

## ***The third mission that looks to the future: for a sustainable, transformative, civic university***

### **Una terza missione che guarda al futuro: per una università sostenibile e trasformativa**

GABRIELLA CALVANO

*After going through the meaning and the historical path that led to the current definition of the Third Mission (TM), this work highlights the transversality of TM compared to the other two missions of the university and the primary importance of the identifying and implementing sustainability paths, strategies and solutions for the territory. TM allows universities to regain awareness of their civic, political and transformative role, also through education.*

**KEYWORDS:** Education, University, Third Mission, Civic University, Sustainable University

## **Introduction**

The University has an irreplaceable role in the transformation processes of our time: for the skills it expresses, for its potential to transform itself and to generate transformation. In a period, such as the one in which we live, characterized by profound changes and by a crisis that affects people both in health and well-being as well as economic, financial and social aspects, it is urgent to ensure that the institutions responsible for tertiary training recover the awareness of its social and political role by rediscovering and redesigning, in an ever new way, the functions of its three Missions: the social and political role of the University also moves from a reconsideration about teaching, research and the Third Mission in response to what social, economic, political, environmental needs highlight and demand.

In this way, universities will be able to put themselves at the service of the society to which they belong, creating and training qualified social and human capital, educating and preparing students and stakeholders so that they can contribute to the development of local, national, and global communities. They have the duty to contribute to the common good and to the public good, as part of the contexts, territories, and societies in which they are inserted but also of those far away, in space and time. Only in this way they will be able to present themselves as institutions incline to and able of change and

transformation, even starting from education, in view of a more just, equitable and sustainable world, so that 'no one is left behind'.

### **The Third Mission: historical path and progressive implications**

Universities are dynamic systems that have on the one hand, a central role in the capacity building of human capital and in the creation and dissemination of new knowledge<sup>1</sup> and, on the other hand, a decisive role in territorial development and social innovation. This second function must be conceived and built together with other institutions, companies, the non-profit sector, citizenship in a broad sense, in order to encourage that 'relational'<sup>2</sup> change that is increasingly required of universities.

If the medieval *universitas* was established with the aim of «sharing, circulating, refining and producing forms of knowledge that could contribute to human and social development»<sup>3</sup>, over the decades this original purpose has become increasingly marginal, to the advantage of others objectives dictated mostly by new needs of social and cultural nature, as well as economic: a place dedicated to the training of politicians and intellectuals in the modern age, an institution for the mass teaching of young generations in the last century<sup>4</sup>.

Traditionally, the mission of universities has been twofold: to train young minds and carry out research activities to deepen and study social, natural, and economic phenomena. Only in more recent times universities have begun to enter into dialogue with the outside world.

Weber already spoke of the mission of academics in 'Science as a profession', highlighting how

«It is important that every young person who is interested to the profession of scholar is aware of the duplicity characteristic of the task that awaits him. He must have not only the requirements of the scholar, but also those of the teacher. And the two things do not coincide at all»<sup>5</sup>.

Alongside these two missions, a further task of responsibility has emerged over the years which, by linking the universities with the surrounding world, has made it possible to renounce the stereotypical image of the University as an 'ivory tower' to mark a new attention of the academy to the context in which it is inserted and operates and to the society to which it addresses and to which it relates. In facts, the activities and practices that fall within the definition of the so-called Third Mission (enhancement and marketing of research results, continuous training and lifelong learning, activities aimed at companies, individuals and PA, social and public engagement, technology transfer...) are not absolutely 'new' to the academic world. It was rather the progressive process of

industrialization of these activities that led to the theory of a Third Mission (TM) of the University<sup>6</sup>.

The National Agency for the Evaluation of the University and Research System (ANVUR) with the expression TM means:

«The set of activities with which universities enter into direct interaction with society, alongside traditional teaching missions (first mission, which is based on interaction with students) and research (second mission, mainly in interaction with scientific or peer communities). Through the Third Mission, the universities come into direct contact with subjects and social groups other than the consolidated ones and therefore make themselves available to ways of interaction with a very variable content, form and dependent on the context»<sup>7</sup>.

The same Agency specifies that the TM can have a double implication:

1. it can be economic enhancement of knowledge or transformation of what is produced through research into useful knowledge for productive purposes;
2. it can propose itself in a cultural and social dimension or as an establishment to produce public goods that increase the well-being of the society.

Different meanings have been attributed to TM over time. Angela Perulli identified three different and consecutive phases that led to the definition of Third Mission as it is intended today. Each phase is characterized by a different semantic coverage, to which different activities, actors and relationships between academy and non-academy correspond. Those phases, in their succession and overlap, have led to an enlargement and a diversification of the activities themselves contained within it and to a different, and tendentially increased, degree of their institutionalization<sup>8</sup>.

