This article examines the consequences of a set of unexamined assumptions related to instrumentalism as a fundamental presupposition in higher education and research policy. In particular, the idea of ‘efficiency’ as an ultimate value is contrasted with the idea of guiding principles with regard to the inner organisation of science, scholarship and teaching at the tertiary level. It is argued that the indispensable criterion for any sort of serious research or solid educational program is that the time required for thinking through a problem cannot be compromised without therewith compromising the very idea of science. At the same time, contemporary innovation and educational policy necessarily treat time as a cost to be reduced. Accommodation to external pressures to increase efficiency on the part of faculty, however, began already with the emergence of the modern European research university two centuries ago, as a response to market and bureaucratic exigencies. Thus, it is instructive to see how ideas such as that of faculty self-governance and the autonomy of science were deployed as a way of negotiating a path for the continued existence of the university under such conditions. The article concludes with a reflection on the future of the contemporary multiversity inspired by Kant’s famous defence of the idea of a free faculty of ‘pure’ science.

Keywords: efficiency; faculty; higher education; philosophy; policy; research; science; values

Def. 6 An absolute presupposition is one which stands, relatively to all questions to which it is related, as a presupposition, never as an answer.

Thus if you were talking to a pathologist about a certain disease and asked him ‘What is the cause of the event E which you say sometimes happens in this disease?’ he will reply ‘The cause of E is C’; and if he were in a communicative mood he might go on to say ‘That was established by So-and-so, in a piece of research that is now regarded as classical’. You might go on to ask: ‘I suppose before So-and-so found out what the cause of E was, he was quite sure it had a cause?’ The answer would be ‘Quite sure, of course’. ‘Because everything that happens has a cause’. If you are importunate enough to ask ‘But how do you know that everything that happens has a cause?’ he will probably blow up right in your face, because you have put your finger on one of his absolute presuppositions, and people are apt to be ticklish in their absolute presuppositions. But if he keeps his temper and gives you a civil and candid answer, it will be to the following effect. ‘That is a thing we take for granted […]’.

Absolute presuppositions are not verifiable. This does not mean that we should like to verify them but are unable to do so; it means that the idea of verification is an idea which does not apply to them, because […] to speak of verifying a presupposition involves supposing that it is a relative presupposition. If anybody says ‘Then they can’t be of much use in science’, the answer is that their use in science is their logical efficacy, and that the logical efficacy of a presupposition does not depend upon its being verifiable, because it does not depend upon its being true: it depends only on its being presupposed.

(Collingwood, 1940)

I have quoted Collingwood at length here in order to make clear the point and purpose of the present article. I will not be presenting any new information, or interpretation of what Collingwood means by absolute presuppositions. Rather, I will argue that much of the discussion concerning the professional identity of the professoriate assumes, or in Collingwood’s terms, presupposes, an idea that is not amenable to empirical proof or refutation.

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In this article, I will discuss the professional identity of the professoriate in terms of the assumptions undergirding what one might call ‘the very idea’ of a professor within the modern university. These presuppositions are naturally tied to historical factors that cannot be adequately addressed here. But there is good reason to believe that what we call the research university, and the attendant assumptions about the professional character of its denizens, has developed largely in response to market forces and bureaucracy (Clarke, 2006). If this is accurate, that is, if the modern research university’s emergence in a context of bureaucratic forms and market forces, where researchers themselves saw the necessity of reorganising their work to mimic those of leading industries in terms of research teams, emphasis on production etc., is significant, then by reminding ourselves of what considerations were pertinent to deeper analyses of those developments at the time they were occurring, we might learn something of consequence for how to think about the rapidly and radically changing environment for our present institutions of education and research. In other words, just as the modern research university evolved out of a negotiation between traditions and ideals and new forces challenging those, we too have to start to rethink modernisation and rationalisation once again, since the pressures that gave rise to the changes associated with the name of Humboldt resemble to a high degree our own. Just to take one example, the justification of the ‘new’ idea of the university as an institution for producing new knowledge, as opposed to preserving and perpetuating a canon of what is known, was in part a response to the challenge posed by mass production of, and easy access to, relatively inexpensive books, itself a result of industrial developments having little to do with the activities of the universities as such (teaching, scholarship, in some cases, research). One could reasonably ask then, as people do today, if the knowledge that the professor professes is readily available without enrolling at a university, what purpose does a university serve? The answer, today associated with the name of Humboldt, was the unity of research and teaching, and the deeper understanding provided by learning to read and interpret difficult material together with, and under the guidance of, the professor. For this reason, the lecture lost its central position to the seminar, the seedbed from which new knowledge would grow in the fertile soil of the university setting (Josephson, 2013). In what follows, I will consider the meaning of current assumptions about academic labour in light of its role in this more general context in which the university’s form and function are determined.

