The Great Transformation in the Profession of Researcher: discussion and points of view

Unplugged - Manifesto

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The Unplugged Manifesto subsection gives the opportunity to academics and non-academics to deliver a viewpoint about the transformation(s) of academic world, our institutions, research practices and methods. It aims to give voice to perspectives which take the opposing view to legitimated and or naturalized ideas about our transformation(s). Sometimes, the editors will edit a counterpoint to these manifestos in another issue.

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This paper is a response to the article by Philippe Monin (2017) published in the *Revue Internationale PME* entitled "La Grande Transformation du Métier de Chercheur".

INTRODUCTION: SO WHAT IS THE SUBJECT?

The article by Philippe Monin (2017) on "the great transformation in the profession of researcher" is both stimulating and ambiguous. Stimulating, because it shows the characteristic evolution of research practices: the decline of the "logic of the artisan researcher", the rapid development of the techniques of investigation and of data processing, the very high degree of specialization, international co-authorship, etc. Such changes are unquestionably particularly pronounced at the present time – the advent of artificial intelligence is one example – but we can nevertheless wonder if this has not always been the case. The older of the present two authors recalls his first research work where, in the large hall of a school in the Paris suburbs, he spent hours punching cards to programme a correlation (it was in 1972, a time when the dinosaurs were still around!). It is of course necessary to constantly enrich the range of research practices as technology advances, both in quantitative work and – though barely mentioned in Monin's article – qualitative research.

But the ambiguity of the article lies elsewhere, in its very construction. Monin begins his argument with a portrayal of the "decathlete" teacher-researcher, whose extinction, like that of dinosaurs, is inevitable. This change stems from two phenomena: the lack of synergy between research and teaching and a growing demand for the expertise needed for teaching, which makes it incompatible with the equally demanding nature of research. But what are we talking about? The

profession of researcher or the profession of teacher? By viewing the teacher as the first (and outmoded) stage of today's researcher, Monin adopts a questionable point of view – and this is one of the main themes of his piece – that precludes thinking about the profession of teacher. Admittedly, this is probably not the aim of the article; but it is, however, an implicit conclusion, all the more so because it is not argued for.

So let us try to give shape to the argument by focussing on the specificity of the profession of teacher and its necessary/possible/ hypothetical linkage with the practice of research. We will do this in four stages. First, we go back to the sources cited by the author in support of his thesis that there is no synergy between research and teaching. We then reconsider certain historical changes that illuminate the linkage being explored. Next, from an institutional standpoint, we discuss the connection between teaching and research. In the fourth and final stage, we draw some conclusions in the field of the human and social sciences, especially management, that are alarming and give cause for concern about the future of universities and more particularly management institutions.

HOW GERMANE ARE THE STUDIES CITED FOR ESTABLISHING THE NON-CORRELATION OF TEACHING AND RESEARCH?

The least that can be said is that the papers drawn on to question the link between research and teaching are hardly convincing. Consider, for example, Hattie and Marsh (1996), the totalising, emblematic and often cited paper that lies at the heart of Philippe Monin's argument. These authors propose that the relationship between teaching and research has been understood through numerous models that ultimately lead to a variety of conclusions: a negative relationship between teaching and research; a positive relationship between them; a lack of relationship; and the influence of mediating variables. Models showing a negative relationship are based either on evidence that nobody disputes – we cannot do everything at once, incentive systems differ, etc. – or on the hypothetical difference in psychological orientation between teacher and researcher (a difference based on one study). The second group, showing a positive relationship, are ultimately not models at all, because according to these authors they are based on conventions or convictions. As for the third group of models (showing an absence of relationship), they are hardly any more convincing since they adopt either the hypothesis of the orthogonality of the personalities (one study) or that of the difference in administrative framework or, more interestingly, use the argument (which we will come back to) of the coexistence of the two worlds without any communication between them. Finally there are the models with mediating variables, which are more stimulating but hardly any more significant: thus the person's mind can influence his/her research findings and the quality of his/her teaching, or even that the time spent on one of these activities is done at the expense of the time spent on the other (as we might have suspected!)

