# DMINISTRATIVE REFORM AND THE NEW CONFLICT OF THE FACULTIES at FRENCH UNIVERSITIES 

Brice Le Gall and Charles Soulié


#### Abstract

According to political and journalistic common sense, French universities are ill adapted to the new economic and social situation at home and abroad, and incapable of reform. We intend to counter this view by showing that, far from being an immobile behemoth as it is often described, the French university system—just like that of other European countries—has witnessed a silent revolution over the past twenty years, preparing it for the current reforms and, in particular, for the latest reform of its administration. In order to do this, we shall briefly describe recent developments in French higher education, highlighting inter-faculty and inter-disciplinary power relations at the universities. Drawing on the work of Pierre Bourdieu, we then offer a sociological analysis of these developments ${ }^{1}$.

Over a period of twenty years or so, the face of French higher education has changed considerably, becoming highly diversified. The sectors that saw the most rapid development between 1980 and 2003 are those that are most "professional," i.e. respond most directly to business demand. These include business and engineering schools, advanced vocational training schools (Sections de Techniciens Supérieurs, STS), and University Technology Institutes (Instituts Universitaires de Technologie, IUT)². Universities proper exhibit the same tendencies. Vocational University Institutes (Instituts Universitaires Professionnalisés, IUP), created in 2001, were offering 397 degree programs by 2003. Their graduate numbers are growing at a much faster pace than those of more traditional programs ${ }^{3}$. Similarly, while there had been 747 vocational licence programs at the beginning of the 2003


#### Abstract

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This article is a thoroughly revised version of Le Gall and Soulié 2008. For additional context, see the other papers in the same volume as well as Schultheis et al. 2008. [The "faculties" referred to in this paper are not specific university departments in the North American sense, but the traditional grouping of disciplines into large clusters that goes back to the faculties of Theology, Law, Medicine, and Arts at the medieval University of Paris. This classification is still used in France, even though it no longer has any administrative significance since the 1968 reform of French higher education. Hence e.g. the "faculty" of law and economics. To avoid confusion, the English translation refers to university teachers as teaching staff rather than "faculty."—Translator's note.] 1 See Bourdieu 1984, especially the chapter on "The Conflict of the Faculties," which is inspired by Immanuel Kant's analysis of the university and uses a fields-based approach.

2 The STSs and IUTs, which admit students immediately after the baccalaureate [equivalent to a high school diploma-Translator's note], offer brief (two-year), specialized vocational programs designed to allow graduates to enter the labor market directly at a level between blue-collar or clerk-type jobs and management positions. Together with schools for paramedics and social workers, students in these programs represented $22.4 \%$ of the entire French student population in 1980, but their share had grown to $29 \%$ by 2003. During this period, enrollment growth was $410 \%$ at commercial colleges, $245 \%$ at the STSs, $184 \%$ in engineering programs, and $112 \%$ at the IUTs, but only $76 \%$ at the classes préparatoires [see note 14] and $62 \%$ at regular universities (source: Ministère 2005: 19). Thus French universities are gradually losing ground to a whole network of parallel schools which usually practice selective admission and are more vocational, since they are oriented toward a limited number of professions. In France, any baccalaureate is sufficient for enrollment at a university. This explains why many holders of baccalaureates find themselves in a non-specialized undergraduate program at a university by default, having been unable to gain admission to either a short or a long program at a more selective school.


3 In 2002-2003, the number of licences awarded by universities grew by $5.9 \%$, and that of maîtrises by $1.2 \%$. Over the same period, IUPs awarded $8.3 \%$ more licenses and $9.4 \%$ more maîtrises (Ministère 2005: 229). [A licence is a degree usually awarded after three years of study, and a maîtrise after another year. They are thus roughly equivalent to a BA and one-year MA, respectively, although more so as a result of the European harmonization effort known as the Bologna process than before, which is why the French terms are used in this translation unless the text refers specifically to the effects of the reform.-Translator's note]
academic year, there were approximately one thousand in 2004, and over 1,200 in 2005 (source: Dupont 2005: 46). Today, more postgraduate students obtain vocational master's degrees than research-based maîtrises or doctorates ${ }^{4}$. In some parts of the higher education system, this unprecedented growth of university-based vocational education is positively endangering the position of research, even though official discourse calls research a "national priority" in the face of "international competition." And yet research, which can be a very different type of activity depending on the faculty or discipline ${ }^{5}$, is also increasingly relegated to a limited number of "poles of excellence," and thus implicitly confined to certain institutions. Soon, given the current reforms, it will probably be limited to certain categories of teacher-researchers, based in particular on the new bureaucratic distinction between "publishing" and "non-publishing" researchers, with the latter being driven by their local university presidents and department heads to devote themselves more to teaching and administrative duties.

