The intellectual situation of a society is reflected in its universities, and the development of modern science and education that is supported by science is reflected in the history of the university. At the university, science and education become institutionalised from the very beginning. Thus, it is correct to view Aristotle’s undertaking as the coming into being of the university. Whether in the form of a school, starting with the Platonic Academy and Aristotle’s peripatos, or in the form of an encyclopaedia, or later, of a monastery, science and education find their highest expression in the university. This is still true today despite strong competition from research institutions outside the university in the contemporary scientific world and the loosening of the connection between teaching and research in the modern mass-education university. All too often, the history of the university’s success is also a history of loss. This is also true of the history of the university between the 17th and the 19th century, when the medieval and early modern university was transformed into the university of today. The essential theory behind it was provided by Immanuel Kant and Wilhelm von Humboldt.

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FROM LEIBNIZ VIA KANT TO HUMBOLDT

The early history of university reform is marked by its dissolution. In a theoretical framework it is reflected in the writings of Gottfried Wilhelm Leibniz. According to him, the academy oriented to the Renaissance academies and the Royal Society (1660), the pre-history of which dates back to 1645, replaced the university. The guiding idea was to oppose a new institution – useful for the advancement of science and research – to the existing universities. Leibniz was thoroughly convinced that universities could not be transformed into modern research institutions, while also maintaining their educational function. Nevertheless, without intending to, his thoughts on science and education policy also prepared the ground for the new university. The fundamental ideas, which were later institutionally elaborated by Kant and Humboldt, include the concepts related to the system of science and the theory of education that were already formulated to great measure by Leibniz. All his plans were directed towards, or led to, the reorganisation of science and education. Examples include the following: his academy plans and his encyclopaedia projects; his plan for a *mathesis universalis* (aimed at logically and methodologically unifying knowledge); a universal language of science as the medium for a future (European) republic of scholars; his efforts to reorganise the book trade and teaching; as well as his policies related to religion and Europe. The university was missing from these plans, but it must have been clear to Leibniz, that in this context, it could not be dispensed with in the long run.

This is where Kant’s reflections come in. The background for this is the development of the university guided by the ideas of the Enlightenment, particularly at the universities of Halle and Göttingen. Not only the history of the Enlightenment, but also history of the university, were made there. Therefore, in contrast to the negative estimation of Leibniz, the importance of the university increased, but the programme and reality still remained far apart. This is also obvious in Kant’s penetrating analysis on *The Conflict of the Faculties* (1798), which may, on one hand, be a particularly impressive example of what Hegel, referring to Kant, calls ‘the Enlightenment made methodical’ (*die methodisch gemachte Aufklärung*²), and on the other,

can be seen as a passionate plea for the university as a house of research and enlightenment, expressed in the form of a theory on the faculty of philosophy.³

According to Kant, the ‘idea of the university’ (already present in the preliminary studies for the Conflict⁴) is a philosophical idea. The bearer of this idea is the faculty of philosophy, since only this faculty is concerned with scientific truth, and therefore, with the essential idea of science. The self-confident declaration reads: ‘A university must have a faculty of philosophy. Its function in relation to the three higher faculties is to control them and, in this way, be useful to them, since truth (the essential and first condition of learning in general) is the main thing, whereas the utility the higher faculties promise the government is of secondary importance.’⁵ According to Kant, the knowledge of the faculty of philosophy takes into account the knowledge of the other faculties (theology, medicine, law). However, not in terms of content, but as ‘the objects it will examine and criticise’,⁶ and not in a propaedeutic role, but with a view to truth.

Kant follows a system of science that he had developed in regard to epistemological aspects in the Critique of Pure Reason. Here ‘the rational’ is contrasted with ‘the empirical’;⁷ and a distinction is made between ‘cognition from pure reason’, the systematic expression of which is transcendental philosophy and ‘cognition from empirical principles’⁸ or ‘empirical philosophy’, which includes physics to the extent that physics recognises ‘empirical’ principles⁹. With this concept, the idea of enlightenment, in so far as it will be realised in the university, reaches its zenith. Kant turns out to be the great theorist of the university, but not its actual reformer. His idea of the

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⁶ Ibidem, 291. [Religion and Rational Theology, 256.]

⁷ Immanuel Kant, Kritik der reinen Vernunft, B 863.

⁸ Ibidem, B 868.

⁹ Ibidem.
university and elaboration of it, from the perspective of the faculty of philosophy, testifies to a new university self-confidence, and to a clear, systematically justified will to reform. However, this is not yet realised. The realisation, i.e. the transformation of a theory of the university into university structures, is left to Wilhelm von Humboldt and the establishment of the University of Berlin.

