Science and Social Responsibility – Heritage and Mission

Godehard Ruppert

I

In his poem “The Garden of Theophrastus” of 1962, dedicated to his son, Peter Huchel writes “remember those who once planted their conversations like trees.” This is a nice bit of advice from father to son, but it holds an even greater meaning.

Theophrastus, the great logician and botanist, was Aristotle’s student and successor, and thereby heir to a kind of intellectual tradition that more than any other cultivated the art of conversation as a means of seeking the truth. It also marks the beginnings of a development towards the European academic tradition.

At the outset of modern science, it was, as it may have been in antiquity, still possible to engage in direct conversation. The arenas of science and learning were like villages: face to face societies where every scholar was well acquainted with the other and their work. But, the villages of academia grew to become cities. Observers at the time commented that the transformation of the sciences, research and learning was happening at an industrial scale with the trend going towards large research and teaching institutions whose organisational structures were based on division of labour principles. Direct conversation and discussion would necessarily have to fall by the wayside in these structures. This development simultaneously and inevitably fostered the creation of disjointed communicative spheres, which barred society as a whole from participating.

Academic development itself pushed in this direction. Modern academic knowledge is synonymous with specialised knowledge. This specialised knowledge cannot be attained without the development of subject-specific jargon. Not only does this ultimately exclude the interested layperson from participating in academic discussion, it also makes communication across disciplinary borders increasingly difficult.

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During the past 20 years, we have witnessed a passionate discussion in many countries about higher education systems. The main reason for this is that the number of students has grown enormously in the recent decades, while the number of university faculty has not matched this growth, and apart from this, university finances are insufficient.

II

A common phrase used in discourses on higher education policy goes as follows: The modern university is founded on the heritage of Wilhelm von Humboldt. Surely, there were others as well – like Schleiermacher – who is, especially outside of Germany, seldom, if ever mentioned.

In the US, modern universities, i.e. those that combine research and teaching, have existed since the last quarter of the 19th century. Whereas today, it is often said that the Humboldtian University in Germany has ceased to exist, representatives of the leading universities in the USA refer to the heritage of Humboldt and attribute the success of the Western universities to his ideals. How can these different views be accounted for? What, in Humboldt's eyes, are the essential qualities of a university that would merit the foundation of a university? As a result of the French revolution, the universities in France were dissolved and reappeared only later following the reorganisation of the educational system, including the replacement of universities by schools for specific professions. The Prussian King Friedrich Wilhelm III also followed the widespread ideas of the Enlightenment. This meant that the universities, with their corporate autonomy, were considered relics of the so-called dark Middle Ages and were replaced by state-controlled university-schools for advanced studies. In 1801, Friedrich Wilhelm explicitly demanded that the Royal Academy for Construction, which was founded in Berlin, instruct "practical workers for construction and not professors".

Indeed, the traditional university of the Middle Ages prepared students only for the profession of a scholar or a teacher. The Baccalaurean had to learn to teach under the supervision of the Magister. Through promotion to Magister and Doctor, as expressed in the titles, he was recognised as an autonomous teacher and was granted the right to teach. But, ever since the founding of the first universities in the early 13th century, the combined concept of learning and teaching, that is, the method of searching for truth through reason, has proven to be an excellent training for the rational mastering of other public tasks as well. Under the influence of Humanism, theoretical efforts to gain scientific knowledge became secondary to training for public service. Schools for military and veterinary professions, as well as academies for construction and mining were founded in addition to universities.

Wilhelm von Humboldt was an opponent of this development. He convinced the king that the renewal of state and society could not be achieved by mere professional training in specialised higher education facilities, but that it depended on a revival of scientific training. For this purpose, the university was believed to be the best option. The special role Humboldt foresaw for the university was that it should concern itself with the sciences to solve problems with the help of research; professional schools, in

contrast, dealt with accepted knowledge. In order to achieve its aims, the university required freedom. In terms of practical life, the students were to live closely together with their peers having similar ways of thinking, as well as in proximity to scholars and teachers devoted to their disciplines. This social-cultural aspect, and not the mere listening to lectures, was perceived as the foremost goal of the university. The state's role was to restrict itself to creating favourable conditions in support of such endeavours. Therefore, the newly founded universities were not only designed as teaching institutions but also as corporations equipped with essential rights. The most decisive right granted was freedom of research and teaching, which was added to the right of awarding academic degrees and the right to self-administration of academic affairs.

The university is both a consequence and driving force in the process of rationalisation and urbanisation. Up to the First World War, most of the German population, for example, had professions in agriculture, trade and industry. Only a few required a scientific education. However, in the modern information society, scientific knowledge is necessary for most professions. Today, we need an education system which gives large parts of the population access to scientific knowledge, not only for professional use but also for a better understanding of the world at large.

We should never forget: Universities have other tasks than guaranteeing ever-changing and highly specialised instruction. Universities should never transform into something like vocational high schools; that would be non-profitable in economic terms and, moreover, nothing less than dangerous. The success and appeal of a higher education system do not depend on the quantifiable results of particular disciplines. The humanities face more difficulties in this regard than the natural or technical sciences.

The teaching of ready-made knowledge – as Humboldt was quite right to say – is typical of schools, while the classic university always “remains in a state of research”. It is one of the fundamental tasks of the university to criticise established knowledge in order to confirm, correct, expand or replace it with new knowledge.