This diversification and rapid vocationalization of higher education result from the combination of the Ministry of Education's policy agenda and the development of student "demand," which is primarily determined by France's particularly high levels of youth unemployment ${ }^{6}$. But these processes may also be traced to the evolution of student demographics, which seem to us to play an essential role in the transformation of the university system. Here is a brief summary of demographic change within that system over the past fifty years. Between 1950 and 2003, on average, the number of students enrolled at a university grew at a rate of $4.2 \%$. However, there were two particularly strong pushes. The first took place between 1960 and 1970, during a period of strong economic growth, when the postwar baby-boom generation entered higher education. In general, that baby boom contributed to a rejuvenation of the French population and was a key factor in the modernization of both lifestyles and politics in France ${ }^{7}$. During this first massification of higher education, student numbers grew at an average annual rate of $11.5 \%$. The second wave of massification, between 1988 and 1993, was both shorter and less intensive, with an annual growth rate of $6.4 \%$ (Ministère 2006). Among other factors, it was the result of a policy, launched in the late 1980 s, that was intended to make $80 \%$ of any cohort obtain the baccalaureate, and allowed an increasing proportion of lower-class students access to higher education ${ }^{8}$.

This second period of massification also initiated a thorough redistribution of teaching staff across institutions and disciplines. In what follows, we shall analyze this phenomenon more precisely by tracing the development of tenured teachers at French universities (full professors and maîtres de conférences, roughly equivalent

4 In 1982-2003, the number of professional master's degrees awarded grew by $639 \%$, pushing their share of all French university degrees from $4.2 \%$ to $13.2 \%$. Over the same period, the relative share of research-based master's degrees dropped from $9.5 \%$ to $7.5 \%$, and the share of doctorates from $4.6 \%$ to $2.3 \%$ (source: Ministère 2005: 229). One of the effects of this change is an increase in teacher-researchers' teaching loads, leaving less time for research.
5 In the humanities and social sciences, just as in law and economics, research remains highly individual and craftsmanlike, and budgets are generally very low, self-financed research being very common in these disciplines. The natural sciences, medicine, and pharmaceutics, in contrast, mostly rely on collective, high-budget research. This creates different attitudes toward money, the private sector, and the state, and goes a long way toward explaining political differences between these disciplines.
6 In France, young people are more hit by job losses in manufacturing than other parts of the labor force. In 2004, unemployment was $16 \%$ overall among all those who had obtained their last diploma three years earlier. However, if the figure is as high as $39 \%$ for those with no qualifications beyond the baccalaureate, it is only $14 \%$ for those who hold a CEP or BEP (professional diplomas awarded before the baccalaureate), and $9 \%$ for those who hold a degree higher than a licence. Any degree is thus good protection against unemployment. This explains why demand for education, especially higher education, is high, and why much of it boosts the vocational sector (Marchal, Molinari-Perrier, and Sigot 2004).
7 In 1968, 32.2\% of the inhabitants of metropolitan France were under 20 years old. Since then, the population has steadily aged: the under-20 cohort represented $28.7 \%$ of the total population in 1982, $24.6 \%$ in 1999, etc. See Courson and Madinier 2000.
8 [The baccalaureate is the French high-school (lycée) diploma-Translator's note.] This objective has still to be reached, but progress over this period has been remarkable. Thus, in 1985, the share of baccalaureate holders among the entire cohort of 18-year-olds was $29.4 \%$. It had grown to $43.5 \%$ by 1990 , to $62.7 \%$ by 1995 , and peaked at $64.3 \%$ in 2006 , with significant variations by sex ( $58.9 \%$ of men vs. $69.9 \%$ of women). See Ministère 2007: 235. The share of high school graduates by cohort is a valuable indicator used in cross-national studies of differences in higher education systems.
to associate professors) by department and discipline between 1986 and $2005^{\circ}$. This will allow us to shed light on the underlying academic, social, and, more generally, political stakes in the current reform of research and university "governance." At the same time, this perspective may contribute to explaining the low level of resistance among French—and generally European—university teachers against what Chris Lorenz (2008) has called the "managerial colonization" of the universities. Indeed it helps to explain why academics are contributing to this process even though it jeopardizes the peer- and discipline-based modes of regulation that are specific to the university and clashes with the values of autonomy, critique, and disinterestedness that are traditionally defended by university teachers.

Elections play a significant role in the administration of French universities. Thus, since the Orientation Law on Higher Education of 1968, universities are governed by presidents elected by councils whose members are in turn elected by all teaching, administrative, and technical staff, as well as students. Universities' constituent parts, the so-called Teaching and Research Units (Unités de formation et de recherche, UFR), which usually comprise several departments and disciplines, are likewise directed by a council whose members are elected by the entire university community, and in turn elect a director from their midst ${ }^{10}$. Thus, universities already enjoy a certain measure of autonomy. In August 2007, however, a new law entitled "On the Liberties and Responsibilities of the Universities" introduced a reform of university administration, giving significant power to university presidents, especially concerning hiring and promotion, as well as increasing the institutions' financial and administrative autonomy. Under the guise of (administrative, though not intellectual or scholarly) autonomy, universities are increasingly seen as academic enterprises that must therefore be managed just like private enterprises ${ }^{11}$.