Humboldt adopts Kant’s definition of the faculty of philosophy as the incarnation of the university and connects it to an educational idea. According to Humboldt, the transformation of ‘scattered’ knowledge into ‘integrated knowledge’, of ‘mere learnedness’ into ‘scholarly education’, of ‘restless striving’ into ‘wise activity’ should occur through science itself, and especially within the framework of the faculty of philosophy.\(^\text{10}\) Here, it is ‘pure’ science, i.e. science for its own sake or as an end in itself that, from the perspective of education, should be productively linked to society: ‘As soon as one ceases to genuinely search for science ... everything is lost, irretrievably and forever; lost for science ... and lost for the state. For only science that comes from within, and can be implanted within, transforms the character; and for the state, as for mankind in general, the goal is not knowing and speaking, but character and action.’\(^\text{11}\) Besides, the task of the university must be ‘to treat science always as a not yet completely solved problem, and consequently always to continue in research.’\(^\text{12}\)

With the emphasis on research and the end-in-itself character of science a new concept of the scientific emerges. At the same time, the older concept of teaching, which was characteristic of the traditional university, combines with the new concept of research at the academy, for example, at the Royal Society and the \textit{Sozietät} of Leibniz. The concept of a republic of learning (again) gains the same relevance as the realisation of a rational ideal of science, and in the sense of a commitment to the discovery of truth, also finds its place in teaching. It is realised in Humboldt’s University. This means: Humboldt succeeds in his central aims that are connected to the principles of \textit{research in solitude and freedom} (i.e. a principle of autonomy) and the \textit{unity of}


\(^{12}\) \textit{Ibidem}, 251.
research and teaching (i.e. a principle of science). Truth and usefulness – the one viewed suspiciously, the other left to the academies – find their home in the university, not outside of it.

However, it is true that Kant’s idea of the university, which in a systematic way, is expressed by distinguishing the faculty of philosophy, did not enjoy permanent success even in Humboldt’s concept and its realisation. Transforming the idea into an educational reorganisation of the university also changed the character of the faculty of philosophy. The idea of truth, which is central for Kant, turns into a general idea of education and training. And therefore, from the very beginning the ‘classical’ university, which is based on Kant’s theory of the university as well as Humboldt’s programme of education, carries within itself the seed of its dissolution. This can be observed in the recent developments of the university – becoming a mass-education university and the renewed emigration of research to specialised institutions outside the university.

THE UNIVERSITY TODAY

The university is changing – because both its social and institutional environment is changing and because science is changing.\textsuperscript{13} Its Humboldtian essence is under pressure. This development is often shaped by political and economic constraints, which as external factors, result in inner reorganisation. Things work out whenever scientific (i.e. academic) reason prevails by facing external constraints with institutional imagination, things work out, where it remains idle and the political and economic constraints rule, the university is threatened with the loss of its essential nature, and with it its idea and theory. This essential nature consists of an autonomous research and teaching organisation along with a concept of education that both reflects and provides a critical self-awareness to the modern world, which itself is scientific in nature. The keywords are: education, commercialisation, autonomy, and universality.

\textsuperscript{13} In this section, I rely heavily on an earlier publication: Jürgen Mittelstrass, ‘The Future of the University’, European Review, 18 (S1) (2010). Diversification of Higher Education and the Academic Profession: Papers from the Hercules Symposium (Turin, Italy, 2009), 183–189.
First: education. In our world, the pressure to constantly change, and as a result, to specialise knowhow is steadily increasing. This drive towards specialisation stands in contrast to the simultaneous ‘technological’ integration of knowledge. However, this integration, which is effected by modern information and communication technologies, does not lead to a new (or old) unity of the universally oriented, and therefore, a universally orienting knower, but rather to the creation of the expert. The modern world is a world of experts: it is ruled not by a Leibnizian understanding that mirrors the world, but by the specialist, in whom almost nothing is reflected. Specialists that know more and more about less and less are the opposite of universality. Experts focus on the details, which for them, are everything.

But this can hardly suffice. In a world of experts, the old ideal of unified knowledge, even if it is to be pursued ‘technologically’, loses its social function. The ordering of knowledge under the categories of universality and disciplinarity, i.e. the responsibility for both the whole and the part, begins to pale. And this is especially true when the knowledge society in which, at first glance, it seems that the dream of the Enlightenment has become reality, begins to view itself as an information society. That is why the present reincarnation of the knowledge society as an information society threatens to disappoint us, at least to the degree that these terms denote an informed society, but one that is not oriented. How such oriented knowledge can be achieved – I mean one that is not to be confused with mere expert knowledge – is thus not a question that can be answered by appealing to even more information. It is actually a paradox: the richer our stores of information and knowledge, the poorer our ability to orient. But this is the ability that the concept of education once stood for.

