in a global setting. Contemporary processes of globalization, digitization, and networking, have induced new forms of organization, production, and distribution of knowledge. The presence of research-oriented universities can assist geographically proximate firms directly through the provision of educated workers and indirectly by way of myriad externalities. Starting from different approaches, namely the Triple Helix Model and its extensions and the systems theory, the authors shed light on the new networked form of universities. Nowadays, competitiveness relies on a vast and complex entity constituted by many players. The university can develop through an externally-driven growth in which networks of (local and international) relationships enable to gain advantages and reputation.

This becomes particularly evident in the area of media and communications: the news industry and its ecosystem are being disrupted due to dramatic social and technological changes. Universities active in media and journalism education can play a central role not only when it comes to knowledge transfer, bringing together experts from academia and the industry. At the same time, universities try also to create a sustainable future for journalism by offering funding schemes and by incubating new media initiatives for instance in areas such as entrepreneurial journalism. Thus, pursuing the third mission, universities take more and more the role of an industry, transferring both knowledge and technology to infuse existing (media) firms with new life and helping to generate new start-ups.

## 1. Introduction

Recently developed countries have been moving from economies based on tangible assets to ones based on a combination of tangible resources and commercialization of intellectual property and other intangible assets (such as research and development, computer software, design, brand, human capital, organisational systems, etc.). In particular, in the advanced economies, such as the United Kingdom and the United States of America, investments in intangible assets (from human resources

and capabilities, to organizational competencies and relational capital) now equal or surpass investments in physical assets (machines and buildings). Moreover, creative, entrepreneurial individuals are becoming increasingly important resources for companies (Colapinto and Porlezza, 2012).

These changes have led to the incorporation of a “third mission” that concerns the economic and social development: universities play a greater role as catalyst and facilitators of knowledge transfer to, and working with, businesses and society. Besides providing a highly qualified workforce, universities perform a wide range of roles, responsibilities and activities. In particular, academia and industry have been successfully collaborating together for over 100 years while driving innovation and economic growth. Moving forward, there needs to be more open communication and collaboration between industry and academia to understand and address the qualities and the skills graduates should possess when transitioning from academia to industry. This is possible only through collaboration not limited to research labs, but starting in the classroom.

Even if today all universities pursue the three missions, each institution has different contributions to make: they span from world class centres of research excellence and players in global markets (for instance the Massachusetts Institute of Technology or University of California, Berkeley in the United States of America) to collaborations with regional and local businesses and communities (for instance the Polytechnic University of Milan in Italy or the University of Lugano in Switzerland). Each university must choose the role which best suits its strengths. The globalisation of research and development (R&D) is becoming more and more visible particularly in industrial research and also in the world wide mobility of researchers. The academic world has always had a transnational spectrum of action: knowledge has been traditionally transmitted from one scholar to another and thus disseminated often without requiring pecuniary compensation. A similar trend can be pointed out for corporate research and development: the internationalization of R&D refers to the distribution of company R&D operations among different countries and the cross-border flows of R&D-related resources such as knowledge, technologies, researchers, engineers and capital (investment and trade). The main driver is the shifting of corporate goals from economizing to adding value: the global firm aims at capturing and utilizing strategic internal competencies.

In the following paragraphs the authors shed light on the new networked form of universities using different approaches. Nowadays, competitiveness relies on a vast and complex entity constituted by many players. Each player can develop through an externally-driven growth in which networks of (local and international) relationships enable to gain advantages and reputation. Recent decades have seen a shift from an earlier focus on innovation sources confined to a single institutional sphere, to the interaction among different spheres as the source of new, innovative organisational designs and social interactions.

As the news industry and its ecosystem are being disrupted and the elements of journalism have to be fundamentally rethought (Brock, 2013), innovation is a crucial element. Universities active in media and journalism education can play a central role not only when it comes to the traditional role of education, but also to the

increasingly significant task of knowledge transfer, bringing together experts from academia as well as the industry. Universities can also help to create a more sustainable future for journalism by offering funding schemes and by incubating new media initiatives (for instance in areas such as entrepreneurial journalism) (Breiner, 2013). Thus, pursuing the third mission, universities take more and more the role of an industry, transferring both knowledge and technology to infuse existing (media) firms with new life and helping to generate new start-ups. The chapter ends with some practical insights which might hopefully be of help for future university leaders and managers.