## ACT 1: THE RISE OF THE CRITICAL DISCIPLINES

Thus the French university has seen two major periods of massification. The first one, in the 1960s, led to an unprecedented rise of the humanities and social sciences. Between 1962 and 1972, these disciplines' share of teaching staff increased from $13 \%$ to $22.5 \%$; law and economics grew from $7.3 \%$ to $10.4 \%$; the natural sciences decreased from $42.4 \%$ to $34.3 \%$; and the medical sciences went from $37.4 \%$ to $32.8 \%$. Overall growth during this period was $162 \%$. This rise of the humanities and social sciences was linked to the intellectual, political, and economic context of the time (a time of full employment and rapid growth), which also led to an increase in the number of universities, with economic growth generating a strong demand for both economic and social expertise.

More specifically, the rise of these disciplines was largely due to modern social sciences such as psychology, sociology, linguistics, and anthropology, which developed at a faster pace than the humanities, that is "bookish" and literary disciplines such as philosophy, literary studies, and history. We call these disciplines "bookish" because books, "canonical" authors, and tradition-in other words, the past—play an essential role in both teaching and research. The epistemological regime of the modern social sciences is different. They are characterized by their focus on fieldwork, empirical data, and experiments, but also on the present, which draws them closer to social and political demand. In France, structuralism, as well as the spread of Marxism and psychoanalysis among academics, contributed to giving these new disciplines legitimacy during the first period of massification. Their scientific ambition pitted them against the humanities, especially philosophy, the former "queen" of the disciplines. Thus, in late 1960s France, it was considered de rigueur to speak of the "death of

9 These tenured teachers are civil servants who have guaranteed employment and are paid a salary that allows them to devote themselves to research and teaching full time. This statute also gives them greater pedagogical and research autonomy. The French government is currently planning to reform this system. The statistical data we use come from the Ministry of Education; we wish to thank Marc Bideault, Pasquin Rossi, and Loïc Thomas of the Directorate of Teaching Staff (Direction des personnels enseignants, DPE A6) for sharing them with us.

10 Add to this that, until the recent law on "Liberties and Responsibilities of the Universities," this election-based system also played a large role in both the recognition of qualifications and hiring. For details, see below.

11 On the growing influence of the entrepreneurial model in French academia, see the special issue of Actes de la recherche en sciences sociales on "Academic enterprises" (no. 148/2003) as well as de Montlibert 2004.

Table 1
Changes in the Numbers of Teaching Staff in the Faculties of Law, Humanities, Natural Science, and Medicine from 1952 to 1978

|  | 1952 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Law | 339 | - | - | 403 | 446 | 522 | 572 | 639 | 717 | - | 894 | 1.109 | 1.236 | 1.429 |
| Human. | 708 | - | - | 671 | 735 | 809 | 876 | 974 | 1.150 | - | 1.602 | 1.970 | 2.396 | 2.724 |
| Nat. Sci. | 1.007 | - | - | 1.406 | 1.594 | 1.925 | 2.281 | 2.853 | 3.632 | - | 5.225 | 6.107 | 6.901 | 7.783 |
| Medicine | - | - | - | - | - | - | - | - | - | - | 4.606 | 5.911 | - | 6.564 |
| Total | 2.054 | - | - | 2.480 | 2.775 | 3.256 | 3.729 | 4.466 | 5.499 | - | 12.327 | 15.097 | 10.533 | 18.500 |


|  | 1966 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Law | 1.519 | 1.729 | 2.344 | 2.772 | - | - | 3.370 | - | 4.205 | 4.224 | 4.011 | 4.012 | 3.989 |
| Human. | 3.232 | 3.908 | 5.133 | 5.782 | - | - | 7.256 | - | 8.011 | 8.056 | 8.005 | 8.057 | 8.124 |
| Nat. Sci. | 8.467 | 9.510 | 10.289 | 10.749 | - | - | 11.071 | - | 14.532 | 14.636 | 14.795 | 14.891 | 15.075 |
| Medicine | 6.929 | 7.366 | 8.499 | 9.121 | - | - | 10.585 | - | 10.997 | 11.230 | 11.481 | 11.096 | 11.254 |
| Total | 20.147 | 22.513 | 26.265 | 28.424 | - | - | 32.282 | - | 37.745 | 38.146 | 38.292 | 38.056 | 38.442 |

Includes professeurs, maîtres de conférences, maîtres assistants, assistants and chargés de cours.
Sources: 1952, 1955, 1956, 1958, 1959, 1964: Bourdieu 1984:269-271.
1957, 1960, 1962, 1963: Ministère 1965.
1965, 1966, 1967, 1968, 1969, 1972, 1974, 1975: Tableaux de l'éducation nationale (1965: 60; 1966: 84; 1967: 416; 1968: 396; 1969: 365; 1972: 405; 1974: 319; 1975: 361).