The first phase took place at the end of the last century, when the University began to commit to give a contribution to the economic development of its contest. The idea of the entrepreneurial university<sup>9</sup> spread. Universities become parts of a process of social construction of innovation; identify, create, and market intellectual property; improve regional and national economic performance; generate financial benefit for themselves and their teachers.

The second phase expands the semantic content of the TM expression that had previously established itself and includes academic engagement activities (commissioned research, consultancy, third parties) and public engagement, or «forms of knowledge transmission aimed at social, cultural, political as well as economic of societies, locally and beyond it»<sup>10</sup>. The emergence of different Third Mission models reinforces and legitimizes the concept of 'useful knowledge', that is, knowledge that does not have the sole objective of generating almost exclusively economic effects.

Similarly, 'useful knowledge' coincides with research and training that are 'expendable' in a broader context as they are not ends in themselves.

In the third and last phase, the TM assumes its maximum extension in terms of semantic content to become a synthesis of the different forms of connection between the university and the outside world that have been structured separately in the previous phases and whose effects «have a value in themselves - economic, social, political and cultural - for the community or parts of it»<sup>11</sup>. It is the phase in which all disciplines find a legitimacy of the TM activities implemented.

Through TM, universities become a 'bridge' between science and society, activating networks and building relationships with the communities that surround them, contributing to the socio-economic development of the territory and the activation of innovation processes able of creating social inclusion and dissemination of knowledge, positively influencing society through initiatives and solutions able of generating value too. They have the opportunity to increase the 'surface contacts' with society and the market<sup>12</sup>. Not surprisingly, TM has 'more porous borders'<sup>13</sup> than the first and the second missions: «it aims to sanction the end of the closed community [...] it is configured as an attempt at a hypothetically two-way dialogue between the scientific community and ordinary people»<sup>14</sup>. The progressive interest of the University in TM is due to several contextual factors. Firstly, the emergence of the knowledge economy: the Lisbon Strategy recognized universities as a key role in the debate on the development policies of the knowledge economy, helping to transform the European economy «into the most dynamic knowledge-based economy in the world»<sup>15</sup>. In the knowledge economy, the link between the advancement of scientific research and its application can only be close<sup>16</sup>. The second determining factor coincides, then, with the increase in attention to regional innovation systems. In the context of the knowledge economy, the innovative capacity of companies is highly dependent on the local context<sup>17</sup>, bearing in mind that the word knowledge refers not to information and codified culture but to the importance that human capital and intellectual skills assume<sup>18</sup>. This is the reason why those territories that manage to produce, attract, and retain human capital are the most competitive ones. Human capital, like natural capital but unlike many of the other forms that capital can take, is difficult to reproduce, especially if it is of high quality, and must always be placed

«in a dialectical equation with human development, which sees initial training in the context of the expansion of the effective freedoms that human beings can enjoy, and therefore in the perspective of the training of humans and citizens able of living as protagonists the own era»<sup>19</sup>.

For this reason, the specific weight that universities can assume is unmatched and therefore the stakeholders increasingly need to have opportunities for comparison with them as to think and create, together, sustainable development paths for the territory, cities, economy and companies. Indeed, there is a broad variety of opportunities for institutionalized discussion between universities and relevant stakeholders for different reasons: effectiveness of degree courses, business training, and use of historical sites owned or managed by universities.

«Memory and future, general knowledge and specialist knowledge, theoretical knowledge and empirical knowledge, initial training and lifelong education, academic community and local institutions, culture and professionalism, educational institutions and the labor market can and must find a suitable place in the university to meet and to dialogue together»<sup>20</sup>.

### **When the Third Mission meets the territory: co-building sustainable development**

The environmental, climatic, social and health crises we are experiencing have a double repercussion: globally, where common problems are highlighted in every part of the planet, and at a local level, as each city and territory always presents specific challenges to face (it is no coincidence that one of the principles on which the 2030 Agenda<sup>21</sup> is based territoriality, given that each context has its own characteristics that can have a non-negligible influence on the achievement of the Sustainable Development Goals). To meet the needs that sustainable development urges, universities can play a pivotal role in supporting national and local governments to understand the phenomena and to identify solutions<sup>22</sup>. Since universities are 'containers' of innumerable skills and expression of multiple disciplines, they are generators of social as well as technological innovation, and can therefore promote the development of critical, complex thinking which they also connect together<sup>23</sup>.

As a response to the needs that sustainable development poses, the relationship with the territorial context has become, therefore, through the Third Mission, central to the Universities. The relationship with the territorial context has therefore become central for universities. Over the years, they have become protagonists aware of the realities in which they are inserted, called to modify their strategies to meet the requirements expressed by the territory itself<sup>24</sup>, so much that a double adaptability to universities is required: external, to the context and to the territory; internal, in research, in teaching and in governance. For these reasons, the tasks and roles of universities should be increasingly flexible, actives and militant in relation to both economic development processes and a number of new local authorities, first of all those of social and environmental sustainability to which actually more and more attention is paid<sup>25</sup>. The complexity of the challenge of sustainability calls into question all educational

institutions, first of all the University, which is now confronted with «the need for a deep cultural renewal to interpret profound socio-economic transformations both on a local scale and global»<sup>26</sup>.