It is another fundamental task of the university to pose questions to society and discern and identify those developments that are truly conducive to healthy human relations and progress. Universities should shape ideas and concepts about education and culture; and this principle should never be sacrificed in favour of short-term profits and mono-dimensional utility.

III

Historical development, sociologically as well as politically speaking, cannot be reversed. Following the Second World War, this development aptly described as “Big Science” accelerated. The unparalleled growth of industrial-produced knowledge in many research institutions outside of the universities further marginalised the conventional village-like modes of academic communication... One talks less and publishes more.

In conclusion: the progress of opening universities to society was a tremendous advancement, and we must not begin to regress. However, this advancement has not

come without a cost. The modes of communication at mass universities are quite different from those at traditional, smaller universities.

IV

What is to be done? There seem to be three options.

Option One: One can simply accept the circumstances as they are and isolate oneself in specialised jargon. In my opinion, this already happens far too often. This option, of course, is a winning strategy for those who are rewarded for knowing as much as possible about as little as possible. However, this type of specialisation comes with a price: they turn into silos of specialised knowledge and a lack of transversal skills. One who sets up a shop in a single room built of their own specialised competence is indeed familiar with every nook and cranny. But a constant perspectivation of who is in charge of what is the foundation of the worst kind of bureaucracy.

Many have noted that new knowledge emerges more between departments and faculties, rather than within them. This is especially important today for two reasons: The first one is obvious, economic and social problems have become so complex that even marginally satisfactory solutions cannot be found without cooperation and discussion between disciplines. The second reason is not as straightforward: More and more problems—and increasingly everyday life—cannot be resolved without the specialised knowledge that is generated within academic disciplines. If, however, the representatives of such specialised disciplines do not seek contact and engage in discussion with their peers, then they voluntarily, needlessly, and rather foolishly forfeit their academically entitled privilege to think beyond and across the borders of specified fields of knowledge.

Option two: To counter the inability to communicate and bridge a wide range of subjects is well-intentioned but is unfortunately often ineffective: pleas for cooperative discussions, working across borders and seeking communication are favoured as a means to counteract tendencies towards excessive specialisation and reciprocal compartmentalisation in academia. This kind of appeal has been a standard of academic policy rhetoric since at least the 1960s.

Are these appeals naive? Is it not also true that often individual scholars are faced with valid and undeniable challenges to engage in interdisciplinary dialogue? Some are even praised for leaving the ivory tower without ever having set foot inside it. One can, of course, also ask if an excess of interdisciplinarity would not represent a return to dilettantism.

Durable and effective action also always requires an institutional framework. This leaves us with the **third option** of dealing with the negative effects of specialisation and the lack of communication in academia. It is necessary to create an institutional framework under which representatives of different fields can and must come together. It is imperative that we precisely foster those institutions that place a focus on interdisciplinary discussion, as they are the gardens in which we might plant conversations like trees.

With an ever-growing student population, we will have more and more institutions of higher education operating like small universities. What used to be different kinds of higher education institutions will soon lose their distinctive profiles. The dangerous outcome of this development is that we will be left with, on the one hand, research universities in which research-professors will not have enough time for teaching, and on the other hand teaching universities in which teaching-professors will not have enough time for research.

V

If one differentiates between forms of communication based on content, meaning comprehensiveness versus lacking content or the content of veiled communication, then the public areas in which communication often stands above academic insight become clear. By the way, this phenomenon is nothing new: even the Romans differentiated between “dicere” (speak, say) and “loqui” (talk, chat), whereby, concerning the often quoted ecclesiastic phrase “Roma locuta, causa finita”, I often ask myself if its author didn’t intentionally insert some bitter irony, as the phrase refers to Augustine’s 131st Sermon, in which loqui is not used.

But, let us stick to our “academic” context. Academics and the university proudly trace this appellation back to Plato’s academy, which, over the course of 700 years, laid the foundation for the western concept of academic endeavours, namely the search for knowledge based on systematic inquiry.

If one looks closely at the fundamental educational goal, one finds three core competencies that ought to characterise an academic’s entire life and serve to allow him or her to recognise their societal responsibility:

- the ability to assess academically
- the ability to communicate academically
- an academic openness to new ideas.

These three core competencies have one thing in common: they require that one directly experiences the academic process. Only those who have experienced the ways that new knowledge is created, or “old” knowledge is challenged, can assess knowledge, communicate it to others, and revise their own position in the face of new knowledge. They characterise the academic who, not primarily as a titleholder but rather as a “citizen of the society of knowledge”, is bound to reason and therefore consistently challenges “common sense”.

With regards to academia, this means that knowledge as a process remains an object of our actions; a process in which development, assessment and communication are integrated. If this academic standard can be successfully communicated in such a way that academia is understood to be the driving force behind the development of a knowledge society, then we need not worry about the quality of the communication.

Perhaps, the word academia itself is laden with an old malediction, as Plato’s Academy took its name from the Grove of Akademos, who betrayed Helen’s hiding place to the Spartans, and in so doing saved Athens. If this is true, then we must

search the depths of our vocabulary so that we might, as in Pandora's Box, find beneath so much calamity the real gift: hope. For 70 years now, the IAU has been immersed in bringing this hope to the fore on a global level. For, as Schleiermacher states, at its heart, every academic pursuit is communication, and strictly speaking, communication that keeps society alive. Indeed, we must plant conversations like trees.

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