## **2. Theoretical background: bridging the gap between Academia and Industry**

Universities have moved far from their roots based on the sole mission of education and training. Different models have been trying to describe this phenomenon moving along two directions: adding new academic functions (research, economic development and co-creation for sustainability) or including new actors in the university ecosystem (government, industry, media, and finance).

The first academic revolution added research to the traditional academic mission of education. In the linear model of innovation, the elite science universities or the laboratories in the large corporations (often referred to as the “ivory tower”) generated a flow of inventions that were then commercialized. It was the so-called three-stage model. This model postulates that innovation starts with basic research, then adds applied research and development, and ends with production and diffusion.

Nowadays innovation benefits from evolving and overlapping relationships between different actors. This second academic revolution has been transforming the traditional Teaching and Research University into an Entrepreneurial University, adding a third mission for economic and social development. The entrepreneurial model relies on the emergence and development of an interdependent relationship between academy, industry and government (Etkowitz et al., 2000). The predominant focus in the literature has been on institutional analysis of university-industry technology transfer. This relationship has been well illustrated by the Triple Helix model (THM, Etkowitz and Leydesdorff, 2000; Etkowitz and Zhou, 2007)), where the university has the leading role in innovation. This model better fits the knowledge-based society innovation, characterized by an iteration model well-integrated in the ecosystem. Universities take advantage of knowledge spillovers from their laboratories to the market for both economic development and financial gains.

Breaking their isolation, universities have established technology transfer and licensing offices able to mediate the interactions among the three spheres and to ensure a more stable technology development, transfer and spin-off. Also Science parks sustain these interactions since their main functions can be categorized into

four primary areas: research and development, business and networked entrepreneurship (including incubating or Venture Capital), management and globalization, and infrastructure (referring to the general social capital for specific activities). University research parks (variously called university research, science or technology parks) create an ecosystem of different stakeholders among the university and its administration, teaching, students, industrial partners, funding organizations, research community, entrepreneurship, and society (Lugmayr, 2012). Additionally there are also press offices and/or media centers that might be able to enhance the reputation and visibility of the university.

The analysis of knowledge-based developments requires at least three relevant dimensions and that is why in the last decade the THM model has been developed to better depict the innovation and economic growth patterns. Another relevant dimension in the innovation process is related to financing organizations (see Carayannis and Campbell, 2006). Some technology clusters (e.g. Silicon Valley and Route 128 in the United States of America and Waterloo Region in Canada) have shown the importance and the role of Venture Capital companies (Colapinto, 2011). The “Quadruple Helix” model involves free interaction of information, human resources, financial capital and institutions.

A different extension of the model includes as a “fourth helix” the “media-based and culture-based public” also described as civil society (Carayannis and Campbell, 2009; Khan and Al-Ansari, 2005; Alfonso et al., 2010). Therefore this fourth helix associates knowledge production and knowledge use with media, public discourses, creative industries, culture, values, life styles and art.

Debating on the third mission and triple-helix partnerships, Trencher et al. (2013) point out the emergence of four missions introducing the function of “co-creation for sustainability”. In contrast to the narrow economic scope of the third mission, this new academic function is far better equipped to bring about the sustainable transformation of a specific geographical area. However, they are different but compatible missions. The crucial difference is that of creating societal transformation rather than only contributing to economic development: they illustrate this through two interesting case studies, namely “The Oberlin Project” by Oberlin College (Ohio, USA) and the “2000 Watt Society Pilot Region Basel” by the Swiss Federal Institutes of Technology (ETH) and Novatlantis. This new approach is characterized by an open-model innovation platform that is place and stakeholder oriented. The authors describe a different collaboration type, in which universities seek the participation of a broad range of non-specialists and civil society: moreover, many partnerships are not initiated by faculty, but by actors from administration and “bridging organizations” (i.e. sustainability offices).

