

CHAPTER

Universities as drivers of societal development?

Michael O. Hengartner and Anna Däppen

Research and teaching have always been the two core missions of universities. But, central as they are, they only cover part of the spectrum of activities of modern universities. Indeed, urgent global challenges and the ongoing transformation of societies from agricultural to industrial to knowledge-based economies, have increased the public interest in profiting from academia also in other areas, including for example the transfer and exchange of knowledge (Ribeiro *et al.*, 2018). Universities are thus increasingly expected to actively promote interactions with industry and the society at large. These activities are often referred to as the “third mission” of universities (Etzkowiz & Leydesdorff, 2000).

The notion that universities can be agents of economic and societal development is, of course, not new; it had already emerged in Germany during the 19th century (Ribeiro *et al.*, 2018). History provides beautiful examples of the potential of universities to act as drivers of societal development, and many studies have confirmed the positive impact that can be generated by academic institutions (Blume, Brenner & Buenstorf, 2017).

THE THIRD MISSION

How broadly should this third mission be defined? That universities can contribute to the economic development of the surrounding community is undeniable. A recent study conducted by the League of European Research Universities (LERU, 2017) showed for example that the University of Zurich generated in 2016, directly and indirectly, more than €5 billion of economic activity and that almost 50,000 jobs depended, directly or indirectly, on the

university. Furthermore, the University of Zurich holds over 300 active patent families and founds a spin-off company based on an UZH patent on average every other month, making UZH an important player within the regional innovation system. In recent years, observers worldwide have noted the significant influence of universities as knowledge providers on regional and national innovation and entrepreneurship (Blume, Brenner & Buenstorf, 2017). It is important to note that the fruitful transfer of knowledge and technology is not a one-way street, but rather a co-production process (van den Akker & Spaapen, 2017). Only then can innovations be successfully implemented outside academia. Hence, frameworks supporting an active exchange of ideas between science and society are of fundamental importance.

To reduce universities' impact within society to "simple economic metrics" (Benneworth, 2015) represents however a far too narrow view. While the promotion of economic development through cooperation with industry or the generation of spin-off companies is widely accepted and promoted, universities can also impact their communities in non-economic terms, including developments at the infrastructure and cultural levels. Thus, more and more, universities are expected to act as drivers of overall societal development by actively generating a variety of societal benefits (van den Akker & Spaapen, 2017). According to Paul Benneworth *et al.* (2019), there is actually a "myriad of ways in which universities contribute to changing the world by equipping civic society with new ideas, challenging injustice and reflecting on past failures, by creating platforms for silenced voices and supporting the development of better policies and better democracy".

As proposed by Chrys Gunasekara (2006), it might thus be helpful to differentiate between the different types of activities performed by universities. The previously mentioned knowledge capitalization of universities through activities such as licensing and spin-offs can be seen as a generative role that directly creates growth opportunities and which is mainly economic in nature. On the other hand, universities also play an indirect systemic capacity-building role, for instance by providing informed and unbiased analysis and information, thus contributing to the development of institutional and social capacities (Gunasekara, 2006). According to Gunasekara, this second role of universities can be characterized as developmental, going beyond the direct influence on economic growth.

It is not least based on the consideration that universities "can engage with and stimulate social innovation processes" (Benneworth & Cunha, 2015) that the University of Zurich (UZH) operates more than a dozen museums, botanical gardens and scientific collections, which are free and open to the public. They represent an important part of UZH's societal engagement, attracting more than 250,000 visitors per year.

UZH also offers a large collection of free lectures and panel discussions, including separate lecture series aimed at children, seniors and the general public. These activities generate an environment of openness where a broad variety of issues can be discussed and critically assessed. It is the right of free inquiry and freedom of speech, ultimately tied to the concept of academic freedom, which makes universities the predestined actors to foster openness and public engagement (Tierney & Lechuga, 2010). As part of its public lecture series, UZH regularly invites renowned personalities to present their views on a certain topic. Up until now, many important, but also controversial, thought leaders and politicians have spoken at UZH, among them Sir Winston Churchill, or more recently, the former president of the European Commission, Jean-Claude Juncker, Petro Poroshenko, (then) president of the Ukraine, or the Polish president Andrej Duda.

All these various activities of course require significant resources. However, we are convinced that they are a good investment, particularly since in Switzerland only about 20% of an age cohort go to university. By providing an open platform for discussion, UZH aims at contributing to the evolution of society as a whole by promoting a differentiated view on the world — something that is essential to the functioning of modern democratic and pluralistic societies.