A final point should be noted before coming to the findings of the research mentioned: the measures adopted in the various studies are often biased. Measures of research are based solely on the number of publications or citations. Admittedly, this proxy is commonly used, even if it has certain limitations, and can be convincing. In contrast, measuring the teaching aspect poses more problems. It is declarative in nature, based on statements made by the teacher-researchers themselves, by students or

by peers. Each of these options has major drawbacks: self-declaration regarding course performance, the irrelevance of student assessment (which we return to below) and the lack of knowledge of what colleagues do. Student assessment may be used when the main objective is to satisfy the students (or "make them happy" as one American business school dean said to one of our colleagues who had recently arrived at the school). When it comes to learning through teaching, the things are different: a recent study shows a negative correlation between how much students learn and their assessment of teachers (Braga Paccagnella & Pellizzari, 2014). It would then be interesting to do a study analysing the correlation between the extent of students' learning (this can be multi-faceted) and the research performance of teacher-researchers, in order to see whether the non-correlation is still valid. (We do not say that it is not, but a study of this kind seems more relevant to what we are interested in, namely student learning).

After detailing these systems of analysis, which are neither consistent nor robust, the authors undertake a meta-analysis with the aim of summarizing a large number of studies on the topic concerned. They draw the following conclusions. The link between the respective productivities of research and teaching is either very low or non-existent. It is zero in the natural sciences and in research universities, non-zero in the social sciences or when the quality of publications is used, and strong in two areas, namely the impact of teaching on the presentation of research work and the impact of the quality of the research on the teacher's enthusiasm. We are making good progress! The authors continue: "We must conclude that the common belief that research and teaching are inextricably entwined is an enduring myth", while at the same time drawing this major conclusion from the perspective discussed here: "Productivity in research and scholarship does not seem to detract from being an effective teacher, and vice versa". The absence of a statistical relationship does not imply a negative relationship, which should be avoided! Thus, in a recent publication (Hattie & Marsh, 2004), the authors comment on the paper used by Philippe Monin. This is what they say:

> Our overall finding and the greatest misinterpretation of this overall finding. Overall, we have consistently found that there is a zero relationship between teaching and research at the individual academic and at the Department level. The greatest misinterpretation and misrepresentation of this overall finding is that it leads to the conclusion that research and teaching should be separated for funding purposes. This conclusion could meaningfully be made if the correlation was negative, but it is not. Zero means that there can be as many excellent teachers and researchers as there are excellent teachers, excellent researchers, and not-so-excellent teachers or researchers. Zero does not mean that there are <u>NO</u>[1] excellent teachers <u>and</u> researchers. It could be claimed that Universities have survived with a zero relationship, but that does NOT mean that all academics within those institutions are EITHER researchers OR teachers. The fundamental issue is what we <u>wish</u> the relation to be, and then we need to devise policies to enact this wish. […] Such a policy decision is more a function of where the system wishes to go. Further, our research (so far) has been at the individual and the Departmental level, and we have not surveyed or commented on the relationship between teaching and research at

1. Emphasis by Hattie and Marsh.

the University level. […] (Hattie & Marsh, 2004: 1)

From this rather long extract we can draw at least two conclusions, both of which seem to us firmly sustainable:

•The study does not establish a clear relationship between the quality of research and the quality of teaching. Let us accept this conclusion, although previous observations on methods and measures may very much call it into question. What does it mean? That the link between the two activities is not based on a concern for the enrichment of the results of the one by the other and vice versa; but is this goal ever sought in the development of the institutionally expected requirements of the teacher? It may be thought that this desire to disconnect teaching and research is also accompanied by a certain vision of the teaching of management, which would solely be the result of a practice of techniques and instruments. This is reflected in the way in which some training programmes are constructed and taught. If it is easy to subdivide the faculty, it is also because what teachers are asked to allocate to pedagogy alone would no longer need to be irrigated by research but almost exclusively by the identification of good practices for managers, consultants, etc.
•It is therefore clear that if the studies mobilized – something we have stressed, and others as well (see, for example, the meta-analysis by Uttl, White & Gonzalez, 2017) – do not establish a conclusive correlation, it does not lead to the conclusion – precisely because it is not their purpose – that the teacher should not be trained in research or that he should not do research in parallel with his teaching, and conversely, that the researcher should not teach in parallel with his research. Yet this is the message, often implied following such research and syntheses. And besides, the two authors quoted themselves admit, since they write at the end of their paper that the university should not dispense with one or other of the two sides of teaching and research, that it would be difficult to imagine a good university teacher who is not aware of recent research, and that it would be stupid to conclude that university education should not be research-based, but that this does not mean that only those who control this research are in a position to communicate it.

So the real question is this: What is a university? What is a university teacher? And how should he/she be trained, recruited and managed? If it is not a question here of saying that the figure of the teacher must necessarily be inspired by the past, it seems to us that a brief historical overview will allow us to clarify the terms of the debate and shed light on what is currently at stake.

HISTORICAL OVERVIEW OF THE UNIVERSITY AND THE FIGURE OF THE UNIVERSITY LECTURER

In most countries, higher education institutions are called universities. Here and there we find higher institutes or higher schools, like the Hochfachschulen in Germany, but generally the term used is university. Only France is an exception, and we will return to this distinctive feature, not through national tropism but because the French case is precisely indicative of the specificity of the university and, consequently, of the university lecturer.

It should be noted immediately that these are institutions of higher education, that is to say, institutions which are responsible for the training of students following their secondary studies, whatever the name we give it. From the beginning, therefore, the ontological specificity of the university is well marked; it is teaching, and teaching offered after the initial educational curriculum. As we know, the very term "university", of medieval origin, from the Latin *universitas*, *universitas magistorum* and *scolarium*, refers to the collective formed by teachers and students. The university of Bologna was founded in 1088, that of Salamanca in 1218 and the Sorbonne in 1257. Very early on, from the 13th century, these collectives, legal entities before the term was coined, endowed themselves or were endowed with autonomy with the aim of favouring and preserving the freedom of debate necessary for the deepening of the thought as much as for the creation and transmission of the most recent knowledge: autonomy with regard to the public authorities, religious powers, powers of the city, etc.

Three characteristics emerge from this initial brief appraisal: the university is a collective place of training, where the teachers are called to debate among themselves and with the students and can only do this if they are guaranteed independence of opinion with regard to the various powers that be. This system was very widely shared at the time. It was to an extent reinforced by the Renaissance and the rediscovery of antiquity. The university was academic in the Platonic sense, while preserving its characteristics: collective assembly, independence of debate, the training of young minds. A further distinctive feature was probably added during this period: the academic is a teacher, but to teach is also to learn how to think independently. Socrates and his maieutics are very close to the logic of discernment developed by the founder of the Jesuits in his long period of university study, especially at the University of Salamanca, then at the University of Paris, where he spent seven years. The Enlightenment disrupted this system (one can forgive those authors who are not historians for these shortcuts, the purpose of which is solely to illustrate their comments and which do not conform to current historical research practices). The university no longer was able to protect its intellectual independence ("And yet it moves!" – Galileo) and in particular did not participate in the intense process of technical discovery that preceded the industrial revolution. University institutions were clearly in decline; they were no longer the principal place where the teaching of thought and the development of new knowledge was forged; they were cut off from what would henceforth be termed research.