A step further can be found in Almeida et al. (2012) who point out issues of social exclusion, poverty and unemployment. They describe the Brazilian cooperative incubator that is a creative reinterpretation of the American business incubator model to advance social innovation. A triple helix dynamic model, including government (local, regional and national), academic (different types of universities, industry (firms of varying scale and sector, industry associations) and NGOs (non

governmental organizations) explain the diffusion and expansion of this innovation in social entrepreneurship.

The Triple helix model can be defined according to the systems theory as a set of components with different functions and relationships between them. It seems natural to link this model to the approach grounded on Niklas Luhmann's (1988) assumptions about how society is organized in different functional systems and which relationships are upheld between them.

Although starting from different disciplines such as management and social sciences, THM and systems theory get to surprisingly similar conclusions. The helix-model stands for the collaboration between industry, universities, government (and other actors such as the media), in order to provide suited infrastructures necessary for innovations and economic development. On the other hand, systems theory facilitates the illustration of complex and complicated relations between different elements, enabling specific views, suited for the respective purpose of the system (Hofer, 2006). A first common trait between the different approaches is characterized by the fact that all the versions of the Helix-Model are based on *differentiation* – a core aspect also in systems theory as Görke and Scholl (2006) point out:

“Social systems are by no means given objects, but constitute their identity by drawing a distinction between the system and its environment and by setting boundaries against their environment. The system *is* the difference between the system and its environment. [...] As systems constitute themselves through differentiation from their environment, (social) systems can be characterized and observed as self-referential, self-organizational, autonomous, autopoietic (= self-(re-)productive), dynamic and plastic forms of specific meanings.”

In other words, through a differentiation process, the system establishes its boundaries and differentiates itself from the environment, thus defining its own meaning and function. This ascription is comparable to the one occurring with the different helices: from a systemic point of view, the different helices are autonomous systems. In other words, industry corresponds to the economic system, government corresponds to the political system, universities to the scientific system and media to the media (or public) system. Leydesdorff (2006) himself argued, that “an accordingly complex systems theoretical arrangement should combine the perspective of non-linear dynamics with the study of systems which process meaning in addition to and in interaction with [...] information exchange.”

Several authors have recognized the similarities between the core assumptions of the two theoretical approaches. Colapinto and Porlezza (2012) have shown that systems theory embodies some remarkable potential to relate to the process of knowledge production and transfer, and thus analyze the interdependencies between different systems on a larger, social scale. The potential of systems theory becomes even more apparent by taking into account that the functional differentiation of modern societies increases. The consequence of this development is an increasing interdependency between the various systems as each system is highly specialized. With Görke's and Scholl's (2006) words: “What happens if separate function systems, despite their mutual dependency, cannot take each other into consideration sufficiently because their instruments to observe the environment are not complex

enough?” The same aspect occurs within the Helix-Model: how can the interactions between different helices assure knowledge or creativity growth if every helix has a different perspective on the reason why information is regarded as relevant?

Considering the original version of Etzkowitz and Leydesdorff’s (2000) model, where interaction and cooperation between the different helices fosters co-evolution of the actors, it becomes apparent that in the case of knowledge-based societies there is the need for a specific system to integrate or at least synchronize observations of other systems. As a consequence, one of the most relevant domains to push forward theoretical development concerning the convergence between the Helix-Model and systems theory is a more prominent appointment of the media and, in particular, of journalism.

The function of journalism in society is to observe, construct and reduce complexity with the help of its own rules by selecting and framing events (Kohring and Matthes, 2002). By doing so, journalism conveys information which synchronizes society as news are relevant in different systems (Kohring 1997). The so-called Quadruple Helix Innovation Theory is a first step into this direction, by associating knowledge production and knowledge transfer in particular with the media as crucial assets for the evolution and advancement of knowledge economies. Hence, journalism becomes a crucial player in today’s knowledge societies.