1976, 1977, 1978: Ministère 1981.
philosophy" (even for those continuing to practice it) and to engage in the relentless persecution of a hydraheaded something called "metaphysics." The new disciplines thus became the driving force behind a new way of doing research, a new scholarly habitus, and in 1968 they were crucial in mounting a pedagogical, scholarly, and political challenge to the traditional university. The work done by Pierre Bourdieu, Jean-Claude Passeron and their team on the education system is emblematic in this respect, as is their own academic trajectory, as normaliens [graduates of the prestigious École normale supérieure—Translator's note] who switched from philosophy to sociology, via ethnology in Bourdieu's case.

The transformations of the teaching body that accompanied the first massification were thus expressions of more general scholarly and intellectual (but also demographic, social, and political) developments. The critical and anti-institutional mood that infused French society was feeding on the new intellectual trends of the time, which in turn were fuelled by the new social and political experiences of May 1968 and its aftermath. This mood contributed to the creation of new disciplines as well as original institutions such as the Experimental University Center in Vincennes. This center, which later became the University of Paris-VIII Vincennes-Saint Denis, attracted a fair part of the intellectual and political avant-garde of the time (Soulié 1998).

## ACT 2: ADAPTING TO ECONOMIC CONSTRAINTS

The second massification also contributed to the rise of new disciplines and institutions. But given the very different demographic, economic, cultural, and intellectual context, its results were also different. While this second period of massification also contributed to a strong growth in the numbers of tenured teachers
(a $102 \%$ increase between 1986 and 2005), the institutions, departments, and disciplines concerned were no longer the same. The strongest increase was at the University Technology Institutes, a type of institution that was created in the late 1960s to cater to business demand, especially on local levels. The second massification was also accompanied by a process of deconcentration, due to the establishment of these new institutes as well as fourteen new "local" universities and provincial branches of major universities. This created major regional university centers which were more inclined to claim greater autonomy from the center (represented by the Ministry of Education, the National Council of Universities, and more generally by Paris) ${ }^{12}$, but also turned some smaller institutions into "agents of local development"13.

Unlike in the 1960s, now it was the most applied and vocational departments and disciplines, those that catered most closely to business demand, that saw the most growth. Out of the four faculties, the faculty of law and economics expanded most rapidly. Today, not counting the medical sciences, it represents $15.4 \%$ of all teaching staff, compared to $11.9 \%$ in 1986. The humanities and especially the natural sciences exhibit lower-than-average growth. Due to the introduction of a numerus clausus system limiting the number of medical students [in 1971—Translator's note], the share of medical professors has dropped steeply.

Table 2

## Changes in the Numbers of teaching staff in the Faculties of Law, Humanities, and Natural Science from 1986 to 2005

|  | Total <br> $\mathbf{1 9 8 6}$ | Total <br> $\mathbf{2 0 0 5}$ | Increase <br> $\mathbf{1 9 8 6 - 2 0 0 5}$ | Full professors <br> in 2005 | Based in <br> Paris 2005 | Employed at <br> IUTs in 2005 | Women <br> in 2005 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Law and <br> Economics | 2.637 | 6.884 | $161.1 \%$ | $31.7 \%$ | $13.1 \%$ | $11.0 \%$ | $35.1 \%$ |
| Humanities | 7.032 | 14.062 | $100.0 \%$ | $30.0 \%$ | $16.1 \%$ | $4.2 \%$ | $45.2 \%$ |
| Sciences | 12.525 | 23.897 | $90.8 \%$ | $31.6 \%$ | $11.4 \%$ | $15.0 \%$ | $25.1 \%$ |
| Total | 22.194 | 44.843 | $102.1 \%$ | $31.2 \%$ | $13.2 \%$ | $11.0 \%$ | $33.0 \%$ |

Includes professeurs and maîtres de conférences. Source: DPE A6. Data treatment: Brice Le Gall and Charles Soulié.

Looking at departments in more detail, we find that in the law and economics category, faculty numbers have grown most strongly in economics and management: these fields are now larger than law and political science. Within economics, experts in management-the most applied field and the one most strongly represented at the IUTs—have seen their numbers grow most rapidly and are set to become a majority. In law, private law and criminology have seen the strongest increase, followed by political science and public law, whereas legal and institutional history, the least directly practical discipline, is collapsing.