The European reaction took two opposing forms. In France, no matter whether State, Crown, Republic or Empire, institutions were created for training the new technical actors needed for the country's development (Corps des Ponts et Chaussées in 1766, School of Mines in 1783, École Polytechnique in 1794-1795, etc.). Universities, on the other hand, suppressed by the Convention in 1793, were reorganized and centralized by Napoleon in 1806 around five faculties (Law, Medicine, Sciences, Letters and Theology). This situation would characterize the French educational landscape in two major respects for the next two centuries. On the one hand there was the separation between technical development (schools) and the academic world (faculties), with the exception of medicine and science (but in the latter field France created hybrid institutions, such as the Ecole Normale Supérieure – ENS, to link the fields of study). On the other hand, de facto, there was the separation between research and training. This specifically French course of development, which overall worked well or even very well until the middle

of the twentieth century, culminated with two innovations that were quite specific to France, the creation of the Centre National de la Recherche Scientifique – CNRS in 1939, which confirmed the separation between universities and research (and to a lesser extent between schools and research, though many schools, particularly management schools, resisted the division) and the creation of the Ecole Nationale d'Administration – ENA in 1945 to train the administrative elite.

The German reaction was very different and owed a lot to Willehm von Humboldt. This philosopher, a follower of Kant and a friend of Goethe and Schiller, became Minister of Education of the Kingdom of Prussia in 1809 and the following year founded the University of Berlin, which today bears his name (and that of his brother Alexander, the celebrated botanist). Humboldt reaffirmed the principles according to which universities must incorporate humanism into the training they provide, and to this end generated a confrontation rooted in research, in order not to be cut off from developments elsewhere. The founding of the University of Berlin and Humboldt's ideas would have a strong impact in England and the United States, and thereby throughout the world.

At the end of the twentieth century, the French public authorities became aware of a certain sclerosis in the French system and in the universities, and no doubt also of a growing gap between the training of elites, almost exclusively from the schools, and their awareness of emerging societal issues. For example, at the École Polytechnique, the few management courses (strategy, organization, human resources) were long regarded as "survival kits" in business! A twofold shift now took place. First, at university level, the 1968 Faure law broke with the royal, imperial and republican tradition of the university, swept under the carpet by the public authorities – remember that in France the rector was still, not the primus inter pares among academics, but the representative in the academy of the minister – by asserting its autonomy. This change, eight hundred years after the mediaeval period, came with the need for training and research institutions to be formally independent of political power. The Savary law of 1984 went further by adopting Humboldt's convictions and by creating the status of teacher-researcher, which formally links the exercise of higher education with training prior to research and with its continuing practice. Unfortunately, this twofold change had little perceived impact. First the universities were being squeezed by the lack of new resources and the growing number of students – a direct consequence of the well-known Article 14 of the Savary law, according to which everyone who has passed the baccalauréat has the right to enrol in their university of choice. They were then weakened by the Pécresse reform, which, with an overall budget without additional revenues, forced them to choose between overhauling the channelling system and the recruitment of teacher-researchers. Renewal in these areas is still pending.

With regard to the schools, their lack of connection with research, especially in management schools, led them, under the impact of pressure from international rankings – perceived more by administrations than by students – to recruit PhDs, though sometimes in a very artificial way and with little linkage to educational needs. In this respect, they were conforming to the international trend that was also impacting universities, embodied in the expression "publish or perish" – which applies both to institutions and to individuals – with the separation of research and teaching. Moreover, this trend was extending to higher education establishments throughout the world. Thus, in a curious and paradoxical reversal of history, at the beginning of the twenty-first century, it is the French model from the end of the eighteenth century, just when it was

evidently running out of steam, which is now in the process of establishing itself at the international level. As testified among many others by the paper that provoked the present response, it is characterized by the separation of the realms of research and of teaching. So once again we return to the original question. What is a university?   What is a teacher? And what should each of them be? Indeed, at the beginning of the twenty-first century, according to the dominant model, teachers are no longer at the heart of the university system: their mission is vague and discredited. Instead it is researchers who are central to the system; it is they who have triumphed, with no concern as to whether they may be the founding intellectual masters to whom universities owe their very existence.