Universities can also promote societal development through their core mission of teaching. By preparing their students to become informed and responsible members of society and by educating the thought leaders of tomorrow, universities are able to develop considerable transformative potential.

DEVELOPMENTS IN SOCIETY

Many important developments in society had their roots in student movements, one need only think of the far-reaching consequences of the protests in 1968. Universities can thus also facilitate societal development by encouraging and supporting student engagement. UZH has a long history of successfully promoting bottom-up student initiatives. In recent years, students at our institution have for example launched the Zurich sustainability week, an initiative to promote an ecologically friendly and sustainable lifestyle, or the Refugees@UZH Program, inviting refugees to attend lectures as guest auditors and eventually helping them prepare for a later application at UZH.

Last but not least, universities can of course influence society through the promotion of research on socially relevant themes. As free and independent institutions, universities have a unique capacity to analyse global challenges

in all their dimensions and to offer solutions that take into consideration all relevant aspects of a problem. What is more, as places where many different perspectives meet, universities can provide a balanced view on potential risks and opportunities of developments such as technological change or digitalization. This consideration led UZH to launch a university-wide Digital Society Initiative (DSI) in 2016. DSI fosters interdisciplinary research on digitalization and promotes the dialogue with different stakeholders from inside and outside academia. Through their research, members of the DSI aim in particular at raising awareness of the effects and potential risks of a rapidly changing societal reality.

Of course, not every societal change is positive, and not every status quo is bad. Academic research can on occasion generate positive impact simply by acting as a stabilizing and integrating force within society. For example, the University of Zurich maintains a professorship of Romansh language and culture. Romansh, a descendent of Latin, is spoken by about 60,000 people living in a handful of valleys in the Swiss Alps. Although less than 1% of the Swiss population speaks Romansh today, it is one of the four official languages in Switzerland. Thus, although the small number of students speaks against it from an economic point of view, this professorship provides an important academic anchor for a language and a culture that represent an integral part of Swiss history and identity, the preservation of which is important for the cultural and national cohesion of the country.

TO SUPPORT OR TO DRIVE?

From the above, it is clear that universities definitively can, through their various activities, impact societal change. The final question that needs to be addressed is whether universities should act in a supportive role, helping society achieve changes that it deems worthwhile, or whether universities should aim to be in the driver's seat, set the developmental agenda for society and then spearhead these changes. While the latter would be intellectually attractive, it would, in our opinion, be counterproductive. The mission of public universities is to support society, not to boss it around, no matter how well-intentioned the bossing around might be.

This is not to say that universities never change society. But, ironically, history suggests that in many of the cases where universities did drive societal changes, these were not planned, but rather inadvertent side-effects of internal developments that were meant to only affect the university itself. As an illustration of this point, let us analyse two examples from the history of the University of Zurich (UZH), in which internal, "academic" decisions on how the university operates led to significant changes in Swiss society.

Being a country with few natural resources and an early industrialization, Switzerland became a comparatively early knowledge society and the establishment of institutions of higher education was seen as being of great public interest. The development of Swiss universities is in general closely linked to the development of the societies they are part of. This is particularly true for the University of Zurich, which opened its doors in 1833 as one of the first universities in Europe to be founded by a democratic state and not by a monarch or the church. In other words, UZH was founded “through the will of the people” and in response to public needs. The close relationship between the University and the community in which it is embedded explains why, at several points in history, university affairs gave inputs for lasting societal transformation. This was the case, for example, in 1839 when the appointment of the very liberal German theologian David Strauss to the Faculty of Theology of UZH caused great waves outside academia. The more conservative parts of the population who saw the old religious order endangered raised vehement protests against the appointment. On 6 September 1839, several thousand people stormed the city of Zurich, where a battle erupted between the protesters and the army, leading to 15 deaths and many injured. The liberal government, in disarray, was ousted and replaced by a conservative “provisional” government which held power for six years. The event was later referred to as the “Züriputsch”, making the Swiss German word “putsch” an official German term to designate an uprising or coup d’état.

