

1.2.2. What does Third Mission of university really mean?

In the 1980s, the changing economic landscape and the increasing importance of knowledge-based industries enabled the academic ecosystem to develop rapidly and worldwide (Nelson, 1994). This turnaround within the Higher Education sector was first investigated by Etzkowitz, who first coined the term "entrepreneurial university" to describe universities as institutions that have become crucial for regional economic development (Etzkowitz, 1983). The idea of an "Entrepreneurial University" emerged to promote technology transfer, commercialization of research, and developing partnerships with industry. Nevertheless, the emphasis on creating new ventures and stimulating economic growth continued to follow the trajectories of the 19th century when the rise of the industrial revolution increased the need for technical skills and the development of technical universities and vocational training.

In the 1990s, Etzkowitz and Leydesdorff (Etzkowitz and Leydesdorff, 1995) posed the thesis that the interaction between university-industry-government improves the conditions for innovation in a knowledge-based society. Consequently, the Triple Helix model posited that the traditional model of innovation, which was based on a linear relationship between science and technology, was no longer adequate to address the complex challenges of the modern economy. Instead, the authors argued that a new model was needed, one that recognized the interdependence and mutual influence of academia, industry, and government. At the time, no one had any idea how complex these challenges of the modern economy would be, and in so far, the relation and interaction between entrepreneurial university and the Triple Helix model have evolved to include a broader set of goals and objectives (Kuhn, 2012). In the 20th century, the novel evolutions to the model did not include only three actors, and the universities did not focus solely on commercialization and economic development; both they focused on social and environmental impact (Gur, 2020). The Quintuple Helix Model provides a framework for universities to engage in open innovation by collaborating with industry, government, civil society, and the natural environment. By embracing this approach, universities co-create innovative solutions that address societal challenges and promote sustainable development in the attempt to continue facing major societal challenges related to the complexity of issues such as climate changes, sustainability, pandemic crisis, challenges of democratic cultures, citizens' well-being, and social justice. More and more, Universities' research and education missions become vital to bridging knowledge and action for the achievement of these goals, but the new societal challenges imply a change of frameworks, cultures, and mind-sets for building a robust collaborative process based on new competencies, values, and critical participation in didactic and research.

These considerations brought to the assumption that social change and the goal of just, equitable, and sustainable development is not achieved by individuals, organizations, communities, or governments acting alone, creating adequate conditions for the implementation of open access to scientific research that should bridge a perceived gap between science and the

broader society ("democratization of science") (Berg and Lidskog, 2018). In this context, professors, researchers, students, and staff in the academic community need to develop behaviours, skills, and competencies related to the quality of growth-mind set, civic commitment, and social awareness because "knowledge is not something objective and removed from our bodies, experiences, and emotions but is created through our experiences of the world as a sensuous and affective activity". Consequently, this process also needs a reflection on the traditional missions of universities – teaching and research – because the new societal challenges imply a change of frameworks, cultures, and mind-sets for building a robust collaborative process based on new competencies, values, and a critical participation in a more inclusive and equitable knowledge-based society.

At the European Union level, in 2015, Commissioner Moedas identified three strategic priorities, described in the book *Open Innovation, Open Science, Open to the World* (the 3Os strategy) (Moedas, 2015), which proposed inter alia that "many more actors will take part in the research process in different ways and the traditional methods of organising and rewarding research will also see many changes". Consequently, one important dimension of open science is becoming citizen science, which is envisioned as "linked with outreach activities, science education or various forms of public engagement with science as a way to promote Responsible Research and Innovation" (EC COM 2016). Giving impetus to this line of activity, citizen science was recently recognised as an open science priority by the Council, and the European Union's interest in social innovation came out as a priority with the adoption of the 17 Sustainable Development Goals (SDGs), by the UN in Agenda for 2030 (GA RES, 2015). After the President of the European Commission (EC), Ursula von der Leyen, laid out the EC's priorities for 2023 in September, the Commission published on 18 October its work programme for next year, providing a detailed overview of upcoming initiatives. In the area of education, research and innovation, the work programme includes a strong focus on digitalization, green dial and civic commitment. They both emphasise the need to put people first in the development of technology, as well as the need to defend and promote European values and rights in the way technology is designed, built and deployed, including in the real economy.