Although sustainability and sustainable development have been at the attention of governments around the world<sup>27</sup> for years, it is with the approval of the 2030 Agenda, on 25<sup>th</sup> September 2015, that this interest begins to become a concrete commitment both through the definition of strategies and national and international policies, together with the identification and development of a series of indicators which periodically allow each institution to verify its positioning with respect to the 17 Sustainable Development Goals (SDGs) and the 169 targets that best specify them. This global impulse and attention have also assumed centrality in the prospects and research policies at EU level: the SDGs will guide the articulation of FP9 Horizon Europe<sup>28</sup>, or the research program with which the European Union makes available about one hundred billion euro of funding in competitive calls between 2021 and 2027. As institutions for change, universities are, like other local authorities, interested in and the process of transition towards sustainable development, a path, among other things, that officially begun for the universities of the world as early as in 1991 with the Talloires Conference<sup>29</sup>, in Haute-Savoie.

Sustainability has called universities to an unprecedented with synergistic and systemic attention to all the components that make it up: environment, economy, society, institutions, thus going beyond the (erroneous) still widespread idea that sustainability and environment are synonymous. A series of innovative strategies were thus developed whose purpose was mainly to harmonize the relationship between space, environment, and people, without however underestimating the importance of spreading a sustainable culture and sustainability, which should be addressed with a particular attention in order to pursue and achieve the Sustainable Development Goals by 2030.

The ability to respond effectively to the needs to which sustainable development calls, invites universities not only to strengthen TM activities but also to change its role. TM is no longer added downstream of training and research to ensure greater impact effectiveness and better dissemination and marketing of what is produced by universities. Its objectives must be fully integrated into training and research activities:

«We cannot speak of a third mission by detaching it from research or teaching activities. The three tasks that history assigns to the university are only three distinct faces of a single functional universe. [...] The task is one and indivisible»<sup>30</sup>.

That is, TM is the main innovation agent of the other two university missions.

In order to be truly effective and generate the desired change and transformation in view of sustainability, TM's activities should be based on a university policy that is strongly

interconnected<sup>31</sup> with the territory, driving co-creation<sup>32</sup> processes whose purpose is basically that of accompany local authorities and institutions in identifying solutions for the benefit of sustainable development. In the process of co-creation for sustainability, the University «collaborates with various social actors to create societal transformations with the goal of materializing sustainable development in a specific location, region or societal sub-sector»<sup>33</sup>, where the term of transformation indicates changes, which are physical and permanent, social, technological, and environmental types that co-creative partnerships can originate. The model that this perspective uses is that of a 'transformative university' in which a multi-stakeholder platform is engaged, while interacting with the context it is part of, in a continuous and reciprocal process of creation and transformation to generate sustainable development, as happens, for example, for the 'Città Studi - Campus Sostenibile' project activated jointly by the Polytechnic University of Milan and the State University of the same city<sup>34</sup>.

The social and civic commitment that finds in the regeneration of territories, in transdisciplinarity, in living labs only some of the forms of expression that go hand in hand with the more traditional activities of technology transfer and entrepreneurship and research marketing; the collaboration of professors from the same university who are expression of different disciplinary sectors and the use of place-based and stakeholder-oriented approaches, based on open innovation, push Trencher and his collaborators to consider co-creation for sustainability a possible 'Fourth Mission' of 'University that adds to and expands the Third, which cannot be considered the definitive chapter of the evolution of the modern University since the challenges of sustainability require universities to become transformative, civic, able of welcoming and transform teaching, research and TM, together with the co-creation for sustainability.

If this approach is taken, the academic institutions and those who make up the community (students, teachers, technical-administrative staff) should be configured as subjects 'in change', protagonists of an active transformation, visible and consistent with the disciplinary contents taught and learned. All this becomes possible also thanks to the freedom and diversity of tools available to the University, which give it strength and authority on a social level, also in relation to the development of new ideas and real sustainability<sup>35</sup> experiments. Sustainability cannot be learned only as an effect of an educational process but must be experienced in participation in the life and dynamics of the University: sustainability can be affirmed only through participation<sup>36</sup>.

Although, even today, the commitment to TM is not widely spread and above all felt among Italian academics, the centrality of it and its multiple declinations to allow and encourage the recovery of the civic, democratic, and political role of university institutions is indisputable: precisely through TM activities, universities can contribute to

the public good by supporting organizations in all society sectors in facing the crucial challenges of the present and the future.

