Resolution by the 23rd General Assembly of the HRK on 14 November 2017 in Potsdam

Transfer and cooperation as tasks of the Universities

# **HRK** German Rectors' Conference

The Voice of the Universities

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# I. Aspects of transfer and cooperation

"Universities develop and define their key role in Germany in constant dialogue with all groups in society. In fulfilling this role, they render services of crucial importance for Germany's scientific, economic, societal and cultural development.." This is how the Senate of the HRK in October 2016 described the relationship between universities and society as a fundamental prerequisite for the successful fulfilment of their duties.

Research and teaching in all their manifestations constitute the core competences of German universities in fulfilling those duties. Collaboration between subjects and between disciplines sparks mutual inspiration and renewed vigour. This is how new knowledge, new abilities and scientific discoveries are generated. Furthermore, over 450,000 students earn a higher education degree and almost 30,000 complete their doctoral training<sup>1</sup>; a significant proportion of these students choose a non-academic career path. In addition, universities are also involved in academic continuing education. This makes them not only important catalysts in society, but also partners of industry, the public sector, organised civil society and culture. These knowledge-based relationships can be summarised as knowledge and technology transfer by higher education institution.<sup>2</sup>

The universities profit from their continuous exploration of problems and issues in society and industry. Teaching and research evolve continuously through cooperation with partners outside the academic world. In view of this, the relationship is accurately characterised in its substance as exchange and interaction, and can be summarised conceptually as "transfer and cooperation".<sup>3</sup> Elements of this exchange

<sup>&</sup>lt;sup>1</sup> Federal Statistical Office (2015): Bildung und Kultur. Prüfungen an Hochschulen (Examinations at universities), Volume 11, Series 4.2 p. 10. https://www.destatis.de/DE/Publikationen/Thematisch/BildungForschungKultur/Hochschulen/PruefungenHochschulen2110420157004.pdf?\_\_blob=publicationFile <sup>2</sup> cf. the very broad definition of knowledge and technology transfer by the German Council of Science and Humanities (2016): Wissens- und Technologietransfer als

Council of Science and Humanities (2016): Wissens- und Technologietransfer als Gegenstand institutioneller Strategien (Knowledge and technology transfer as an element of institutional strategies). Position paper, p. 7, and also the definition of knowledge transfer by the DFG,

http://www.dfg.de/en/research\_funding/faq/faq\_knowledge\_transfer/index.html <sup>3</sup> cf. High-tech Forum (2017): Bringing good ideas to effect. Implementation Impulses of the High-Tech Forum on the High-Tech Strategy, 8.

are laid down as statutory duties in the higher education laws of the federal states.

In addition, many universities have expanded their support for business start-ups, and are trialling new formats in order to take increased account of research activities by members of the public. Transfer offices and independent transfer companies have been established at universities, the activities of which contribute to the transfer of research results into commercial and societal applications. In turn, interaction with practice in the field makes it possible to develop new research themes. Furthermore, new societal and economic developments such as progressive digitalisation or increasing demands for sustainability require new types of action by universities. For example, universities operate technology centres for Industry 4.0 in order to advance the impending change together with industry and society.

In addition, universities are part of economic and social life in their region and shape cultural development processes in conjunction with art and organised civil society. They are advocates for an improved public understanding of science, the humanities and art. Scholarly communication through articles in the media, public events and series of debates has played an important role in these activities for many years. In addition, today universities are increasingly focusing on the targeted use of social media and other online formats. These activities enable universities to have a positive influence on their public imagesometimes including among less-educated groups – and therefore increase opportunities for participation. This social involvement on the part of the universities evolves constantly in dialogue with society. For example, in many cases cooperation with local partners has become part of higher education activities in order to carry out tasks of direct societal relevance and to promote knowledge transfer in a targeted fashion.4

The sum total of the activities described in the areas of continuing education, knowledge and technology transfer and social involvement is frequently referred to as the "third mission" of the universities.<sup>5</sup> The "mission" referred to is not discrete and independent, but rather invariably develops on the basis of the core competences of research and teaching, and in synergy with them. It is therefore a part of the

take place in the context of teaching and research, without themselves being, or

without solely being, teaching or research (ibid., p. 21).