THE MISSION OF THE UNIVERSITY TEACHER TODAY

This new standard model, a curious mix of the French model of the end of the eighteenth century and the Anglo-Saxon competitive model, is today largely dominant. Let us have another brief look at it. The universities "must" recruit the best researchers as teachers, that is to say those who have published in the best journals or are best ranked in France by the CNRS (note the semantic loop!). This categorical imperative will enable them to occupy a visible place in the international rankings, largely based (a second loop) on the visibility of the research and, consequently, to attract the best students and the best teachers, while at the same time being able to charge the former and pay the latter. From this imperative expressed in a deliberately provocative way – the format of the paper permits it – some logical observations may be drawn.

1. Universities are becoming research organizations and teachers must be researchers of the highest international standard
2. This consequence is not consistent with the historical analysis formulated above
3. The primacy accorded to research is not based on any renewed analysis of the mission of the university and, starting from the teacher, of its ontology.

Hence the debates that opened the analysis acquire a very particular and very relative meaning. It is finally not necessary to know whether research is beneficial for teaching and teaching for research since the duality of the university's mission is no longer asserted, or rather, it is deconstructed. The realms of teaching and research are disconnected. The risk that ensues is that, in the absence of in-depth thinking about the mission of these institutions, they are weakened and reduced to being simply bi-cameral, binary entities juxtaposing researchers and teachers, and thus are no longer able to fulfil their primary mission, that of deepening independent creative thinking. The underlying thesis presented here considers that this essential task must be reaffirmed and, to do so, it must first be overhauled; then secondly, that this involves recruiting teachers who are able to play a leading role in this mission, which is as necessary today as it was in the past. This in turn requires that they master the logic of research (philosophical in the Greek era, theological in mediaeval times, technological in the nineteenth century). Let us first try to substantiate this ontological perspective and then to define its necessary articulation with research, within a sociological and institutional perspective, since these are the two essential dimensions of what is at stake.

Among the six "orders of worth" listed by Boltanski and Thévenot (1991) none is directly concerned with the world of higher education. The new standard model referred to above comes from both the inspired order of worth (creation) and the fame order of worth (reputation). This observation leads us to believe that the university as such has largely left the field of sociological thinking and more generally of institutionalist thinking. If we narrow the perspective by drawing on social convention theory, we can only note the supremacy of the value "publication", from which variously arises the order of worth (publishing), the order of non-worth (non-publishing) and related incentive schemes (sanctions for non-publication by increasing the teaching load). The university has thus become an environment where teaching is a punishment! But then why still talk about the university? It would seem more logical to institutionalize the separation and promote research institutions (such as the CNRS) and teaching establishment institutions (such as the schools) since, a fortiori, the quality of the accomplishment of these two missions would not be linked. This is probably rather jumping the gun. Can we therefore consider higher education institutions that are radically separate from research, even if this contravenes the lessons of the historical approach taken? The answer can only come from updating the question of the present purpose of the university, as an institution in society.

It is clear that this question has been hardly discussed. The university should be a privileged site of research. Yes, but why? From another perspective, the university should also take any students who would like to enrol. Yes, but again why? Recent texts – the Faure law, the Savary law and the Pécresse law through to the Blanquer/Vidal projects – all emphasize *operational* missions (initial education, continuing education, production and dissemination of knowledge, participation in societal debates) but without, however, addressing the *why* of these missions, their purpose, their raison d'être.

The absence of such questioning is, to say the least, surprising. The answer to this institutional question is to be sought precisely in institutional approaches. If one refers to the dominant model and within a "passive" institutional perspective (DiMaggio & Powell, 1983), teacher-researchers are encouraged to favour the research side, the institutions to which they belong are assessed, and in these assessments the amount of research plays a sizable role. It is very easy then to make the link between the individual's research activity and the institution's (a published paper for the researcher = a paper notched up for the institution). Institutions can thus identify the best researchers and remunerate them accordingly, consistently with the model (in institutions practising segmentation of the profiles of teachers-researchers, those whose research component is dominant are always better remunerated than those whose teaching component is dominant). In addition, the market value of a teacher-researcher, not only internally but also externally, depends on the volume of publication. According to the organizational socialization grid, researchers are willing to accept these rules and forms of institutional pressure, adhere to them, and even absorb them and make them their own (Perrot, 2009).