### **Civil and political commitment: towards a civic and transformative university**

The COVID-19 crisis has highlighted the need to promote innovation in order to better address social challenges<sup>37</sup> and on the other hand the civic role that universities can have in creating a more just, fairer and more sustainable world. The pandemic has had and will have, on the life of institutions, societies, and of each of us, impacts that we cannot foresee. However, we are certain that the future requires a change and a renewed commitment also in pedagogy. As knowledge that guides practice, it is called to support the world of education and universities so that they can rethink their role, their responsibilities (for people, knowledge and democratic society)<sup>38</sup>, and their political, civil and civic positioning. The greater the awareness that universities and the world of education will have of this role, the greater change they can generate.

The role that the University must play, in an authentically democratic and sustainable society, in its function as TM

«It requires a collective reflection on the entire structure of the training systems, within which the University (in synergy with the other training agencies) can recover a cultural value and a vocational value, coming out of the market logic that enslaved it and supporting young people in a process of cultural and human growth that allows them to best express their potential»<sup>39</sup>.

TM is a public citizenship function of the university. Through TM, the University places itself at the service of the Common Good, where the territory becomes a «political laboratory for social, political, economic and educational innovation»<sup>40</sup>. Through TM, the University can become 'militant' in that

«Committed, involved in advancing man and science by contributing to improve human conditions and development, to raise the ethical and spiritual level, to cooperate to improve the living conditions of the most oppressed humanity, increasing critical consciousness and forming free consciences»<sup>41</sup>.

The civic role of the University has returned to attention in recent months, also by virtue of the requests contained in Call VQR-TM 2015-2019 published by ANVUR<sup>42</sup>, and it is a role that can manifest itself on two distinct levels:

1. On the individual level, which is expressed in the capacity of those who make up the academic community to be witnesses in the reference context.
2. On the institutional level, which asks us to look at how the University stands with respect to the outside world, to the context, how it communicates in order to try to



modify and propose measures for the political agenda (in this case it is the University that leads the political agenda and not the latter to 'impose' a research question, as unfortunately still often happens).

But the University can rediscover its civic role if it acts freely and responsibly, if it always questions itself about the good and evil of what it does or would like to do<sup>43</sup>, to train informed and aware citizens, able of understanding political and social dynamics and making informed decisions, able to choose among all possible future scenarios, the most desirable ones. The creation, for example, of spaces for dialogues on problems that have to do with the city they live in, striving to co-construct solutions, can be a device to facilitate the recovery of the civic and political role of the University. It is a question of rediscovering that the space of education is the relationship itself<sup>44</sup>, that «the educational experience is a civil experience that forms citizenship»<sup>45</sup>.

The civic function places universities in front of a series of new challenges that are generated in societies both locally and globally: being able to mobilize their resources to face the most important challenges of the present and support communities in order to thrive in times of rapid transformation is one of the most mandatory functions to which a civic university is called.

In the model developed by Goddard<sup>46</sup>, the civic university is a university that feels its responsibility towards the whole society (Fig. 1). Universities are considered, especially in the presence of weaker economies, as 'anchoring'<sup>47</sup> institutions as they can make available countless skills that express the different disciplinary sectors and different knowledge. However, civic universities, adopting the paradigm of open innovation, that is

«a new paradigm based on a Quadruple Helix Model where government, industry, academia and civil participants work together to co-create the future and drive structural changes for beyond the scope of what any organization could do alone. This model encompasses also used-oriented innovation model to take full advantage of ideas' cross-fertilisation leading to experimentation and to prototyping in real world setting»<sup>48</sup>,

recognize the centrality of all the actors of the university and territorial community. Businesses and institutions ask for skills from the University but allow the former to be able to experience and experiment with innovation; students bring knowledge and ideas to the structures and realities in which they do their curricular internship but, at the same time, they represent an opportunity for connection between the outside world and the University they attend and the teachers who are their internal reference at the University.

Goddard, Hezelkorn, Kempton and Vallance have proposed a specification of Goddard's civic university model. This specification integrates teaching, research, and engagement

with external reality where each component does not dominate but enhances the other<sup>49</sup>. This is a model that attributes<sup>50</sup> seven dimensions to civic university:

1. it is actively engaged in the social context and with the local community in which it is inserted.
2. its engagement involves a holistic approach that involves the entire institution, not just a part of it.
3. it has a strong sense of place and this allows it to develop a specific characterization.
4. it has a purpose: not only to understand what the University is able to do well but also what is appropriate and suitable for the University to do.
5. it is willing to invest to have an impact beyond the purely academic sphere.
6. it is responsible and accountable to stakeholders and to the community more generally.
7. it uses innovative methodologies such as team building and social media in engagement activities.