Similar developments have taken place in the humanities and social sciences. The humanities (see table 4 in the appendix), where graduates traditionally choose teaching or public service careers, continue to lose ground, whereas the social sciences, especially the interdisciplinary cluster that includes sports, communication, and education, is seeing explosive growth. Our analysis shows that disciplinary growth is a function of applicability and proximity to the private sector. Thus, within the humanities, the classics, philosophy, as well as French and comparative literature are the most affected. Within the social sciences, anthropology is just about stable, while sociology and especially psychology—which has a longer institutional history and is much more professionalized than sociology-exhibit strong growth.

[^0]Table 3
Changes in the Numbers of Teaching Staff in the Faculty of Law and Economics between 1986 and 2005

|  | Total <br> $\mathbf{1 9 8 6}$ | Total <br> 2005 | Increase <br> $1986-2005$ | Full <br> professors <br> in 2005 | Based <br> in Paris <br> 2005 | Employed <br> at IUTs <br> in 2005 | Women <br> in <br> 2005 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Management science (06) | 431 | 1.640 | $280.5 \%$ | $21.9 \%$ | $11.9 \%$ | $25.1 \%$ | $37.2 \%$ |
| Economics (05) | 679 | 1.807 | $166.1 \%$ | $31.4 \%$ | $13.9 \%$ | $9.4 \%$ | $28.9 \%$ |
| Private law and criminology <br> (01) | 638 | 1.579 | $147.5 \%$ | $32.6 \%$ | $13.0 \%$ | $8.5 \%$ | $46.0 \%$ |
| Political science (04) | 139 | 330 | $137.4 \%$ | $37.6 \%$ | $20.3 \%$ | $2.1 \%$ | $24.5 \%$ |
| Public law (02) | 549 | 1.251 | $127.9 \%$ | $40.0 \%$ | $11.8 \%$ | $2.4 \%$ | $30.9 \%$ |
| Legal and institutional history <br> (03) | 201 | 277 | $37.8 \%$ | $43.0 \%$ | $12.6 \%$ | $0.7 \%$ | $31.4 \%$ |
| Economics and management <br> cluster (5 and 6) | 1.110 | 3.447 | $210.5 \%$ | $26.9 \%$ | $13.0 \%$ | $16.8 \%$ | $32.8 \%$ |
| Law and politics cluster (1-4) | 1.527 | 3.437 | $125.1 \%$ | $36.6 \%$ | $13.2 \%$ | $5.1 \%$ | $37.3 \%$ |
| Total | 2.637 | 6.884 | $161.1 \%$ | $31.7 \%$ | $13.1 \%$ | $11.0 \%$ | $35.1 \%$ |

Includes professeurs and maîtres de conférences. Source: DPE A6.
Data treatment: Brice Le Gall and Charles Soulié.

The result is that there are now three times as many teaching staff in psychology than in philosophy, whereas in former times psychology—just like sociology—used to be taught by philosophers. Sociologists are twice as numerous as philosophers. If the trends of the past decade continue, it is likely that communication science and sports studies will catch up with, or even outgrow, sociology.

It is clear that within the humanities and human sciences, the disciplines that have most benefited from the latest period of massification are the modern social sciences. This concerns, in particular, multi-disciplinary programs with a practical or vocational character that are based on the study of a specific object (such as education, communication, sports, and urban development) rather than a theoretical paradigm. The share of the traditional humanities, in contrast, continues to decline. However, we observe an interesting paradox: the humanities are declining in terms of relative numbers, but continue to draw students with an above-average social and academic background. This is due above all to the importance of the system of classes préparatoires and grandes écoles and to the absence or slow pace of change in intellectual hierarchies in the French academic world, where theory is seen as opposed to practice, the general to the particular, the specialist to the generalist, and so on ${ }^{14}$. This is reminiscent of Max Weber's observation that

Behind all the present discussions about the basic questions of the educational system there lurks decisively the struggle of the "specialist" type of man against the older type of the

[^1]> "cultivated man," a struggle conditioned by the irreversibly expanding bureaucratization of all public and private relations of authority and by the ever-increasing importance of experts and specialized knowledge. This struggle affects the most intimate aspects of personal culture (Weber 1978: 1002).

In the long run, since the 1960s, among the humanities and human sciences, the most "bookish" disci-plines-those that have the most academic, intellectual, but also traditional legitimacy—such as philosophy, history, French literature, or classics, have seen a continuous decline in their share of teaching staff numbers, even though they continue to attract the highest numbers of holders of an agrégation and/or graduates of an École normale or classes préparatoires ${ }^{15}$. But while the first period of massification saw the rise of "modern" social sciences such as linguistics, psychology, or anthropology-some of which strove to present themselves as intellectual alternatives to philosophy -the second period of massification witnessed the advent of multi-disciplinary fields that specialize in the study of a specific empirical object (such as sports, communication, and education). These are less intellectually ambitious and more directly practical fields with a large proportion of vocational master's programs ${ }^{16}$.