However, when it comes to the discussion of innovation and knowledge production in modern societies, the function of science journalism is crucial. According to Kohring (1997), the function of science journalism is to observe the entire society – and not only the scientific system – for events of particular interest for the environment of the scientific system in order to develop certain expectancies. In other words, scientific events chosen for news coverage are such events that are of great interest in the social context of science, i.e. in other social systems such as events considered to have medical, political, legal, economic or moral implications.

As Peters *et al.* (2008) argue, this systemic notion of science journalism has particular implications for the knowledge production within society: “One of the consequences of this conceptualization of journalism is that journalism is seen not as a transmitter of knowledge but as a producer of knowledge. Observation of society results in media constructs, which represent a specific type of knowledge about the world that is influenced by the media logic.”

These conclusions show that science journalism as part of the media system is important not only for divulging scientific findings within society, but it is crucial for the production of knowledge itself. Therefore, the Quadruple helix model, which associates knowledge production and knowledge use with the media, is particularly helpful in order to grasp the concept of knowledge production in modern societies. Moreover, systems theory allows understanding knowledge production not only from a perspective of different actors such as universities or governments, but it helps to understand how knowledge is been produced within society and swayed by media logic.

The Helix-Model and systems theory can be fruitfully combined when it comes to topics such as knowledge production, creativity and innovation. However, the role of the media and, in particular, of journalism in the process of innovation and

knowledge production is still underestimated in terms of its (social) implications, its potential repercussions on the scientific system (Bockelmann 2011) and, generally, as a driver for knowledge transfer and innovation.

### **3. Universities in transition: establishing networks and joint ventures**

Due the setting described above, knowledge intensive entity work closely with their stakeholders in the network in both loosely and tightly coupled ways to disseminate knowledge and deliver products and services. Diverse theoretical perspectives agree that the form, process and role of organizations had fundamentally changed at the end of the twentieth century, and continue to do so.

According to Park (1996) the purpose of establishment of a network is the advantage that stems from complimentary skill-sets within the network or from a re-configuration of skills. At the end of last century it was evident a greater permeability of organizational boundary and the development of networks, co-operative relations and alliances within and between organizations (Di Maggio, 2001).

The ties illustrated in the Quadruple Helix model foster the economic and social development of a specific geographical area. These co-creative partnerships, characterized by a formal or informal collaboration with any combination of partners from academia, industry, government, finance and civic sector, can be seen in technology transfer offices (TTOs), science parks and incubators.

In the academic realm, these networks can occur on two distinct levels:

- Networks between universities and organizations from a particular industry, and
- Networks between different universities in a selected area of research.

These two different kinds of networks have distinct strategies and objectives with regard to their nature. The networks may be institutionalized as loose relationships, durable partnerships or even more robust joint ventures between universities and representatives from the (media) industry. The direct collaboration between academia and the industry is usually set up with the goal of sharing firsthand experiences, particularly in the subtle area between research and day-to-day editorial news processing. Both parts can benefit from these collaborations: for instance, research can benefit from direct access to newsrooms and the media organization's collaborators like journalists, editors or publishers. On the other hand media outlets can draw profit from direct access to the research findings, which might well be useful for the media organization, particularly if research projects try to support media organizations as well by developing guidelines or through best-practice examples.

In the Anglo-Saxon world such collaborations are supported both at the political and academic level. Consequently there are extensive research funds dedicated to close partnerships with the industry. The "Industrial Transformation Research Program" (ITRP) launched by the Australian Government is a noteworthy example of