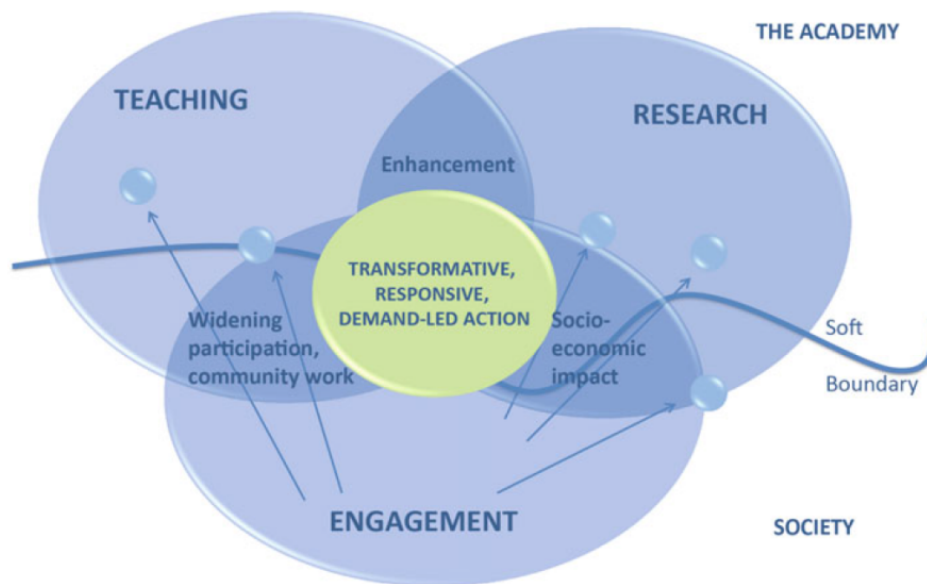


Fig. 1 - The civic university. Source: Goddard, 2018, p. 363.

In order to 'explode' their civic and transformative capacity, universities need a territory, institutions, local governments able of accompanying them in this process (also in this case 'no one saves himself alone'). Moreover, without a favorable socio-institutional, formative, and territorial background, Silicon Valley would hardly exist today.

The territory and the community are not only the recipients of what is produced by the universities and their teachers but subjects who express needs and expectations to be listened to and from which each university can measure its commitment in terms of

ethics and responsibility: «Universities might even become spaces of resistance and so promote social changes that both reflect and promote values of democracy, justice and equity»<sup>51</sup>. In this perspective, the civic university is also transformative in that

«attempts to transform the world so as to live under democratic values of freedom, inclusion, equality and justice. It is a university that contends with the status quo and the establishment and that promotes within and outside its walls a more equal society in which citizens can express a diversity of visions and values»<sup>52</sup>.

In it there are pedagogical spaces where students are no longer considered exclusively as consumers of knowledge but become producers of the same because together with other components of the university community, they question themselves about existing problems and work in order to identify possible solutions, also on the issues of sustainable development. The University thus becomes «a dialogue and reticular space that allows the creativity of teachers and students to be transformed into widespread cultural innovation»<sup>53</sup>. Emblematic, in this sense, is the case of the Green Offices of Students who were born in some European and Italian universities which should also be observed from a TM perspective<sup>54</sup>.

For the university, recovering its civic and transformative role is not a predictable and simple task but is, today more than ever, indispensable and needs and «urges to explore new avenues for pedagogical planning»<sup>55</sup>. In the context of the knowledge society, university policies are called upon to create the conditions so that, also through TM, each person can fully develop their potential and contribute to the development of society. It is a University that promotes the person, that favors community empowerment that brings with it an innovative vision of University development that allows to activate the level of participation and interdependence between people and to promote the idea of an institution tertiary training as an open organization, as a place to exchange stimuli and resources with the reference social, economic, environmental, cultural, educational context<sup>56</sup>.

### **Conclusions or the TM for the recovery of the educational role of the University**

As for all the other institutions of the 197 signatory countries of the 2030 Agenda, also for the Universities the Sustainable Development Goals represent an action plan whose aim is to transform the world by acting for the benefit of people, planet, peace, future prosperity, and partnership<sup>57</sup>. The more the values underlying sustainability become a widespread culture among all components of the university community, the greater the impact that universities can have on the sustainable development of the area. For this

reason, education is central in the discourse of sustainability and for this reason a «general rethinking of the pedagogical discourse» is required<sup>58</sup>.

The challenge of sustainability, in particular, can be counted among those for which the TM of universities is asked for greater commitment and unprecedented attention. Those shall be dedicated to identify policies with a long-term vision that imply the involvement of stakeholders, the dissemination the culture of sustainability, the co-creation of solutions for problems of great importance (climate change, loss of biodiversity, fight against inequalities, digital citizenship, intergenerational justice) in the perspective of Trencher Fourth Mission. Promoting TM policies attentive to the present and projected into the future means, for universities, dealing with people and with the concrete requests that come from the local and global territory, from the economic and political world but also with issues concerning aspects such as personal well-being, the right to education, democratic life, citizenship education<sup>59</sup>. This implies for universities to think of themselves as Goddard's civic university where TM is a perceived and acted responsibility towards society and the territory. A TM that promotes social engagement and that wants to contribute to the well-being of the territory is a TM that believes in the need of universities to recover their function and their educational vocation, as well as teaching and training.