Demographic developments thus do not necessarily correlate with disciplines' academic or intellectual prestige. Thus, philosophy, the old "queen of the disciplines," has remained particularly male and Parisian and therefore recruits a socially and academically higher-than-average teaching body. Together with its increasing rarity and the fact that is dominated by normaliens, this provides it with significant symbolic advantages and has no doubt contributed to the "return of philosophy" that is currently being proclaimed by the intellectual press.

Turning to languages, we find that, globally, they exhibit a smaller-than-average growth (72.4\%). English, the most popular foreign language at French universities, has a growth rate that is close to the average for all languages (63.6\%). The other Germanic and the Slavic languages have seen their relative share collapse; in the case of German, just as with Latin and Ancient Greek, this tendency follows a similar shift in secondary education. Conversely, Arabic and Asian languages are growing at a steep rate (255\%), notably due to increased demand for Asian languages, which are extremely useful in an age of globalization and the rise of new economic giants such as China and India.

In the natural sciences (see table 5 in the appendix), the least geographically centralized field, tenured teaching staff numbers have increased by $90.8 \%$ overall. Just as in the other fields, however, there is a marked change in the relative share of each discipline. The engineering, computer science, and electronics segmentwhich has particularly well-developed ties with industry —has grown the most, and today represents $39.2 \%$ of all science faculty, against $26.8 \%$ in 1986 . We also find that one quarter of people in this group work at IUTs, a much higher proportion than for the other groups. This highlights the vocational focus of these disciplines, which also have a particularly low proportion of Parisians. There is also a (less marked) growth in mathematics, but our analysis shows that it is mainly driven by applied math teachers, who are now in a majority among

[^2]mathematicians, better represented at IUTs, and include more women. The French university system is already being transformed, starting at the margins.

The other groups of disciplines have lower growth rates than the natural sciences overall, and are therefore growing at a much slower pace than the average across all university disciplines. Relatively speaking, we are witnessing the collapse of the most theoretical (and masculine) disciplines, such as physics (especially particle physics), which is also going through a serious recruitment crisis ${ }^{17}$. The same goes for chemistry and the earth sciences, with the exception of meteorology and oceanography, which are of increasing interest to the state (climate modeling, prevention of natural risks, etc). In biology, some applied subfields such as physiology are on the wane and other more theoretical ones, such as the neurosciences, are growing; growth is strongest in biochemistry and molecular biology, i.e. in those fields that have come to draw heavily on genetics and very quickly yield applicable results (such as human genome research, genetically modified organisms, or bioinformatics).

The second massification of higher education has thus continued the general transformation of the faculties, with both student demand and ministerial policies pushing for a more applied and vocational education. This is also highlighted by the breathtaking expansion of postgraduate professional (e.g., master's) degrees across all disciplines. In the sciences, this growth of the professional sector has encroached on doctoral, i.e., research-based, degrees. This means that the share of research activities at universities is constantly decreasing. Although this factor is rarely stressed, it seems to us to be essential for an understanding of the current crisis of research as well as the debates among many of our colleagues about the meaning of their particular profession or discipline in the face of the profound recent changes.

The developments that we have broadly described for each of the faculties are also visible within each discipline. In most cases, there is mounting tension between a more research-oriented and/or theoretical (or "academic") cluster, which tends to be more autonomous, and an applied cluster that is supported by student demand for professional training as well as universities' increasing responsiveness to business expectations. To take the example of languages, this opposition is crystallized in the contrast between Language and Civilization courses, which devote much attention to the literature of the country studied, and Applied Foreign Language programs whose curricula and teaching practices are attuned to business demand. The former have seen student numbers drop by $40 \%$ between 1994 and 2007, whereas the latter have remained stable. In economics, we find that in the large Parisian universities epistemology and the history of economic thought are more and more marginalized in curricula (where they are not entirely displaced), while banking, finance, consulting, or foreign trade are advancing constantly, and with them a certain conception of economics. Thus, many departments of "political economy," as they used to be known, are gradually being transformed into management departments or even poor man's business schools, not least to meet student demand, which in turn is due to France's particularly high level of youth unemployment.