In rethinking rationalisation in general, and the modernisation of the university in particular, we should first acknowledge that the fundamental presupposition at play is not one limited to academic questions, but goes much deeper, just as the example of causality in the passage quoted from Collingwood is not one limited to medical pathology, but has to do with the modern self-conception of science and scientists in general. The presupposition I have in mind is one described by Hannah Arendt as ‘the almost universal functionalisation of all concepts and ideas’ (Arendt, 1961, p. 101). By this Arendt means not merely the replacement of ideas with values, and of meanings with ends, but also the instrumentalisation of conceptual distinctions in terms of the functions they fill. Ideas and ideals are absolute; as absolute, they set the standard for measurement and comparison and are themselves neither comparable nor measurable. In contrast, values have no intrinsic meaning. The notion of value is tied to commerce, exchange and expediency. A value is always a matter of relation (comparison) and thus relative by definition. The equation of things, both ideas and material objects, with value means making everything into some sort of social commodity. But it also entails that real differences in sense are dissolved into an identity of functional utility, so that, to use her own example, if argumentation and violence have the same political function of achieving the goal of consensus, then they are functionally the same (Arendt, 1961). Such an identification, to continue with the same example, obliterates the conceptual distinction between the attempt to convince someone of the benefit or disadvantage of something, and the attempt to force one’s will on someone: they are both understood merely in terms of their relative worth in achieving some practical end.

In what follows, I will analyse the activities of academic research and teaching in terms of this instrumentalist presupposition. As we shall see, the act of seeking new knowledge or a deeper understanding, that is, ‘research’, will, in this scheme, be understood in terms of the role the activity plays, its function, within the innovation system. Similarly, the sum and substance of education will be its foreseeable effects within the same system. The instrumentalist model on which our understanding of what a university is leaves no room for the consideration of the relationship between two indispensable components all activities of the mind such as education and research necessarily require: thinking and, indirectly, the time it takes to think.

Guy Neave describes how the latest version of the Evaluative State was developed to attend to three systemic issues: (1) to replace administrative control over higher education to one more adaptable to being driven by external forces; (2) to draw up criteria and procedures for assessing all sectors, including higher education, and embedding these in an institutional form; and (3) to deal with ‘implementation lag’, that is, to accelerate the rate of take-up, response and adjustment at an institutional level by regular and reiterative evaluation of performance (Neave, 2012, p. 15).
In a chapter on institutional autonomy in the context of the changing contract between the university and the State, he remarks that

[...] the basic dilemma arises from the belief as widely held amongst political and administrative elites as it is amongst more sober-minded students of higher education, that the pace of institutional responsiveness needs to accelerate and, indeed ought to continue to accelerate further the closer the university is brought into the ‘innovation system’.

(Keve, 2012, p. 30)

Many scholars of higher education have focused on the effects of marketisation, evaluation and massification (Martin, 2016; Peters, Paraskeva, & Besley, 2015). Here I wish to focus on the meaning of the mode in which all of this is occurring: the function of academic activity as efficiency understood as perpetual acceleration. My point is that this acceleration of activity stands in an inverse relation to time for thought and reflection. I will deal with time as it relates to certain characteristic traits of the pursuit of science and scholarship construed in terms of academic ideals (Weber, 1919/1946), or, if one prefers, Mertonian norms (Merton, 1942/1973; Ziman, 2002), that is, the meaning of what one might call ‘academic time’, and time understood functionally, that is, as value efficiency. Finally, I will offer a suggestion as to how the instrumental needs of the contemporary multiversity can accommodate the ideals necessary for resilience and sustainability in science and education.