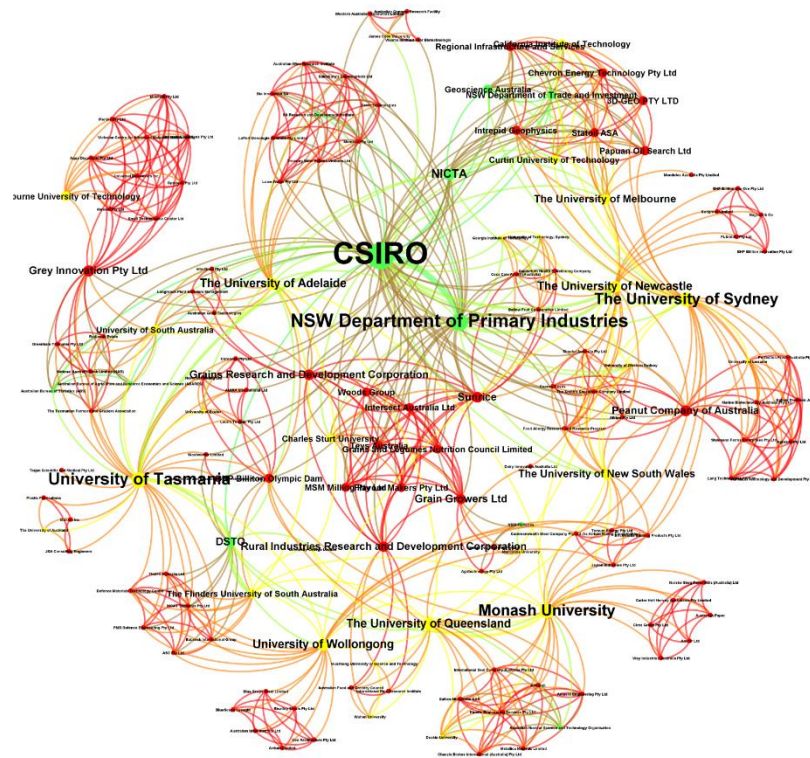


such a framework for collaborations as it offers different funding schemes to both universities and the industry. This program consists of two schemes, namely the Industrial Transformation Research Hubs and the Industrial Transformation Training Centers. The overall objectives are:

- foster important partnerships between business and universities, and
- support researchers (higher degree by research & post doctoral fellows) to gain ‘hands-on’, practical skills and experience in important priority areas.

This program helps universities and industry research hubs and research training centers. As shown in Figure 1, it supports universities and industries to work together: yellow lines for Higher Education, green lines for Government, red lines for Industry/business, and blue lines for Non-profit/other entities.

Figure 1: A network analysis of the different actors within the ITR



Source: Australian Research Council, 2015

It is interesting to see that there are similar partnerships in the crucial area of journalism, media and communications: e.g. the Vice-Chancellor’s research fellowships

offered by the Queensland University of Technology (Brisbane, Australia) provides the opportunity to develop and enhance academic records in creative industries, namely digital media as well as journalism and professional writing (QUT, 2013). There are also examples of collaborations with public broadcasters such as the “User Experience Research Partnership” launched by the BBC, together with six universities based in the United Kingdom (namely The University of Bath, The University of Dundee, University College London, Newcastle University, The University of Nottingham and Swansea University). Bringing together a world-class team of experts from academia and BBC R&D, they aim to stimulate innovation (BBC 2013).

Networks can also involve the collaboration between different universities in a specific area of research rather than on the direct cooperation with an industry representative. These more academic networks usually focus more on the general dissemination of what is thought to be relevant news for the (media) industry. The European Journalism Observatory (EJO), a non-profit institute based at the University of Lugano in Switzerland<sup>1</sup> is an example of such an international and intercultural academic collaboration. The EJO is a decentralized and developing network of collaborating actors: research institutes, institutions and media outlets based in 13 different countries, namely Albania (University of Tirana), Austria (Medienhaus Wien), Czech Republic (Charles University), Germany (the Erich-Brost-Institute at the Technical University of Dortmund and e.g. the daily newspaper *Der Tagesspiegel*), Italy (University of Milan), Latvia (Turība University), Poland (University of Wrocław), Romania (Andrei Saguna University of Constanta), Serbia (University of Belgrade), Switzerland (Zurich University of Applied Sciences and e.g. the Swiss German daily *Neue Zürcher Zeitung*), United Kingdom (Reuters Institute for the Study of Journalism), Ukraine (National University of “Kyiv-Mohyla Academy”) and the United States (School of Journalism and Communication, University of Oregon). The main mission of the EJO summarizes well this second type of network: the goals are to reduce the gap between communications research and media practitioners, to make relevant results research accessible to broader audiences, to study “best practices” in journalism and analyze trends in the media industry. (EJO 2012).