Education is the expression of a culture in which the rational nature of man is realised and, at the same time, education is the obverse of culture – culture that has become a form of life, indeed, an individual form of life. In this respect, Wilhelm von Humboldt is still right. An educated person for him is someone who tries ‘to grasp as much of the world as is possible, and who tries to bind it to him as tightly as possible’.\footnote{Humboldt, ‘Theorie der Bildung des Menschen. Bruchstück’, 283.} The locus of orientation is the life-world, not the conceptual or theoretical world. And this holds true for education as
well. Education and orientation are structurally correlated, less in the form of science than in the form of life, that is to say, in the form of an ability. Based on Humboldt, we could say that it is the ability to integrate the world in oneself and to express the world in itself. To put it differently: knowledge is, at least when one considers knowledge and experience as well as sensibly dealing with them, the universal expressed as a particular. And this is something that the university, which has been caught up in the Bologna Process and lured into managerial and economic ideologies, must learn again.

Second: commercialisation. Today, knowledge has become a commodity that has been adopted to the usual market forms. It does not master the modern world, but becomes something mastered by this world and its markets. For a large part of society, knowledge has become something that one employs, but does not actually practice oneself. The magic word is knowledge management, which increases the distance between knowledge and the knower, between those who drive knowledge forward and those who use and manage knowledge. Generally, this separation is detrimental to knowledge and also enables its commodification, i.e. it renders the knower a mere provider of services, who is no longer a part of the knowledge process. But knowledge that is viewed only as a commodity, which is to be acquired, managed, sold, and used, loses its proper essence – in Kantian or Humboldtian terms. Thereby, the knowledge society is characterised in its self-perception and self-understanding as a part of the service society, in which all production processes seem to be transformed into mere exchanges. Everyone is in the service of someone, including scientists, who no longer understand their craft as lying in the production of knowledge and their intelligent labour, but see themselves instead as salesmen and managers.

However, knowledge cannot be manufactured in the same way that one manufactures ball bearings or soap. But this idea, conditioned by a changing way of dealing with knowledge, is the one that is catching on. The pressure on research institutions, among them universities, to commodify is constantly increasing. In effect, repeated demands for so-called knowledge-transfer assume that science is a means of preparing knowledge in a form directly amenable to the needs of

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the economy, like slugs for the production line. Anyone who dares to speak of research in the sense of fundamental research immediately evokes the image of ivory towers. And while it is true that the latter no longer have a place in the architecture of the modern world, that has nothing to do with the particular essence of science in its search for the new, and with the special routes that it takes to arrive there. We stand before a grave misunderstanding. And if we do not take care, our casual and superficial treatment of the sciences will have a detrimental effect on them.

Third: autonomy. Every institution, every system which takes its fate into its own hands, and does not just think in terms of external dependencies, as expressed by the concepts of education and commercialisation, must think in terms of planned development, starting from an assessment of its current situation, and what its goals are. This applies particularly to universities. The modern keywords here are profile-building, autonomy, and new university structures.

Of course, in an institution like a university not everything can be planned for. The same is true of science, the institutional heart of which is the university. Therefore, it is often inferred that planning is antagonistic to science and universities, i.e., it is attempting to obstruct or revoke the essence of its freedom, the freedom of research and teaching. In other words, planning is part of the vocabulary of constraints. But this is wrong. What is important is to awaken an institutional consciousness in the university that does not think in the categories of the already existing and its protection. Instead, it should think in the categories of development in which the tried and tested old is joined with the desirable new in order to form functional organisational structures that foster such thinking.

It will be essential to practice autonomy not just in regard to the external, i.e. political autonomy, but also internally, i.e. structural autonomy. Structural autonomy demonstrates itself primarily in the realisation of structures that are informed by thinking about the systematic nature of science; for instance, at the organisational level of fields and disciplines, the establishment and abolition of degrees and areas of specialisation in research, but also in the implementation of quality standards adhering to international standards in research, teaching, and the education of junior academic staff. Where this is not feasible or not desired, autonomy in the form of an isolationist strategy with respect to interference of any sort will lead to structural
immobility and ultimately to the university bidding farewell to general development. For example, as we all know, science and research are increasingly moving *trans-disciplinarily* beyond disciplinary core areas, and institutional structures must take this into account. That means that a system of science, including the one provided by or realised within a university, must follow the developments in research and science – and create an adequate institutional background for this – and not, conversely, the development of research or science the given system. Many universities have yet to learn this. Becoming a managerial university, or whatever the reason of university politics might happen to imagine, is of secondary importance.