The proposed scenarios towards co-creating of a transitional pathway for a resilient, innovative, sustainable, and digital proximity and social economy ecosystem seem very heterogeneous and capable of involving many sectors and different stakeholders. Civil Society, Educational environment, Public authorities, and Enterprises are in the same ecosystem when they approach the co-creation of common goods and social utility. Consequently, the Tertiary education sector has to demonstrate its commitment to playing its part in meeting the SDGs and sharing best practices. HEIs are called to reflect on the critical role that education and research have in delivering the SDGs. This context has given rise to the concept of a "Transformative University" and quadruple and quintuple helix models (Qureshi, Sutter and Bhatt, 2018). The shift from an Entrepreneurial University to a Transformative University has been driven, consequently: by several factors, including changing societal expectations, increasing awareness of global challenges, and a growing recognition of the importance of sustainability and social responsibility. A Transformative University is one that is committed to using its resources and expertise to address the world's most pressing challenges, such as climate change, social inequality, and global health. These universities seek to engage with communities and stakeholders to co-create knowledge and solutions that have a positive impact on society. Many universities worldwide strive to become Transformative Universities, leveraging their research, teaching, and community engagement activities to create positive social and environmental impact. These universities are collaborating with a wide range of stakeholders, including businesses, non-profits, government

agencies, and local communities, to co-create solutions that benefit society as a whole. It is widely recognised that making research results more accessible contributes to better and more efficient science, and to innovation in the public and private sectors. One of the main difficulties faced by the HEIs is how to promote social and academic behaviours while supporting the development of engaged students and researchers who could become active change makers in this process.

HEIs are called to identify synergies, challenge the way of teaching and doing research, and develop new perspectives that in turn enable a transformation. As it is more than ever on the European agenda, regarding the importance of resilience for tomorrow's economy, HEIs should advocate a strong vision: "More social good in university, more university in social good". Consequently, HEIs will have a crucial role when it comes to involving citizens in co-creation activities, such as public dialogues, which provide them with a voice to influence and shape curricula, research and innovation in order to produce socially desirable outcomes. The Academic Missions (didactic and research) needs to focus on the way academic communities interact both internally and with the external context. Moving from an Entrepreneurial University to a Transformative University in a complex society prefigures a changing paradigm of what we call the Academic Third Mission and how universities respond to what society expects from the outcomes of academic activities. Aligning Institutional Third Mission under a shared mind set for educators, staff, researchers, academic students, and stakeholders is pivotal to achieving a Sustainable European Higher Educational System. The definition of principles and concepts for making HEIs more social-oriented represents a challenge to approach exploiting academic education and research. These principles have very wide application and are universally relevant to involve the academic community in the processes affecting human well-being. These principles are also implicit in key areas of contemporary society and are promoted in the SGDs 2030 and in the new European Innovation Agenda (EC COM, 2022).

Nowadays, Social Innovation is magnified by specific or general manifestations of the so-called wicked problems affecting the 21st century, recalled in the introduction of this Special Issue. Collaborative and interactive exchanges between business, governmental, civic, and academic stakeholders may effectively support the realisation of Social Innovation (Domanski, 2019). Nevertheless, there is a permanent lack of understanding, concerning how the collaborations are carried out in multi-actor partnerships. In 2009, during the economic crisis, Professor Emeritus John Goddard wrote "Reinventing the Civic University". He describes and motivates why universities should be more and strongly connected to people and place, why they should be committed to generating prosperity and well-being and balancing economic and cultural values. He express for the "University" the point of view for Social Innovation that claimed to be: the result of an interaction between different societal sectors working towards systemic change (Howaldt, Kaletka and Schröder, 2016). In 2010, Professor Elvira Uyarra (Uyarra, 2010) outlined five archetypes of university societal engagement; distinguishing knowledge factories (focused on technology knowledge for the industry), relational universities (working interactively with industry), entrepreneurial universities (exploiting their knowledge via patents and spin-offs), systemic universities (building collective innovation assets) and engaged universities (improving regional policy frameworks). Moreover, University as a "responsible facilitator" (Gur, 2020), is the element of each orientation of the model based on social innovation; the main changes in the positions covered are due to the different institutional freedom: engaged and entrepreneurial university approaches are potentially supportive of social innovation (at least not indifferent to it), whilst the other models frame university knowledge in ways that potentially makes social innovation invisible. Therefore, a comprehensive, holistic, and multidimensional approach is necessary to