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<sup>&</sup>lt;sup>4</sup> In public (expert) debate, these approaches are often described using English-language concepts such as service learning, social entrepreneurship or community outreach.
<sup>5</sup> To name just a few examples: Conway, Cheryl; Humphrey, Lynne; Benneworth, Paul; Charles, David; Younger, Peter (2009): Characterising modes of university engagement with wider society. Newcastle upon Tyne; Henke, Justus; Pasternack, Peer; Schmid, Sarah (2016): Third Mission von Hochschulen. Eine Definition. (Third mission of universities. A definition.) In: Das Hochschulwesen, 1+2, p. 16-22. Henke, Pasternack and Schmid define the "Third Mission" as activities of a higher education institution that

universities' range of duties, the overall fulfilment of which requires dependable basic funding.<sup>6</sup>

# II. Core competences of universities and their relationship to transfer and cooperation

### 1. Research

In current European research and innovation funding and in the global debate about the potential of research, there are many calls for direct "usability" of research results under the motto of "impact". Science and the humanities are expected to be at the service of economic and societal development to a greater extent than previously. In response to the major challenges of our times, technical and social innovations are being demanded that can be turned into economic growth and jobs as quickly and demonstrably as possible.<sup>7</sup>

The achievements of the German universities across all disciplinary boundaries are internationally visible in the field of applied research, and are essential components and hallmarks of the innovation system in Germany.<sup>8</sup> One of the particular strengths of the German academic system is basic research, both in the humanities and social sciences and in the natural and engineering sciences. The HRK emphasises the necessity of maintaining this breadth, which is no longer politically supported and funded in all European countries. The HRK is in agreement with the Alliance of Science Organisations in Germany in this respect.<sup>9</sup> Experience has shown that, again and again, basic research spawns major innovation. Moreover, additional targeted programmes for research and development that are a response to specific challenges must make their mark over and above basic research, and must mobilise additional resources in order to accelerate innovation or to strengthen cooperation arrangements, e.g. with small to medium-sized enterprises (SMEs) or cultural institutions, through specific funding measures.

At present, taking greater account of the societal interests and abilities of members of the public in research processes is also being discussed. Citizen science approaches (also referred to as engaged research) pursue the objectives of working more closely with volunteers and non-profit organisations, contributing to greater transparency in the research area and integrating the findings of lay people more effectively into

<sup>&</sup>lt;sup>6</sup>Special services are associated with increased funding needs. For this reason the Federal and state governments have set up specific funding programmes, e.g. the "Innovative University" programme or "EXIST" funding for university-based start-ups. Where additional demands are placed on universities, the appropriate instruments continue to be necessary.

<sup>&</sup>lt;sup>7</sup>European Commission (2014): Guidance for evaluators of Horizon 2020 proposals. Version 1.1, p. 2.

https://www.timeshighereducation.com/world-university-rankings/funding-for-innovation-ranking-2016: Table: Average industry income per academic by country https://www.hrk.de/fileadmin/redaktion/hrk/02-Dokumente/02-05-Forschung/2016 07 13 Allianz IntEval Horizon2020 en.pdf

research.<sup>10</sup> In this way issues and perspectives might be incorporated into research that are not perceived by experts. The universities are open to this participation by societal stakeholders, as long as it does not result in decision-making about the selection of research questions and methods shifting into the public arena. Research at universities considers itself as receptive, but must remain independent.