A different institutional perspective is conceivable. In his analysis of change (in this instance, economic), Douglas North (1990, 2005) highlights the key role of those he calls "institutional actors". His overall explanatory schema begins with the discovery of the prime mover of all human action, the conviction that action can improve the lot of the person who undertakes it. This conviction is based on the observation that everyone is able to

become familiar with the institutional scaffolding, made up of intertwined rules, norms, laws, conventions derived from the functioning of both formal and informal institutions. The role of institutional actors is precisely to be able to shift the analytical frameworks, to change their mechanisms, to alter their representations, and to promote innovative behaviour – and all the more so if there is institutional rigidity. in doing so, they persuade those who are operational, both individuals and organizations through their leaders, to change their way of thinking and hence to act. These actors are therefore, in a way, masters in the renewal of thinking. From this perspective, the role of universities and, within them, teachers is obvious: they are places and actors whose mission is, precisely and specifically, the renewal and stimulation (if not the training) of critical thinking applied to current issues of society. The link is thus made between the dynamics of responsible action, training in this dynamic, and the role of teachers and of universities, the archetypal institutional actors. Our societies, therefore, especially since they are tending to freeze while the world undergoes perpetual renewal, are crucially in need of this.

Within this perspective, teacher-researchers should not submit to the pressures of their environment; in confrontation with others, they convey a vision, individual or shared, based on an intellectual project that they develop during their multiple activities (research, interaction with the outside world, teaching, etc.). Consequently, research activities and teaching activities are embedded in this project, which the teacher-researcher aims to develop, because it is meaningful to him or her. To consider the activities of this project in isolation does not make sense. Thus teacher-researchers are institutional entrepreneurs, who evolve at the heart of institutions that they should seek to change. Inserted into organizations, changing in front of an audience of other teacher-researchers and students, they occupy a privileged position necessary for defending a vision of society, based on relevant and rigorous research that nourishes their teaching. As Hattie and Marsh (2004) argue, ultimately the linkage of teaching and research is more of a political decision to be implemented. Not to do so would be a denial of what the university should be.

Moreover, in the linkage of teaching and research, it is important to emphasize that teaching can take on very different aspects. The authors of the present commentary both teach or have taught to different audiences, from the first year of a bachelor's degree through to master's degrees (whether or not research-oriented), MBAs (more or less senior), EDBAs (executive training) and PhDs. It is very clear that, depending on the public, reliance on research to feed course work varies enormously (though it is never zero). From there to saying that such reliance produces the best courses is another matter, but it is clear that some of the content used comes from what we read during our research, and that aspects of the perspective framing what is taught are based on reasoning acquired during reflection within research-oriented projects. It seems important also to emphasize the reciprocal relationship, namely the influence of teaching on research. It is, moreover, in this sense that Carton and Mouricou (2017) specify the relationship, so as to improve the relevance of research, and underline "the importance of <u>teaching as a way</u>[2] of making research in management more relevant". Indeed, our teaching with executive or apprentice audiences has clearly given rise to practical questioning from

2. Our emphasis.

which research projects have emerged. In addition, students' own thinking sometimes freights deep, even radical questions, that allow an in-depth study to be developed. If teacher-researchers split up these two activities, they will be unable to use the potential synergies between them. If, on the other hand, they seek to develop synergies, then both aspects can feed each other.

These considerations take us back to what has been called the rigour/relevance gap in the management literature, i.e. a decoupling between on the one hand research that is rigorous but irrelevant for practising the field of study (management science) and on the other relevant studies that are deemed to be not very (or less) rigorous. Indeed, the question arises not only as a matter for debate with a view to making the field of management science more scientific (Carton & Mouricou, 2017), but also as self-criticism on the part of researchers in management (and not only researchers!) in view of their weak connection with the professional world they study. Indeed, Langley and Tsoukas (2010) attribute to the dominant model – statistical studies based on variance (explanations of "on average" phenomena with explanatory variables) – one of the major problems associated with the non-use of research results by practitioners: establishing the antecedents of a dependent variable by controlling the contextual elements does not, in practice, allow these determinants to be introduced within organizations. We can therefore wonder about the type of research that is valued today by journals and the impact that the orientation of this research may have on the link between teaching and research.