## ACT 3: THE CRISIS OF THE ACADEMIC ETHOS

These transformations may help us understand the social conditions of the emergence of a movement such as Sauvons la Recherche ("Saving Research") ${ }^{18}$, whose initiators and spokespeople represented the "hard" sciences and specifically the most theoretical among them. But as many observers have stressed, the movement was mainly driven by researchers from large non-university research institutions (CNRS, INSERM and the like) ${ }^{19}$. That university-based researchers should have such limited involvement in the current debates about research seems

[^3]to us to be symptomatic of the overall situation ${ }^{20}$. On the one hand, it is due to the schism between universities and large research organizations as well as the dual system of universities and grandes écoles that structures research and teaching in the French system of higher education. But it also has to do with more recent changes in the profession of the teacher-researcher, the diversification of teaching positions in higher education, and the evolution of power relations between faculties, disciplines, and institutions. The increasing regionalization of higher education is transforming the nature of competition between them and is accompanied by a redistribution of teaching and research tasks between institutions, reinforcing inequality and hierarchies. This inequality is especially salient in the contrast between those institutions which, following the so-called LMD reform of the licence-maîtrise-doctorat system, will be limited to granting undergraduate licences, and those that will be able to develop master's and doctoral degrees (Abélard 2003).

The second massification of higher education has changed the balance between research and teaching activities among teacher-researchers. The increasing bureaucratization of their lives is likely to intensify with the spread of managerial evaluation practices-as in the case of Great Britain, which is manifestly spearheading this process. It has already contributed to an increase in the share of administrative duties; at the same time, the advent of "new publics," the development of a system of tutoring, and the growing number of programs, degrees, vocational schools and the like have increased the share of both teaching and administrative activities, particularly in connection with internship placements. These transformations have led to diminished research activities among teacher-researchers and contributed to creating a crisis of the academic ethos (Faure and Soulié 2006). Hence the feeling of deprofessionalization and dispossession, but also loss of social status experienced by many academics. This feeling is further fuelled by the chronic underfunding of French universities and the constant reforms they undergo, with the LMD or $3 / 5 / 8$ reform being especially time-consuming.

Retreating into their own microcosm—their subfield, discipline, laboratory, department, or institutionuniversity teachers are less and less likely to be doing the same job. Together with the diversification due to the creation of new types of higher education teachers (such as part-time associate professor or professeur agrégé working in higher education) and the rise of new temporary jobs (temporary teaching and research assistants, pre-doctoral teaching assistants, untenured lecturers, and others), this has further divided and broken up the profession, and thus made it vulnerable.

The Enseignants associés and their Contribution to the "Professionalization" of French Universities
Presidential decree no. 85-733 [of 1985—Translator's note], later incorporated into the Law on Innovation and Research [of 1999—Translator's note], allows higher education and research institutions to recruit "French and foreign professionals who possess expertise directly related to the area being taught." Thus, "associate" professeurs and maîtres de conférences, totaling 265 in 1986 and 3,030 in 2005 (outside the medical disciplines) may be professionals or former professionals with experience in either the public or the private sector ${ }^{21}$. According to the official texts, inviting such professionals to teach was mainly intended "to make up for recruitment shortages in certain disciplines, but also to open [academic] institutions to business and civil service" (Zetlaoui 1999: 64). The share of associate professeurs and maitres de conférences within each discipline is therefore an indicator of its "professionalization" (in a market sense).
Thus, within the field of law and economics, this share is highest in management studies (28.8\%) and, to a lesser degree, in private law and criminology ( $28.8 \%$ ), but is minimal in the history of law and institu-

[^4]tions ( $1.1 \%$ ). In the humanities and sciences, these teachers are primarily represented in information and communication science ( $31.2 \%$ ), art ( $23.5 \%$ ), and environmental/urban planning ( $21.9 \%$ ). This is followed by educational studies ( $7.8 \%$ ), sociology ( $7.6 \%$ ), psychology ( $7 \%$ ), and sports science and technology ( $6.3 \%$ ). There are virtually no such associate professors in comparative literature, classics, theology, anthropology, and philosophy. In the natural sciences, their share is greatest in mechanics (8\%), computer engineering ( $6.1 \%$ ), and computer science ( $6 \%$ ), but also energy science and chemical engineering ( $5.6 \%$ ), whereas neuroscience, cell biology, astronomy, and mathematics each have less than $0.7 \%$. This unequal distribution of associate professors indicates that different disciplines have different or even antagonistic principles of legitimacy. There exists a practical, professional, or even entrepreneurial legitimacy on the one hand and an academic and intellectual legitimacy on the other hand. Today, the balance of power has clearly tilted toward the former and their conceptions of the university and of research.

Applied, professional, and worldly disciplines thus tend to get pride of place at universities. This is also borne out by a study of the disciplinary backgrounds of French university presidents over a period of approximately thirty years. Thus, economists, management studies experts, and engineers are best represented among them. This also explains why the Conference of University Presidents so strongly supported the latest reform of university governance, that of the "Liberties and Responsibilities of the Universities"-to such a degree that it is fair to see the reform as a joint product of the university presidents and the government. Thus, this reform also originates from within the universities, and more specifically from those who are most involved in administrative tasks and hail from the youngest and most rapidly expanding disciplines.