The University, in fact, responsible for training future citizens, politicians, decision-makers and professionals, is called to take a more challenging step towards sustainability, addressing an open reflection on its impact from the educational point of view, in the knowledge that the training provided by universities must respond more closely to the demands of a rapidly changing society and a world of work that requires professionals not only with specific disciplinary skills, but framed in a systemic perspective, also based on knowledge of transversal and transdisciplinary aspects. This requires, first of all, the University to provide each student, regardless of their specialization, the possibility of carrying out educational programs focused on sustainability, also in view of the fact that the world of work is increasingly looking for graduates with professional knowledge, skills and skills related to this area.

Faced with a change of course not only considered necessary, but now advocated by many, there are still numerous evidences of initiatives/projects/activities that still move on the basis, often implicit, that high-quality training/information on the emergencies of the planet and/or sustainability is sufficient to guarantee new generations aware and ready for that much desired change. This form of education to/on sustainability, which considers the inclusion of sustainability issues and themes as sufficient within existing training paths, cannot be considered the only contribution to sustainability provided by the academic world at the educational level, whose the aim should instead be to train the «citizens of sustainability»<sup>60</sup>. In this perspective, education for sustainability will also be

asked to undertake to rethink overall tertiary training: from teaching to research and TM, from management to leadership, from the role of students and teachers to governance<sup>61</sup>. TM, where training and research meet with civil society, can represent the place for the reconstruction of social values through which we undertake to work to favor the direct application, enhancement and use of knowledge to contribute to develop sustainable, cultural, and economic society. Finally, to learn to be able to imagine the future and to «to contribute to the emergence of a new way of thinking that is the background to an action inspired by the principle of living wisely the Earth»<sup>62</sup>.

GABRIELLA CALVANO

*Università degli Studi di Bari*

<sup>1</sup> European Commission, The role of universities in the Europe of knowledge, com., 58/2003, Brussels 05.02.2003. In <https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2003:0058:FIN:IT:PDF>. Last online consultation on 2nd January 2021.

<sup>2</sup> V. Martino, *Terza Missione e cultura delle università. Note per una sociologia del patrimonio accademico*, «Rivista Trimestrale di Scienza dell'Amministrazione», 1 (2018), p. 6.

<sup>3</sup> M. Striano, *Università oggi: problemi aperti*, «Studi sulla Formazione», 22 (2019), p. 47.

<sup>4</sup> M. Baldacci, *Per un'idea di università*, «Metis», 6 (2014), pp. 18-22.

<sup>5</sup> M. Weber, *La scienza come professione*, Bompiani, Milano, 2008, p. 71.

<sup>6</sup> H. Etzkowitz, L. Leydesdorf, *The Dynamics of Innovation: From National Systems and «Mode 2» to a Triple Helix of University – Industry – Government Relations*, «Research Policy», 29 (2000), pp. 109-123.

<sup>7</sup> ANVUR, *Rapporto sullo stato del Sistema Universitario e della Ricerca 2013. II.2.3 – La Terza Missione nelle Università*, 2013, p. 559. In [http://www.anvur.it/attachments/article/882/8.Rapporto%20ANVUR%202013\\_UNI-.pdf](http://www.anvur.it/attachments/article/882/8.Rapporto%20ANVUR%202013_UNI-.pdf). Last consultation on 31<sup>st</sup> December 2020.

<sup>8</sup> A. Perulli, *La «Terza Missione» degli accademici: cosa si intende e cosa si fa*, in A. Perulli, F. Ranella, M. Rostan, R. Semenza (a cura di), *La Terza Missione degli accademici italiani*, il Mulino, Bologna 2018, pp. 22-23.

<sup>9</sup> H. Etzkowitz, A. Webster, C. Gebhardt, B.R.C. Terra, *The Future of the University and the University of the Future: Evolution of the Ivory Tower to Entrepreneurial Paradigm*, «Research Policy» 29 (2000), pp. 313-331.

<sup>10</sup> A. Perulli, *La «Terza Missione» degli accademici: cosa si intende e cosa si fa*, cit., p. 29.

<sup>11</sup> *Ibi*, p. 31.

<sup>12</sup> M. Morcellini, *Comunicare l'Università che cambia*, in A. Lezzi (a cura di), *La comunicazione da strumento a strategia: il fundraising e il bilancio sociale. Atti Forum AICUN 2007*, Martano Editrice, Lecce 2007, pp. 21-29.

<sup>13</sup> M. Binotto, S. Nobili, *Università italiana e Terza Missione*, in M. Morcellini, P. Rossi, E. Valentini, *Unibook. Per un database sull'Università*, Franco Angeli, Milano 2017, p. 200.

<sup>14</sup> *Ibi*, p. 205.