If one focuses on the management sciences, and in particular the strategy/organization/management field to which this journal is dedicated, one other final conclusion is called for. Reducing academic competence to the researcher's technical competence accentuates the subordination of the social sciences to the so-called hard sciences. Indeed, by emphasizing the importance of technical competence for the detailed understanding of empirical phenomena, management researchers subjugate themselves 1) to researchers in finance and economics who do a "serious" job (i.e. more anchored in mathematical modelling and macro phenomena) and 2) to mathematicians who find in finance and economics fields for the application of new methods and skills. But since management belongs to the synthetic sciences, the mathematical modelling of the various phenomena it covers does not seem to us to be the only road it has to follow. It calls for a plurality of methods, all of them highly demanding. Management sciences possess bastions of this vision (AIMS, EGOS, Organization or M@n@gement journals, etc.). Let us not convey a message that would silence these approaches because they do not make use of mathematical techniques borrowed from other disciplines. It is up to us to develop our own methods, our own approaches (for example, science design or action research, to which the management sciences lend themselves particularly well), and to make them legitimate in the institutions in which we participate.

In this perspective, how specifically should we envisage the training of these teachers-cum-"thought leaders"? It is important to draw a parallel with researchers who, curious and observant, identify a phenomenon unexplained by the present state of knowledge (this is the frequently mentioned theoretical gap). Accordingly, they seek to come up with a model, for which they need creativity, imagination, investigation, discussion, the exchange of ideas and so on. Then from the resulting

consistently formulated model they carefully evaluate to what extent it makes sense, both locally and generally. The parallel between teachers and researchers is evocative and one then understands that teachers have always been exposed to the work of research, have always sought to understand and grasp its dynamics. It only remains to draw some current operational implications from this analysis.

IMPLICATIONS AND PERSPECTIVES

Ontological reflection carried out on the university and its teachers and researchers, leads, whatever the approach used (whether historical, sociological or institutional), to a semantic convergence. The university emerges as a place where new generations are to able deepen and nurture creative independent thinking. If they are to do so, they need to have mentors who will enable them to learn how to think: in a word, teachers. The primary mission of the teacher is therefore to serve as an alter ego, as a partner (universitas) to those pursuing this quest for learning. The latter must therefore be endowed with a capacity for listening, discussion, organized intellectual activity, independence of thought and caution with regard to facts as well as social dynamics. Historically, as has already been shown, training in these capacities has been anchored in the practice of creative intellectual inquiry, now known as research. We understand why: the teacher is not a researcher, but the teacher has to have been trained in research.

Does today's world still need such institutions and academics? Our answer is yes, absolutely. Here we put forward only a few arguments meriting further development that emerge from the field of this reflection centred on the role of the teacher. The pace of technical change is clearly very rapid; the advent of the digital transition is disrupting most professions and ways of life; globalization is shrinking physical and cultural distances; religious, ideological and political reference points are fracturing... So is the present era no longer in need of institutions where the capacity to think about the world independently, critically, cautiously and openly is at least strengthened if not constructed? Certainly, it is very much in the interest of society to bring up to date the mission of the university and thus the intrinsically related mission of the teacher.