Considering funding issues, EJO has to rely on different public and private sources: it is funded by different national (the Swiss National Science Foundation, and the *Fondazione per il Corriere del Ticino* in Lugano) and international institutions as well as several private foundations (the Robert Bosch Stiftung, the FAZIT-Stiftung and the *Stiftung Pressehaus NRZ* in Germany). Thus, while the first network type strongly focuses on a research-based partnership with industry representatives such as media organizations, the second one focuses more on knowledge transfer, publishing research findings in different media outlets, making them more accessible to practitioners and the general public.

Furthermore, as both networks are able to liaise theory and practice, they might have beneficial effects on media and communications research as well as on the

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<sup>1</sup> Disclaimer: both authors were, in the past, members of the EJO.

industry. Especially in a fluctuating branch such as the news industry, it is essential to combine competencies and experiences in order to create an innovative context.

#### **4. How universities can foster innovation in the media industry**

The news industry is in turmoil and requires, as Brock (2013) explains, “assumptions and practices to be rethought from first principles”. Accordingly, universities, and in particular communications, media and journalism departments, have to rethink their role in terms of how and what they teach and, even more important, how they can actually stimulate innovation with regard to an industry in continuous transformation. With regard to the role of universities it is particularly useful to analyze the context of media and journalism, because it can show how institutions of higher education might well be able to promote innovation in times of radical industrial alterations.

A first step towards improving the universities’ profile in reference to innovation is represented by the adaption of educational offers: in the case of media and journalism this is best shown through different “entrepreneurial journalism” programs. These programs try to train students from an interdisciplinary perspective how to set up a new “news business” on their own, combining therefore different academic fields such as journalism, economy, informatics as well as management. Very often these programs bring together experts both from academia and the (media) industry, giving the students not only theoretical but also practical advice on how to build a successful journalism start-up (Breiner, 2013). Recently many universities started to offer such programs, for instance City University London or the Tow-Knight Center for Entrepreneurial Journalism at City University New York.<sup>2</sup>

Through education, research and incubation such programs confirm the close relationship between universities and the media industry as innovation-drivers. By the end of the term the participants develop their start-up projects in close consultation with faculty advisers and expert mentors. On the last day of class, they pitch them to panel of academic experts and practitioners, competing for awards from the Tow-Knight Center to fund further development of their projects. The combination of educational programs together with funding schemes in order to realize start-ups presumes a different understanding of higher education, but it might well be a fruitful approach to promote innovation in an industry in the midst of upheaval.

However, teaching entrepreneurial skills to (journalism) students that might not expect to get in touch with similar subjects is not enough. There needs to be a change in the (academic) mindset with regard to established teaching methods as well. One of these revolutionary methods that can bridge the gap between academia and industry is called Design Thinking: “Design Thinking sparks innovative thinking in

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<sup>2</sup> Disclaimer: Colin Porlezza works as a lecturer in Journalism at the Department of Journalism at City University London.

many ways and as a cross-disciplinary and user centered method it allows to understand better user needs and understand their principle problems in daily life. The design process uses intensive collaboration in cross-disciplinary settings and is divided into the exploration of the problem space and the solution space to achieve new ways of solving existing problems (Lugmayr et al. 2014). This particular method has also been adopted for another module entitled “Frontiers of Media Management” organized by the Entertainment and Media Management Lab at the Tampere University of Technology.

Beyond preparing students for future challenges, universities active in media and journalism education can play a central role when it comes to knowledge transfer by actively supporting the realization of projects i.e. start-ups. Besides, universities ought to create a sustainable future for news and journalism by offering different funding schemes. One of these funding schemes is the “Nieman & Berkman Fellowship for Innovation in Journalism”<sup>3</sup>, a collaboration between two different institutions of Harvard University: the Nieman Foundation for Journalism and the Berkman Center for Internet & Society. The fellowship offers the opportunity to journalists – not researchers – to pursue a specific project with regard to journalism innovation for one year. One of the main requests of the fellowship is, that the projects have to benefit journalism at large, thus taking into account both the academic but also the practical consequences of the fellowship.