<sup>15</sup> Consiglio Europeo, *Strategia di Lisbona. Conclusioni della Presidenza*, Lisbona 23-24 marzo 2000. In [https://www.europarl.europa.eu/summits/lis1\\_it.htm](https://www.europarl.europa.eu/summits/lis1_it.htm). Last consultation on 30th November 2020.

<sup>16</sup> M. Gibbons, C. Limoges, H. Nowotny, S. Schwartzman, P. Scott, M. Trow, *The New Production of Knowledge: The Dynamics of Science and Research in Contemporary Society*, Sage, London 1994.

<sup>17</sup> P. Cooke, *Regional Innovation Systems, Clusters and Knowledge Economy*, «Industrial and Corporate Change», 10 (2001), pp. 945-974.

<sup>18</sup> W.W. Powell, K. Snellman, *The Knowledge Economy*, «Annual Review of Sociology», 30(2004), pp. 199-220.

<sup>19</sup> M. Baldacci, *Per un'idea di università*, cit. p. 21.

<sup>20</sup> I. Loiodice, *L'università per la formazione iniziale e continua e per l'orientamento permanente*, in I. Loiodice, D. Dato, *Orientare per formare. Teorie e buone prassi all'università*, Progedit, Bari 2015, p. 10.

<sup>21</sup> United Nations, *Transforming our World: The 2030 Agenda for Sustainable Development*, 25<sup>th</sup> September 2015. In <https://sustainabledevelopment.un.org/content/documents/21252030%20Agenda%20for%20Sustainable%20Development%20web.pdf>. Last consultation on 3<sup>rd</sup> January 2021.