Academic ideals and professional values

Recent scholarship (Kehm & Teichler, 2012; Martin, 2016; Peters et al., 2015; Rider, Hasselberg, & Waluszewski, 2013; Slaughter & Rhoades, 2004) has indicated that the incentives introduced in higher education and research throughout the world in the last four decades have the effect of eroding, although not entirely upheaving, academic ideals such as:

1. commitment to shared ideals (collegiality),
2. (autonomous) professional judgement,
3. professional codes of conduct,
4. meritocracy,
5. collective action of critical (academic) citizenry for civic, scientific and social development, and
6. trust between the ‘three Estates’ – academic, administrative and student – as well as between citizens, the political sphere (lawmakers) and the academic community (qua professionals and civil servants)

while promoting the development of market values, such as:

1. customer satisfaction (students and economic actors),
2. (heteronomous) cost-benefit analysis,
3. non-professional (amateur) transparency through communication policies and programs,
4. (uncritical) loyalty toward the organisation and ‘customers’ and the ‘levelling’ of absolute standards to cater to current conditions,
5. promotion of one’s career, organisational unit or research program over and against ideals of academic or civic obligation to the greater good, and
6. mistrust between the student (customer), the policy sector and the profession.

The consequence for professional academic activity is a focus on production (enrolment, course completion, citations, grant capture etc.) rather than content, since compliance and quality assurance are verified through standardised assessment exercises. This leads, amongst other things, to:

1. an increase in and prioritising of form (meeting quantifiable aims and objectives) at the expense of matter (content, whether in preparation for teaching or as research), and
2. a cleavage between teaching and research, since these are separately assessed.

An effect of the replacement of professional ideals with market values is that what was once a sliding scale between two poles within the framework of the modern research university has become two entirely different ideal-typical characterisations of university faculty (Josephson, Karlsohn, & Östling, 2014; Martin, 2016; Teichler, 2008):

| Autonomy | Heteronomy |
|----------|------------|
| Grounded judgement, expertise and argument | Protocols and performance indicators |
| Accountability | Accountancy |
| Knowledge as “Vocation of Man” | Knowledge as skills |
| Governance | (Vocational training) |
| Management | |

What we see here is not merely a tension, but a direct incongruence, between the guiding principles (and, as a consequence, the practical aims) of academic faculty as academicians, on the one hand, and as actors in the university marketplace, on the other. In the next section, I will discuss the problem of the functionalisation of higher education in light of the ideas on the left-hand column, which were explicitly articulated as the basis for the innovation that was to become the modern research university. Thereafter, these ideas will be contrasted with the values used to govern and assess higher education and research today. Finally, I will try to formulate what an alternative idea of the university for our time might look like, and what it would mean for the professional identity...
of academics in our day. But in order to narrow the focus enough to make the argument cohere, the entire discussion will revolve around performance acceleration and intellectual inertia.

Science and scholarship as research

It is tempting to think that the developments sketched above are merely the result of political and economic decisions made during the last three or four decades. But the seed for such changes, it can be argued, can be found in a more fundamental shift in our understanding of the nature of science that began much earlier. In his article, ‘The Age of the World Picture’, written in the 1930s, Heidegger describes modern science as characterised by ‘research’, or what he calls ‘industry’, ‘enterprise’ or ‘business’ (Betrieb), noting the dual sense of the term: a pursuit or undertaking, on the one hand, or mere bustle and busy-ness, on the other (Heidegger, 1938/1977, p. 124). He argues that science, in having always to adapt itself to its own results (technological innovations and methodological advances), is now characterised by the institutions in which it needs to be embedded to carry out its work (he exemplifies with the case of modern physics and the extraordinary resources and complex machinery involved in smashing the atom). This enterprise entails perpetual adjustments and planning in order to facilitate the conjunction of different technologies and methodologies, reciprocal checking and communication of results that are not merely added on to scientific activity, but are rather intrinsic to it. This entails a radical break in the character of the man of science:

The scholar disappears. He is succeeded by the research man who is engaged in research projects. These, rather than the cultivating of erudition, lend his work the atmosphere of incisiveness [...] Moreover, he is constantly on the move. He negotiates at meetings and collects information at congresses. He contracts for commissions with publishers. The latter now determine along with him which books must be written. (Heidegger, 1938/1977, p. 125)

He concludes on the following page: ‘Projection and rigor, methodology and ongoing activity (Betrieb), mutually requiring one another, constitute the essence of modern science, transform science into research’ (Heidegger, 1938/1977, p. 126). Echoing Collingwood’s idea of absolute presuppositions cited above, Heidegger then poses the question of what basic assumptions about what can be taken as true and valid, that is, as knowledge, must be in place for this transformation of science into research to occur. Borrowing Ernst Jünger’s term for describing modern warfare, ‘total mobilisation’, Heidegger describes a social and political climate in which these perpetual adjustments become second nature, where we understand ourselves and our work fundamentally in terms of the technologies devised for the planning and implementation of our various endeavours. In an appendix to the article, Heidegger explains what this ‘total mobilisation’ means for research:

Ongoing activity (Betrieb) becomes mere busyness whenever, in the pursuing of its methodology, it no longer keeps itself open on the basis of an ever-new accomplishing of a project-plan, but only leaves that plan behind itself as a given; never again confirms and verifies its own self-accumulating results and the calculation of them, but simply chases after such results and calculations [...] the more completely research becomes ongoing activity, and in that way mounts to its proper level of performance, the more constantly does the danger of mere industriousness grow within it. Finally a situation arises in which the distinction between activity and busyness not only has become unrecognizable, but has become unreal as well. (Heidegger, 1938/1977, p. 138)

The political and economic regime of the last few decades, in other words, is not the singular cause of the change in the nature of academic activity. Rather, one might say that the prior and more primary recasting of our way of conducting science and the values ingrained in it had made possible an accommodation to such regimes. In the current climate of management by aims and objectives, performance indicators and recurrent assessment exercises, one virtue is paramount, namely efficiency. Efficiency means, in economic terms, that a certain good (product or service) is supplied at a lower cost with no loss in quality. This latter characteristic is essential to the notion of efficiency: without equal or superior quality, the lower cost of production is not to be regarded as demonstrating efficiency, but merely a reduction in price at the expense of quality. A tacit assumption in many attempts to make the production and maintenance of public goods and services such as higher education and research more efficient is that efficiency is a value in and of itself. But efficiency has to do with function, in the sense described earlier; that is, it is a relative term by means of which something is measured against something else.

Thus, in order to assess the efficiency of academic scholarship or teaching at the tertiary level, we would first have to describe accurately what its function is, what it’s supposed to do, in order to see if the means utilised are those best suited for achieving the stated ends. We would also have to take into account unintended consequences and unforeseen effects, that is, how any given planned or expedited change might affect the achievement of the overall aim. Only then would we be in a position to assess if the implementation of the reform or the introduction of the new element actually increases efficiency. The insertion of the market mechanism has necessary effects on the overall function on the basis of which we ascertain if the good or service is of higher or lower quality. Michael Sandel (2012) makes a similar point when he argues that,
even if we were to disregard all other practical effects, the very intrusion of market incentives into spheres of human action previously considered primarily ‘moral’ carries with it an implicit imperative of another sort, namely, to consider all human affairs as fundamentally and irreducibly subject to cost-benefit analysis and hence, in the last analysis, a question of private gain. The prevalence of instrumentalist explanation and prediction leads to a ‘crowding out’ of the language of ideals and principles in favour of the terms of a rational calculus of relative values, that is, of costs and effects, in which the individual seeks to maximise her benefits. Whatever cannot be captured within the framework of the calculus become nonsensical since it quite literally cannot be made sense of given the presuppositions built into the algorithm (Rider & Waluszewski, 2015).

Hence, what has been added to the already industrialised form of science that Heidegger thought ‘research’ had become in his day is that the activity of science, scholarship and teaching today is not simply constrained to follow the course set by its own technological results and applications, but also by a new kind of apparatus that has been integrated into the very performance of academic work, that of efficiency, in the economic sense. And digitalisation notwithstanding, the most important resource in teaching and research is that of personnel, which is to say, their time. If academic time is essentially bound up in the development and operation of instruments of production and assessment, then there is quite simply less time for any kind of pursuit that falls outside of the network of structures, protocols and measures which, functionally speaking, constitute academic work.

Principles and functions
According to Hannah Arendt, late modernity pursues meaning ‘with the same machinery of intentions and organised means as were the particular direct aims of concrete action—with the result that it was as if meaning itself had departed from the world of men and men were left with nothing but an unending chain of purposes in whose progress the meaningfulness of all past achievements was constantly cancelled out by future goals and intentions’ (Arendt, 1958, p. 154; also Arendt, 1961, p. 78). She likens this self-understanding to that of the carpenter who forgets that while his purposes in particular acts and, implicitly, of the institution in which it was to be incarnated, the modern university, were very aware of the need for a guiding principle in the always forward-looking activity that is science and higher education. As a matter of fact, were successful in rethinking the point and purpose of the university to such an extent that they became touchstones for later formulations of ideas about academic freedom, critical thought and scientific advancement. By considering such previous reflections, we can perhaps gain some distance toward our own present institutions and their conditions. For all the differences between the eighteenth-century Prussia and present-day liberal democracies, insofar as we can recognise the kinds of problems that a Kant or a Humboldt was grappling with when arriving at their own conceptions, we can also perhaps find enough parallelism to assist us, by way of example, in thinking through our own situation.