Another example for such bridge-building and innovation fostering activities between academia and practitioners are closer cooperations between universities and foundations as it is the case with the “Knight Prototype Fund” by the Knight Foundation for: “The Knight Prototype Fund helps media makers, technologists and tinkers take ideas from concept to demo. With grants of \$35,000, innovators are given six months to research, test core assumptions and iterate before building out an entire project” (Knight Foundation, 2014).

Such collaborations can be fruitful particularly in terms of research, education and knowledge transfer – even if one has to take into account that the Foundation might have an agenda of their own. Besides, initiatives like the Knight Prototype Fund or the Nieman & Berkman Fellowship can actively support future entrepreneurship. Taken all this together, if universities want to be able to promote innovation in the future, they have to rethink long established concepts like education, research and, in particular, knowledge transfer and collaboration. If universities want to play an important role in the future (of media and journalism) they might well rethink their engagement, by offering alternative educational programs that include entrepreneurial skills as well as the incubation of new journalistic or media start-ups.

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<sup>3</sup> See <http://nieman.harvard.edu/NiemanFoundation/NiemanFellowships/TypesOfFellowships/NiemanBerkmanFellowshipInJournalismInnovation.aspx>

## 5. Practical Conclusions

Adopting an evolutionary model, we can observe how different university types emerged and co-evolved, each with different emphases on the functions of teaching, research and contributing to the economy and society.

In the context of a highly competitive, global and fast changing business environment, many different actors (universities, firms, financial institutions, media companies etc.) should respond by rethinking their established strategies, programs and ways of acting. On one hand universities have to become more market-oriented – also in the field of social sciences where media, communications and journalism are usually to be found. As we have shown in the case of the European Journalism Observatory EJO, different actors such as the government and the industry have to collaborate in order to support creative or research institutions. Innovation is too complex as well as too expensive for a single actor. On the other hand, there is a need for more public schemes whose objectives are:

- to encourage collaborative R&D projects between universities and industry organisations;
- to attract investment from the local and international business community by supporting the internationally-recognised excellence of universities and their industry partners; and
- to leverage national and international investment in targeted industry sectors.

Previous literature has highlighted the relevance of collaborative research, contract research and informal relationships for university-industry knowledge transfer. The purpose of this chapter is to provide a critical review of the concepts of innovation focusing on the role of universities as key players, which need to build an “ecosystem of entrepreneurship”, a top-to-bottom culture that breeds and fosters innovation. This new culture affects every part of the university system, from admissions to faculty promotions, grants, fundraising to new educational programs and teaching methods. The challenge is to understand whether and to what degree a university wants to play the role of an incubator for companies and innovative business start-ups. We believe that bringing together different threads and drawing on their strengths can help taking the academic debate another step forward.

Universities worldwide are being called on to fulfil more and more roles, often with fewer resources: the function of universities as institutions devoted essentially to teaching and research has been pulled alongside with the goal to be entrepreneurial and market-relevant. All academic institutions have been affected by this expansion of roles: they are multifaceted institutions and act as creative centers, as engines of economic development and ultimately as drivers of innovation.

Increasingly complex goals require larger and more sophisticated academic institutions. In this perspective the networked form might help especially because it is important to admit that a stronger focus on transfer, networks and partnerships may require different structures and incentives. However, firms, governmental or

financial institutions need to be equally skilled and ready for different kinds of collaborations. It is becoming more and more important to be open towards international networks and interaction and to be able to create a suitable context for learning, for a rapid transfer of knowledge and for ideas to be put into action – with the result of nurturing innovation in society. The field of media studies can be recognized as an early mover in recognizing this shift in grassroots innovation culture. This might well be due to the structural changes in the media industry that require new ways of financing and content creation, but also for its pivotal role when it comes to knowledge production, transfer and, generally, as a driver for innovation.

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