If we accept this conclusion – and how can we not? – some organizational implications are logically called for. First and foremost, it appears that the university is not a research centre or a collection of research centres. This is not its ontological mission. It is probably appropriate, or even essential, that the university embodies research laboratories in which teachers' required intellectual qualities – the very qualities we have spoken of – are continually honed; but wanting to reduce the university to being solely a research organization would be to renounce this role. From this standpoint, the concept of a research university is particularly ambiguous. On the one hand, it is obvious that a university where there was no research would not be a university, and this should be clearly stated. On the other hand, defining the university by its research is nonsense. There would be much to say, from a Foucauldian perspective, on the issues of power that seek to confine the teacher in his/her role as researcher and that are intent on propagating this ambiguity: defence and promotion of these economic, political and administrative powers that cannot accept the teacher's mission and even challenge it; defence of and glorification of the researcher who would like to go beyond simple technical

recognition and ipso facto claim to be a thought leader. Such concerns go beyond the scope of the present reactive reflection; but they are nonetheless essential, however much they may be occulted.

In the same vein, we can only be concerned about the future of a number of schools, particularly management schools, which, with the help of advertising, welcome the fact that they are classified in this or that list in the daily or weekly press. Yet they probably do not suspect that these rankings represent a worrying pyrrhic victory for them. Not being embedded in a university architecture – unlike many of their international rivals – they seek recognition by submitting to external criteria and thus run the risk of destroying the specificity of their faculty (distinguishing between "star" researchers, who are excused teaching courses, and teacher/tutors, who do not do research) and the collective dynamics of student-teacher debate.

A second field opens on to the analysis of the observation that supports this reflection. It concerns the management of teachers: their training, their recruitment, their careers. Again, the conclusions are fairly immediate. Teachers must (and when one uses this word, it is to signify a logical consequence) have been trained in research and have proven their ability to be in the top rank, in their time and in their world. But this established, the recruitment process is precisely just beginning and the "jury" must (same point as above) ensure that the applicant has mastered or will be able to master the qualities required for the teaching profession (we will not again list them). The *agrégation* (the high-level competitive examination for recruiting teachers in France) has provided for this relatively well, as too have the local recruiting competitive examinations, so much so that they have not been confined solely to specialist researchers in the discipline. It is important to reaffirm the need for faculty recruitment which, once the qualities of researchers have been verified, focus on detecting the qualities of teachers.

Following the same logic, evaluation of teachers cannot be based solely on their publications; it must necessarily, at the risk of denying their institutional specificity, go much further and assess the quality and dynamics of them as "thought leaders". A practice that has long been dominant in this area is the assessment of the influence of the teacher as research supervisor. In this sense, the recent fact that research supervision is no longer viewed as research but as teaching is not fundamentally inconsistent; this capacity reflects many of the qualities required of teachers and deserves to be strongly re-asserted in assessing their careers. While this was formerly the case at the French Centre National des Universités – CNU, it is scarcely no longer the case in the internal management of institutions. In this sense, accreditation to supervise research (HDR) should logically occupy a primary place, provided that the capacity (H) to supervise (D) and not only to publish (R) is well recognized and tested.

There remain crucial questions, such as teachers' "duty" and remuneration, but these are soon answered if one wants to reaffirm the specificity of their mission. Thus, in its wisdom, the Third Republic limited teachers' class time to 75 hours, which left them the opportunity to carry on with their work and participate in societal debates. Some countries have formally included service to the community in what is expected from their teachers. Therefore, remuneration cannot be linked to publications – which would be senseless – or to student assessment alone: their progress in mastering critical and independent thought can only be judged in the long run. Thus, remuneration can only be institutional, linked to the recognition

by academic institutions and society of the crucial role of the teacher. There is much to be done!

This could be the conclusion to our reflection. It has become urgent to revalue the specificity and societal importance of the teacher and the university. This task is primarily the responsibility of teachers themselves, provided that they do not want to be exclusively researchers; it also concerns academic institutions, provided that they reaffirm their existential mission; and finally, it is a matter for political authority, especially European political authority. It was in Europe that the university was born. It is unquestionable that Europe today owes a lot to its universities, and in turn has done a lot for them (Bologna, Erasmus). It is now no doubt up to them, if they want to control their future, to take charge of the rehabilitation of their key missions in the face of the current worrying trends of globalization. The advent of the "intelligence" society may ultimately open up rather positive perspectives.

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