The architects of the program of the Enlightenment and, implicitly, of the institution in which it was to be incarnated, the modern university, were very aware of the need for a guiding principle in the always forward-looking activity that is science and higher education. As a matter of fact, they were even aware of the effects of, and need for, certain kinds of market principles. In his Introduction to The Conflict of the Faculties, Kant writes:

Whoever it was that first hit on the notion of a university and proposed that a public institution of this kind be established, it was not a bad idea to handle the entire content of learning (the thinkers devoted to it) by mass production, so to speak—by a division of labor, so that for every branch of the
sciences there would be a public teacher or professor appointed as its trustee, and all of these together would form a kind of learned community called a university (or higher school). The university would have a certain autonomy (since only scholars can pass judgment on scholars as such), and accordingly it would be authorized to perform certain functions through its faculties (smaller societies, each comprising the university specialists in one branch of learning): to admit to the university students seeking entrance from the lower schools and, having conducted examinations, by its own authority to grant degrees or confer the universally recognized status of 'doctor' on free teachers (that is, teachers who are not members of the university)—in other words, to create doctors. (Kant, 1798/1979, p. 23)

Kant goes on to distinguish this autonomous corporation of scholars with those who are members of academies or learned societies without the privileges or obligations attaching to belonging to a university. But he also distinguishes the corporation of university teachers from those who have been educated at the university and have obtained degrees therefrom certifying their competence to fulfill their duties in whatever civil office they eventually take up. The main difference between the two is that the latter, 'the businesspeople or technicians of learning', practice science for its functions. Their engagement with science and study is as a tool for their chosen vocation. It is quite right, Kant thinks, that the businesspeople and technicians be educated with an eye to the interests and needs of the State. This function of the activity of the professional schools is essentially distinct from the point and purpose of science and scholarship, which is to provide the principles underlying the functions. This is achieved, he argues, by allowing for a faculty that is not vocational, but purely scientific, in its principles. In short, this means that for the professional schools to be certain of resting on solid, resilient foundations, they need access to what we today would call 'basic research', that is, science and study for the sake of critical analyses and understanding, with no other immediate aims or goals than the perpetual continuation of themselves, which, he emphasises, is in the interest of the State and society precisely because we want our empirical results and applications to be tried and tested against the tribunal of rationality at its most developed (i.e. science itself). The utility of this free faculty, he claims, is that it checks and controls the activities of the professional schools to make sure that their own claims to usefulness rest on what philosophers today might call 'justified true belief'. He writes: 'It is absolutely essential that the learned community at the university also contain a faculty that is independent of the government's command with regard to its teaching; one that, having no commands to give, is free to evaluate everything, and

concerns itself with the interests of the sciences, that is, with truth' (Kant, 1798/1979, p. 37).

In a footnote to the remark about independence from government intervention, Kant remarks:

A minister of the French government summoned a few of the most eminent merchants and asked them for suggestions on how to stimulate trade – as if he would know how to choose the best of these. After one had suggested this and another that, an old merchant who had kept quiet so far said: 'Build good roads, mint sound money, give us laws for exchanging money readily, etc.; but as for the rest, leave us alone!' If the government were to consult the Philosophy Faculty (the faculty of the sciences, as opposed to the professional schools) about what teachings to prescribe for scholars in general, it would get a similar reply: just don't interfere with the progress of understanding and science. (Kant, 1798/1979, p. 39)