Part of the broader role of universities and science is also to identify clearly and realistically to the public the limits of their own understanding and ability to solve problems through research. Science and the humanities can analyse problems and make them comprehensible, but they cannot decide of their own accord on the measures to be taken and how they should be prioritised. Overcoming major challenges such as, e.g., climate change requires far-reaching societal and global change processes. The universities can help to develop and advance these change processes, but cannot assume responsibility for decisions about specific adjustments to be made by government, industry and society or for their implementation. This remains the task of government.

## 2. Teaching

Higher education teaching must fundamentally be based on the knowledge acquired and the outcomes of the current state of research. A course of study is therefore more than the communication of practical experience or vocational training. Scholarly reflection of theories and methods and the broadest possible training in the discipline must be the first priorities. "It is the duty of universities to take into account in an appropriate manner each of the three central dimensions of academic education – academic discipline, personal development and preparation for the labour market. A fourth dimension arises in the form of social engagement skills." These elements are at the heart of the idea of a course of study and may not be diluted or marginalised.

Along with tried and tested formats for the integration of teaching and vocational practice, universities explicitly welcome new approaches that more effectively incorporate broader context into the course, going beyond the cooperation arrangements already developed with industry and the public sector. For example, university teaching can also be combined with specific practical projects as part of social initiatives. Students teach languages, accompany disadvantaged groups when they attend meetings with authorities and support migrants, for example by supporting them on legal issues or through projects that provide access to music and art. They assist not-for-profit organisations with legal and

<sup>&</sup>lt;sup>10</sup> For example, Baden-Württemberg has set up a programme to fund so-called real-world laboratories, in which universities, associations, companies and other interested parties work together, including on the development of new mobility concepts.
<sup>11</sup> cf. Joint declaration by the BDA, DGB and HRK (2016): To further improve the employability of university and college graduates. <a href="https://www.hrk.de/resolutions-publications/resolutions/beschluss/detail/to-further-improve-the-employability-of-university-and-college-graduates/">https://www.hrk.de/resolutions-publications/resolutions/beschluss/detail/to-further-improve-the-employability-of-university-and-college-graduates/</a>

organisational issues and help to create websites or databases. Students themselves can also become active as (social) entrepreneurs, develop entrepreneurial thinking and contribute to social innovation through business start-ups. Some universities have now established liaison offices that pool such activities, broker partnerships with public or volunteer organisations and regulate the recognition of the relevant projects as part of the course of study. All these approaches also promote successful learning and improve employability and the further personal development of graduates.<sup>12</sup>

#### III. Conclusions

- Universities are a part of society and have an obligation towards it. They
  have been cultivating exchange with stakeholders outside academic
  institutions for many years. In view of societal changes, the task is to
  further advance this exchange. The structure of activities for this
  purpose relates closely to the respective profile of the university, and
  must be carried out by leadership of universities as an autonomous
  strategic decision.
- 2. Various new approaches that incorporate social concerns into research to a greater extent can raise interesting new questions and give rise to innovations. However, they are always subject to the quality criteria of scholarly work. Good research is characterised by the appropriate scholarly approaches and methods, not by a promise of short-term benefit.
- 3. The acquisition of expert knowledge and competences, scholarly reflection of theories and methods and broad training are at the centre of higher education courses. Academic continuing education options and teaching options that promote involvement in civil society are to be welcomed; they should be of a supplementary nature and expand the choices available to students.
- 4. Academically based interaction with industry, the public sector and organised civil society constitutes an important part of the activities of universities. This exchange is based on their core competences in research and teaching and should strengthen these. It presupposes appropriate basic funding of the universities.

This paper reflects a snapshot. The area of transfer and cooperation, in particular, is subject to dynamic development and is therefore being analysed and further developed continuously.

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<sup>&</sup>lt;sup>12</sup> Over 30 higher education institutions have teamed up for this reason to form the "Bildung durch Verantwortung" (Education through Responsibility) network; cf. <a href="http://www.bildung-durch-verantwortung.de/mitglieder">http://www.bildung-durch-verantwortung.de/mitglieder</a>