- <sup>22</sup> S. Talwar, A. Wiek, J. Robinson, *User engagement in sustainability research*, «Science and Public Policy», 38 (2011), pp. 379-390.
- <sup>23</sup> J.C. Stephens, M. Romàn, A.C. Graham, R.W. Scholz, *Higher education as a change agent for sustainability in different cultures and contexts*, in «International Journal of Sustainability in Higher Education», 9 (2008), pp. 317-338.
- <sup>24</sup> D.B. Audretsch, *From the Entrepreneurial University to the University for the Entrepreneurial Society*, «The Journal of Technology Transfer», 39 (2012), 313-321; B.R. Clark, *Delineating the Character of the Entrepreneurial University*, in «Higher Education Policy», 17 (2004), 355-370.
- <sup>25</sup> J. Goddard, P. Vallance, *The University and the City*, Routledge, London 2013.
- <sup>26</sup> A. Vischi, *Alta formazione ed ecologia integrale*, in C. Giuliodori, P. Malavasi (a cura di), *Ecologia integrale Laudato si. Ricerca, formazione, conversione*, Vita & Pensiero, Milano 2016, p. 104.
- <sup>27</sup> Officially from 1987 by the publication of *Our Common Future*, also known as Brundtland Report, but specifically in 1968 when the Club of Rome was born and the publication in 1972 of report called *Limits of growth*.
- <sup>28</sup> [https://ec.europa.eu/info/sites/info/files/research\\_and\\_innovation/strategy\\_on\\_research\\_and\\_innovation/presentations/horizon\\_europe\\_en\\_investing\\_to\\_shape\\_our\\_future.pdf](https://ec.europa.eu/info/sites/info/files/research_and_innovation/strategy_on_research_and_innovation/presentations/horizon_europe_en_investing_to_shape_our_future.pdf). Last consultation on 3rd January 2020.
- <sup>29</sup> G. Calvano, *Educare per lo sviluppo sostenibile. L'impegno degli Atenei italiani. Esperienze in corso e buone pratiche*, Aracne Editrice, Roma 2017.
- <sup>30</sup> N. Paparella, *A proposito di terza missione: una nuova versione del modello della tripla elica*, in C. Formica (a cura di), *Terza Missione. Parametro di qualità del sistema universitario*, Napoli: Giapeto Editore, Napoli 2014, p. 27.
- <sup>31</sup> S. Boffo, R. Moscati, *La Terza Missione dell'Università. Origini, problemi, indicatori*, in «Scuola Democratica», 2 (2015), pp. 263-264.
- <sup>32</sup> C. Trencher, M. Yarime, K.B. McCormick, C.N.H. Doll, S.T. Kraines, *Beyond the Third Mission: Exploring the emerging university function of co-creation for sustainability*, «Science and Public Policy», 41 (2014), p. 152.
- <sup>33</sup> *Ibidem*.
- <sup>34</sup> *Ibi*, pp. 157-158.
- <sup>35</sup> A.D. Cortese, *The critical role of higher education in creating a sustainable future*, in «Planning for higher education», 31(2003), pp. 15-22.
- <sup>36</sup> M.G. Riva, *Sostenibilità e partecipazione: una sfida educativa*, «Pedagogia Oggi», 1 (2018), pp. 34 - 50.
- <sup>37</sup> OECD, *Fostering Innovation to Address Social Challenges. Workshop Proceedings*, 2011. Available online at <https://www.oecd.org/sti/inno/47861327.pdf>. Last consultation on 30th December 2020.
- <sup>38</sup> J.C. De Martin, *Università futura. Tra democrazia e bit*, Codice Edizioni, Torino 2017.
- <sup>39</sup> M. Striano, *Università oggi: problemi aperti*, cit. p. 49.
- <sup>40</sup> L. Milani, *L'Università: un Bene Comune per il Bene Comune*, «Metis», 7 (2017), p. 9.
- <sup>41</sup> *Ibi*, p. 7.
- <sup>42</sup> <https://www.anvur.it/attivita/vqr/vqr-2015-2019/>. Last consultation on 3rd January 2021.
- <sup>43</sup> G. Bertagna, *Per un sistema superiore dell'istruzione e della formazione. Ritardi, urgenze, prospettive*, in «Formazione Lavoro Persona», 12 (2014), p. 21.
- <sup>44</sup> J. Dewey, *Democrazia e educazione. Intorno alla filosofia dell'educazione*, Anicia, Roma 2018.
- <sup>45</sup> L. Montedoro, G. Pasqui, *Università e Cultura*, Maggioli Editore, Santarcangelo di Romagna 2020, p. 64
- <sup>46</sup> J. Goddard, *The Civic University and the City*, in P. Meusburger, M. Hefferan, L. Suarsana (Eds), *Geographies of the University*, Springer, Cham 2018, pp. 355-373.
- <sup>47</sup> J. Goddard, M. Coombes, L. Kempton, P. Vallance, *Universities as anchor institutions in cities in a turbulent funding environment: vulnerable institutions and vulnerable place in England*, in «Cambridge Journal of Regions, Economy and Society», 7 (2014), pp. 307-325.
- <sup>48</sup> European Commission, *Digital single market: Open Innovation 2.0*, Bruxelles 2015, in <https://ec.europa.eu/digital-single-market/en/news/open-innovation-20-yearbook-2015>. Last consultation on 15th December 2020.
- <sup>49</sup> J. Goddard, E. Hezelkorn, L. Kempton, P. Vallance (Eds), *The civic university: The policy and the leadership challenges*, Elgar, London 2016.
- <sup>50</sup> J. Goddard, *The Civic University and the City*, cit. pp. 362-363.
- <sup>51</sup> C. Guzmán-Valenzuela, *Unfolding the meaning of public(s) in universities: toward the transformative university*, in «Higher Education», 71 (2016), p. 673.
- <sup>52</sup> *Ibidem*.
- <sup>53</sup> U. Margiotta, *Innovazione. Un'idea per l'Università del XXI secolo*, «Metis», 6 (2014), p. 46.
- <sup>54</sup> G. Calvano, A. Paletta, A. Bonoli, *How the Structures of Green Campus Promotes the Development of Sustainability Competences. The Experience of the University of Bologna*, in W. Leal Filho, U. Bardi (eds.), *Sustainability on University Campuses: Learning, Skills, Buildings and Best Practice*, Springer, Cham 2019, pp. 31-44; G. Calvano, *Shared Learning and Sustainability Commitment. The Green Office of University of Bologna*, «Metis», 8 (2018), pp. 249-258.
- <sup>55</sup> Malavasi P. (a cura di), *Progettazione educativa sostenibile. La pedagogia dell'ambiente per lo sviluppo umano integrale*, EDUCatt, Milano 2010, pp. 68-69.
- <sup>56</sup> E. Del Gottardo, *La terza missione come creazione di valore pubblico. Attività conto terzi: lavorare con le competenze non formali e informali*, in C. Formica (a cura di), *Terza Missione. Parametro di qualità del sistema universitario*, Napoli: Giapeto Editore, Napoli 2014, pp. 109-129.
- <sup>57</sup> United Nations, *Transforming our world: the 2030 Agenda for Sustainable Development*, cit.
- <sup>58</sup> L. Mortari, *Pedagogia ecologica, educazione al vivere sostenibile*, «Pedagogia Oggi», 1 (2018), p. 17.
- <sup>59</sup> U. Margiotta, *Teorie della formazione. Nuovi orizzonti della Pedagogia*, Carocci, Roma 2015.

<sup>60</sup> A.E.J. Wals, *Beyond Unreasonable Doubt. Education and Learning for Socio-ecological Sustainability in the Anthropocene*, Wageningen University, Wageningen 2015; A. Leicht, J. Heiss, W.J. Byun, *Issues and trends in Education for Sustainable Development*, Unesco Publishing, Paris 2018.

<sup>61</sup> Unesco, *UNESCO Roadmap for Implementing the Global Action Programme on Education for Sustainable Development*, Unesco Publishing, Paris 2014.

<sup>62</sup> L. Mortari, *Pedagogia ecologica, educare al vivere sostenibile*, cit., p. 18.