For Enlightenment thinkers, the State has legitimate interests in the university, not least of all because its administrators receive their training there. But the liberal, laissez-faire doctrine in science as well as industry that is expressed here is thought to guarantee that those interests are indeed served by the ongoing autonomous activity of science and teaching unfettered and unencumbered by immediate practical (economic, political) interests. For the laissez-faire liberalism of a Kant or a Humboldt, the state should provide a general framework that will allow the market to achieve its potential. The parallel with the academy is that the state should also set a framework that allows the university to function according to its own internal principles. This is an entirely different view from the managerial position that it is up to external actors to determine what the function and inner organisation of the university should be. (The latter, from a Kantian point of view, would rather be a case of illiberalism.) The efficiency of how well it performs this task cannot in principle be judged from without, since the criteria of what constitutes good science can only be given by science itself. For Kant, it is furthermore unthinkable that external criteria could be integrated in scientific thinking because that would mean the end of science, if by science one means the always open possibility that one's assumptions are mistaken, that something new can be discovered by hitherto unknown and unrealised means and methods, that the very ground that our present knowledge stands on can be shaken. To integrate into the idea and practice of science an ever-watchful eye on what is fashionable, desirable and measurable (or, as we say today, 'deliverable') is to internalise in scientific thinking the very dogmatism, short-sightedness and willfull ignorance which only science and higher education can vanquish.

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The ideals of Enlightenment thinking about higher education and science, then, are infinitely progressive and even futuristic. The ideal is the maintenance, flourishing and enhancement of the store of human knowledge and understanding indefinitely. The timeframe is one of human history, not quarterly reports. On the surface, one might not see much of a difference between this idea of infinite progress and the perfectibility of human knowledge, on the one hand, and the ongoing activity of research as described by Heidegger, on the other. But there is in fact a major historical shift at work between the two with regard to the conception of the use of time. One could say that the Kantian ideal of the scholar's vocation is infinite in the sense that there is no limit, that is, no pre-established endpoint or point of completion. There is however, an overriding principle of scientific activity, a regulative ideal, namely, the deepening of human understanding, the improvement of human judgement, and the advancement of human society via the always-active use of reason. The busyness described by Heidegger, however, is non-finite in the sense that it is indeterminate, an amorphous ensemble of currently useful, which is to say temporally limited, projects to meet present interests. It is without any unifying aim or purpose other than whatever immediate expectations are built into the formulating of the project at hand. Thus, following the terminology introduced earlier, the university today can be said to have many functions [the point made by Clarke Kerr (2001) in coining the term 'multiversity'], but no principles.

**What is to be done?**

Given the expansion of the university into areas of training and economic activities that were previously held at arm's length, and, on the other hand, given the increasing and soon comprehensive openness of the university to external interests and purposes, it can hardly be claimed that there is such a thing as a university in the sense of a corporation of scholars and students. Universities are de facto the extended arms of industry and commerce, as well as of national, state and regional policy. It is not only the humanities that have lost traction, but also largely all the disciplines that in the traditional university, not much more than a century ago, belonged to the Philosophical Faculty (mathematics, physics, astronomy, as well as philosophy), are increasingly geared toward practical occupations and applications. They are becoming ever more 'efficient' in their use of time for solving current problems or challenges as we implicitly understand them. There is a risk, however, that the very ad hoc character of publication projects and educational programs, the fundamental disunity of science, scholarship and teaching, will lead to a depletion of the kind of rigor in which the liberal tradition in political thinking about the university placed so much hope. In the case of public education, there is thus some justification for Slavoj Zizek's indictment of the Bologna Process and its focus on employability as 'a concerted attack' on the public use of reason that is part and parcel of the university as the Enlightenment conceived it (Zizek, 2010).

It has become something of a commonplace to take the seemingly evenhanded but actually quite trivial position that the complaints levelled, usually by the professoriate, against the different forms of managerialism and overblown accountancy in higher education and academic research used by the State and industry to make the university more relevant and more useful for economic, ideological and social agendas, tend to ignore the need, indeed the responsibility, of political actors to have a system of reliable checks and controls in order to achieve their ends; yet, this neutral stance admits, it must also be acknowledged that the systems that have been put in place undermine those aims when they are not anchored in the principles, structure and norms that make science and higher education so useful to begin with. The problem with this seemingly reasonable position is that in its ostensibly high-minded impartiality, it fails to acknowledge that there is a genuine conflict of principle at stake here, reminiscent of that to which Kant refers above. The problem today, as in the late 18th century, is that it is still the case that genuinely new ideas with strong potential to radically alter science and/or society do not arise out of a reactive response to the carrots and sticks of New Public Management any more than they did to threats of punishment or promises of reward earlier. What is required is time to think. There can be no intelligible 'performance target' for thinking; it is something that falls out of the system of measurable outcomes, which means, strictly speaking, it can't be counted, and therefore doesn't count.