The graduation of female Russian student Nadezhda P. Suslova from the University of Zurich in 1867 is another example of how universities’ actions can eventually initiate societal change. During most of the 19th century, women’s rights to education were very limited throughout Europe. As a rule, only men were admitted to universities. There were a few exceptions, however. Following the lead from the University of Paris, the University of Zurich became the second university to allow women to study from the 1860s onwards. As there was no written law explicitly prohibiting the admission of female students, the president of UZH of the time took a pragmatic approach and allowed women to take up their studies at the University of Zurich. Over the following years, UZH attracted many young women, a large number coming from Russia, where previous reforms to girls’ education had given women access to higher education, but without allowing them to pursue an academic degree.

Nadezhda Suslova was the first woman in history to formally enrol at UZH. In 1867, she graduated with a doctorate in medicine — the first woman ever to receive a doctoral degree in a German-speaking country. Suslova’s pioneering achievement opened Swiss universities’ doors to women. In 1872, merely five years after her graduation, women made up more than 30% of the registered student population at UZH, illustrating the lasting influence

of Nadezhda Suslova's matriculation and graduation. Suslova's success initiated an irreversible — but originally unintended — development towards equal opportunities at Swiss universities and, through the professional, social and political activities of the female university graduates, also within Swiss society.

So how are we to answer the question addressed in the title of this contribution — are universities drivers of societal development? The answer is likely both a yes and a no. Universities' actions can indeed have profound influence on societal development. Some of them change society, others stabilize it or can even take it backwards. However, the two examples above also highlight the limited control that universities have on their actions' impact within society. To fully anticipate and control the consequences of university affairs and of scientific innovation is hardly possible. In most cases, only history will reveal the ultimate effects — be they positive or negative — of scholarly actions and decisions.

CONCLUSION

In summary, while the fundamental importance of academia's commitment to society cannot be denied, prioritizing societal impact at any cost and in every domain is likely not the most effective approach. In the face of limited financial resources and time, university leaders should set clear priorities, focusing on those areas where they can actively influence the outcome of their activities. Not surprisingly, these will often be areas corresponding most closely with the genuine strengths of academia, namely research and teaching. Therefore, we propose that universities should not strive to actively "drive" societal development. Rather, they should focus on their core business in the areas of research and teaching, thus providing the necessary basis for transformative scientific discoveries, education for qualified graduates and the means for successful science-society relationships. In short, it is by fostering excellence in research and teaching that universities can most effectively serve the interests of society and generate positive impact.

REFERENCES

- Benneworth, P. (2015). "Tracing how arts and humanities research translates, circulates and consolidates in society. How have scholars been reacting to diverse impact and public value agendas?" *Art and Humanities in Higher Education*, 14 (1), pp. 45-60.
- Benneworth, P. & Cunha, J. (2015). "Universities' contributions to social innovation: reflections in theory & practice". *European Journal of Innovation Management*, 18, pp. 508-527.

-
- Benneworth, P., Fitjar, R. D., Fonseca, L., Manrique, S. & Nguyen, H. T. (2019). Special Issue Information. Online: https://www.mdpi.com/journal/socsci/special_issues/Universities_Contributions_Societal_Development (Accessed 23 July 2019).
- Blume, L., Brenner, T. & Buenstorf, G. (2017). "Universities and sustainable regional development: introduction to the special issue". *Review of Regional Research*, 37, pp. 103-109.
- Etzkowitz, H. & Leydesdorff, L. (2000). "The Dynamics of Innovation: From National Systems and 'Mode 2' to a Triple Helix of University-Industry-Government Relations". *Research Policy*, 29, pp.109-123.
- Gunasekara, C. (2006). "Universities and associative regional governance: Australian evidence in non-core metropolitan regions". *Regional Studies* 40 (7), pp. 727-741.
- LERU (2017). "The economic impact of the LERU universities". Online: <https://www.leru.org/news/the-economic-contribution-of-leru-universities-2016>
- Ribeiro, B., Bengtsson, L., Benneworth, P., Bühner, S., Castro-Martínez, E., Hansen, M., Jarmai, K., Lindner, R., Olmos-Peñuela, J., Ott, C. & Shapira, P. (2018). "Introducing the dilemma of societal alignment for inclusive and responsible research and innovation", *Journal of Responsible Innovation*, 5: 3, pp. 316-331.
- Tierney, W. G. & Lechuga, V. M. (2010). "The Social Significance of Academic Freedom". *Cultural Studies ↔ Critical Methodologies* 10 (2), pp. 118-133.
- van den Akker, W. & Spaapen, J. (2017). "Productive interactions: societal impact of academic research in the knowledge society", LERU position paper, March 2017.