comprehend the complex set of needs and create a Transformative University. Such a solution must provide stakeholders with a broader understanding of overall processes.

Today, a growing number of scholars have acknowledged that the Third Mission is more than promoting the institutionalisation of technology transfer activities, as well as pursuing the commercialisation of research results (McKelvey and Zaring, 2018). Broader and more socially inclusive goals gather within Third Mission boundaries (Arocena, Göransson and Sutz, 2018) and have started to be the object of academic institutionalisation, falling under the fields of "public engagement" and "university community engagement" (Vargiu, 2014). The academic Third Mission refers to the idea that universities have a responsibility not only to produce and disseminate knowledge but also to contribute to the socio-economic development of their communities and the wider society. Nevertheless, defining the civic boundaries of a university remains a complex and often debated issue. In general, a university's civic boundaries can be thought of as the extent to which it engages with and contributes to its community's social, economic, and cultural life. However, there is no one-size-fits-all answer to the question of where a university's civic boundaries lie. The definition of these boundaries may depend on a range of factors, such as the university's mission and values, its relationship with its local community, and the specific needs and challenges of that community. Moreover, while universities may not have a clear-cut definition of their civic boundaries, the EU programme demonstrates that Universities can work with VET providers, industrial sectors, and their local communities to develop mutually beneficial partnerships and contribute to positive social change. Universities can collaborate with civil society organizations to identify societal needs and co-create innovative solutions that meet those needs.

This implies the way how Universities manage knowledge that should be created or (co-created), regulated, and monitored, considering itself as a public good. This means that the Third Mission should promote a policy that guarantees:

- the right to access knowledge and to use it for their own personal development and the advancement of society as a whole, regardless of their cultural, socio-economic, geographic, or gender background;
- the right to access and use information creatively and innovatively, without restrictions or limitations;
- social equality and inclusion through open debate and deliberation (deliberative democracy);
- the diffusion of knowledge compatible with the protection of the environment and with the sustainable management of natural resources.
- Collaboration and knowledge exchange between people and organizations for the creation of new ideas and innovative solutions for the welfare of society as a whole and not just for private profit.

Consequently, there are several issue areas that universities must address when implementing the academic Third Mission, such as partnership and local networks, open innovation, citizen science and public engagement, knowledge management and transfer, impact assessment, ethical conduct, civic and democratic competencies and skills development, multi-level governance and many others. Throughout the centuries, social and economic development impact how universities approached education and research.

In conclusion, the academic Third Mission refers to the idea that universities have a responsibility not only to produce and disseminate knowledge but also to contribute to the socio-economic development of their communities and the wider society. The Third Mission seems to be the attempt to theorize this evolution in contemporary times. There is an increasing call for Higher Education to play a more active role in communities and to develop democratization of the Third Mission of universities, thus not simply as experts providing solutions but as partners and collaborators in relationships with non-governmental organizations, local communities, and citizens. This active role in communities is meant to promote a structured dialogue enabling an open approach (innovation and science), a more effective technological transfer, and a collaborative decision-making process on current issues (e.g., Covid19 and its impact on HEIs environments) (Macq, Tancoigne and Strasser, 2020). Furthermore, the Academic Third Mission seems potentially both the most crucial mission and the one which most needs innovation within the organization of universities because this means that Academia should abandon their ivory towers and address social needs and industrial objectives as well with not only a focus on global perspective but also with careful sight on "glocalization".

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