While there is actually today a great deal of research pointing to the greater efficiency of decentralised organisations with greater institutional and local autonomy in areas in which creativity, judgement and critical thinking are paramount [see Martin (2016) for an overview], the point to be made here is not empirical, but conceptual. The 'hypothesis' implicit in the view that sound judgement and creativity assume a certain degree of autonomy is twofold: certain kinds of activities require thoughtfulness, and thinking takes time. Yet the system that is emerging is one in which thinking and teaching to think are treated as something intangible and unreal precisely because they are so difficult to measure. What are real are units of production (degrees, patents, publications, citations). Thus, according to recent studies, academics are all very busy producing what counts, that is, what is counted, by any means necessary (citations cartels, grade inflation, the use of public relations consultants for impact-assessment exercises etc). It is not at all as clear, however, that there is much serious thinking going on.
Some universities or departments will always come out on top in league tables, and some professors will win Nobel Prizes every year; in neither case does that prove one way or another that science or education are improving or even standing still. For all we know, we are today simply squeezing out the last few drops of innovation that are left from the great scientific discoveries of the last two centuries, and the well might soon run dry. Similarly, we might consider that the 50% of every cohort that will go on to some form of ‘higher education’, for all their certified skills, are by and large less educated in fundamental respects than those with only secondary or even primary education a century ago.

Any practical solution to the coming crisis in education and science would have to start with a slowing down: a deliberate, measured and moderate attempt to think through the current state of affairs, its dangers and its potential. It is not a matter of standing still or returning to some mythical halcyon days of Humboldtian professional autonomy, but of taking a serious look at what we are doing and considering what needs to endure in order to guarantee the future. It requires that we become aware of what has been for a long time an absolute presupposition in political thinking about society as much as in political thinking about science, namely, value functionalism and, for want of a better term, the idea of ‘rational agency’ behind most economic behavioural models. The idea of autonomous adherence to principles as motivating human action, not merely coincidentally, but fundamentally, fits badly in with a conception of the human being as essentially motivated by drives to experience pleasure and avoid pain. Similarly, the idea that there can be motivating principles of action entirely apart from practical function makes comparison and measurement more precarious and less precise, and therefore, given the logic of cost-benefit analysis at the core of all our thinking, ‘irrational’ (Rider & Waluszewski, 2015).

To become aware of one’s basic presuppositions as such (that is, as a presupposition or prejudice, rather than a fact) is to be forced to move beyond slogans and self-interest: it is to start thinking. But thinking, in this sense, has no pre-set goals or measurable outcomes and is therefore inherently slow, arduous, messy and inefficient. And who has time for that? The only possible answer when the university is not unified by any common principle or idea would have to be something along the lines of Kant’s proposal: any organisation calling itself a university should have the capacity, or faculty, of examining itself and its own knowledge-base. This cannot be the responsibility of the parts of the university devoted to producing skilled labour for the workforce or developing technical and marketable innovations for industry, which is to say, most of it in its present form. These can happily continue going about their business, having been fully integrated into the educational-political-industrial complex (or ‘innovation system’) that it is designed to serve.

But if the complex is to continue to have the resources to hum along efficiently producing measurable gains and reproducing the structures that make those gains possible, it will need what we can call basic science, a science that is basic in the sense that it can critically assess its own foundations. By basic science, in other words, I mean thinking about the form and content of the science in question itself, or what the mathematician and physicist Hermann Weyl called Besinnung (reflection, consciousness) rather than Erkenntnis (knowledge). That ‘faculty’ need not be large; it probably cannot be a ‘faculty’ in its current institutional sense at all. It need not have enormous financial or technical resources, and it need not have many students. This is a question of principle: how autonomous thinking will be made possible so that more practically oriented subjects can be subject to genuinely scientific scrutiny. How this is to be organised today is a difficult question, but one that has to be addressed. Pharmaceutical research needs an autonomous critical study as much as political science or management studies, so a division along subject matter lines will not do. Indeed, as Kant proposes, it would better serve its purposes if it were not tied to the kinds of demands that such benefits impose. But what it should have is exemption from the business of the schools, which means not only exemption from meeting nonsensical demands for certification and planning that cannot be met except by lowering intellectual standards (such as making instruction follow standardised protocols such as dictated by the Bologna Process) or otherwise cooking the books (plotting institutional narratives to satisfy assessment panels), but also from the expectation that they should have any use at all except this critical function. If there is no place at the university for this kind of teaching and research in mathematics, philosophy or economics, it is fair to say that there is no longer either a time or a place for thinking.

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