Fourth: *universal*ity and other virtues. A university that steers clear of the shortcomings and meets the requirements described above must either answer, or be able to demonstrate its institutional response to, the following questions:

1) How much *universality* should there be in order for a university to come into being? Despite all the tendencies towards specialisation, academic knowledge is something that can only grow on a field that everyone tends. Great achievements require not only specialised knowledge, but also close contact with other areas. Gottlob Frege was a mathematician and philosopher, Max Weber a sociologist and historian, Max Delbrück a biologist and physicist. Disciplinary boundaries do not determine actual achievements here. On the contrary, these boundaries need to be overcome if great achievements are to result. This is especially true in modern developments. New insights most often form on the edges of fields and disciplines, on the borders with their neighbours, and not at the core where textbook knowledge is at home. Thus universality, in its institutional form of fields and disciplines, cannot be arbitrarily restricted. In other words, research and teaching can only thrive to a certain degree in departmental or disciplinary greenhouses. Access to the (university’s) external environments must remain open, and be accessible in both directions. One must be able to get outside when one is looking for complementary knowledge, and someone else with the same wish must be able to get in. This means that the university must maintain its claim to universality.

2) How much *disciplinarity* must there be in order for *trans-disciplinarity* to have a chance? The bearers of the institutional unity of research and teaching, in regard to which the university will
continue to define itself in the future, are still the disciplines, even
if the systematic academic memory of what disciplines are, what they
can achieve, and what distinguishes them from departmentalised
structures has grown somewhat faint over time. Disciplines are
the systematic forms in which academic knowledge, including that
of departments and faculties, constitutes itself. And they are also
the medium in which academic learning operates. Disciplines also
remain a prerequisite for transdisciplinary forms of work and of
cognition. There can be no transdisciplinary forms of work if there
is a lack of diverse disciplines in research and teaching. In such a
situation, there will be none of the intellectual progress that results
from the increased cooperation among and beyond various fields
and disciplines. At the same time, this means that the university
presupposes a multi-disciplinary character (or multiversity), i.e. a
living part of that universality that once determined the development
of the university.

3) How much plurality is necessary for a university identity to exist?
Disciplinary plurality bestows a sense of self upon the university, a
sense of being a real university. If this plurality is missing, this sense
of being a university will not develop, but merely that of being a
school. In such a case, the unity of research and teaching defines itself
by what a circumscribed part of academia knows. In consequence, it is
defined by a closed form of research, and not by the open one, which
is characterised today by a transdisciplinary perspective among other
things. The paradigm of the school replaces that of the university.
The university as an institution of teaching displaces the university
as a research institution; the unity of research and teaching loses its
content and coagulates in rhetoric.

4) How much quality is needed for excellence to emerge? According
to the Humboldt principle, universities are institutions of higher
learning in the sense that university teaching develops out of
university research, and remains connected during teaching and
learning. If teaching and learning are disconnected from research,
or remain connected to the latter only through the memory of the
teacher’s own learning, terms such as ‘academic’ and ‘scientific’, or the
German wissenschaftlich lose their meaning. In this case, university
teaching and learning are no longer distinguished from other, non-
academic teaching and learning. Academic achievement of a high
calibre and scientific excellence are once again only possible in an
environment that is conducive to achievement and that stimulates and furthers academic achievement through academic achievement itself. Although mediocre conditions do not necessarily exclude high levels of achievement, nor occasional feats of excellence, these will remain the exception. It is more likely that mediocre conditions are a programme for academic mediocrity or as the old saying goes, ‘second-rate people hire third-rate ones’, thereby ensuring that the tree next door does not grow too tall. In other words, there must be a great deal of academic quality in one place if academic excellence is to be developed. And this quality cannot be found in isolated fields or disciplinary islands that one occupies alone, but in an academic and scientific context which is defined by quality and excellence. Differentiation and diversification are the engines that drive the development of the university, and thus, of higher education.

**Conclusion**

Behind institutions we find ideas that sustain them over time and make them unique and singular. What is the idea that sustains the university today? This question is unwelcome. The problem is that the university no longer has an idea. The Bologna Process and the managerial university are not a fit answer. Bologna transforms the university into a school, the managerial university turns it into one enterprise among many others. But the university is not just any school – that much of Humboldt needs to be preserved – and the university is not just an enterprise – that much Kant has to be preserved. However, this no longer seems to be true. Today wherever politicians, as well as scientists, meet to discuss the future of the university, the topic is always exclusively the next step in the Bologna Process and university management. Anyone calling for an idea or theory of the university is viewed as an incorrigible idealist. But isn’t it precisely the absence of suitably focused idealism that makes us so credulous and unimaginative? The history of the university teaches us that it is always awakened by fascinating models, and Kant and Humboldt are two examples. A critical look at the present university teaches us that such models are lacking – and are urgently needed. One does not need to evoke the end of history in order to see that the end of the university is approaching. Let us not let things go that far.
Jürgen Mittelstrass: The Idea of the University: History and Fate

Keywords: history of the university; Gottfried Wilhelm Leibniz; Immanuel Kant; Wilhelm von Humboldt; essence of education