Table 6
Disciplinary Background of University Presidents, 1975-2005

|  | $\mathbf{1 9 7 5 - 8 5}$ | $\mathbf{1 9 8 6 - 9 5}$ | $\mathbf{1 9 9 6 - 2 0 0 5}$ |
| :---: | :---: | :---: | :---: |
| Engineering (incl. computer science) | 7 | 9 | $\mathbf{1 2}$ |
| Law and political science | 10 | 8 | $\mathbf{1 1}$ |
| Economics and management | 2 | 3 | $\mathbf{9}$ |
| Literature | 7 | 6 | 7 |
| Physics | 5 | 9 | 7 |
| Chemistry | 4 | 4 | 7 |
| History and geography | 6 | 8 | 7 |
| Medicine | 7 | 9 | 5 |
| Mathematics | 2 | 5 | 4 |
| Human sciences, incl. Social sciences | 1 | 2 | 3 |
| Biology | 6 | 3 | 3 |
| Languages | 4 | 5 | 3 |
| Pharmacy and dentistry | 3 | 3 | 2 |
| Interdisciplinary | 1 | 1 | 2 |
| Earth sciences | 2 | 1 | 1 |
| Non-teaching background | 1 | 1 | 0 |

## Source: CNU.

How to read the table: e.g., between 1996 and 2005, on average, 12 university presidents a year had a background in engineering sciences.

One of the most vivid responses to this reform was voiced by the Permanent Conference of the National Council of Universities (CNU). A brief explanatory note is in order here. In France, each discipline is represented
by a division of the CNU—a national disciplinary organization, two thirds of whose members are elected by their peers, while the other third, although also representing the same discipline, are appointed by the government. The CNU decides on the qualifications of candidates for a position of teacher-researcher, and is also in charge of promotion and career advancement. In order to be recruited at a French university, one needs to have been "qualified" by a division of the CNU. Thus, the CNU acts as a filter for each discipline. On a national level, it acts as a threshold of scientific quality. It is only after having gone through that filter that a candidate may apply for a university position through an interview with what has been known until now as a commission of specialists-that is, scholars who teach a given discipline, who are elected by their peers, and who have the authority to make hiring decisions in each given institution ${ }^{22}$.

The "Law on the Liberties and Responsibilities of the Universities" abolishes these commissions of disciplinary specialists, replacing them with "selection committees" whose members are no longer elected but nominated by university presidents and confirmed by the university's administrative council. This will allow presidents to maintain a tight grip on hiring. Thus, while considerably expanding presidents' power over their "personnel," it also sharply restricts the power of each discipline, since those responsible for hiring will now be chosen by a local administrative body based on the institution's goals ${ }^{23}$. Understandably, the CNU's Permanent Conference opposed the reform, which shifts a large amount of power from the disciplines to university presidents. It even launched a petition, signed by 2,000 colleagues; but ultimately proved unable to mitigate the effects of the law.

## WHAT FUTURE FOR SCHOLARLY AUTONOMY?

The scope of this paper does not allow a more detailed projection. It seems to us, however, that, in addition to transformations in the disciplinary composition of the academic faculty body and in the relative balance between faculties and disciplines, two factors have contributed to the emergence of an ideological aggiornamento that legitimizes the current university reforms. These are the increasing regionalization of higher education, which has created more powerful regional centers wishing to extricate themselves from national and Parisian tutelage, and the evolution of the social, professional, and cultural functions of higher education in a context of mass unemployment.

It may be supposed that the recent changes in university governance are one symptom among others of the slow tectonic drift of disciplinary continents, whose results emerge very slowly, in part due to the hysteresis of intellectual habitus. This analysis also allows us to understand numerous contradictions, silent assumptions, and ambiguities that we find in the French academic world and the minds of many teacher-researchers. As we have argued, social, economic, and political demand tends to reinforce the most practical disciplines, to the detriment of the most traditional and most theoretical ones (or the more "academic" ones, as zealous supporters of the reforms often call them somewhat contemptuously). These demographic shifts are therefore also accompanied by a loss of (especially administrative) influence within the university by disciplines whose legitimacy is intellectual and symbolic, and with that a decline of their particular conception of scholarship and of the university. Within the academic world, this generates conflicts and contradictions between different

22 The CNU thus acts as an essential counterweight to purely local (or localist) modes of recruiting and promoting teacher-researchers. On the significance of localism in French academia, see Godechot and Louvet 2008.

23 Thus, Christine Musselin, a professor at Sciences Po, welcomes the "replacement of disciplinary modes of thinking by procedures that are more centered on specific institutions," a process by which, she argues, true, autonomous universities will emerge that will finally "take their administration into their own hands" (and decide on their own structure and hiring policies), independently of any a priori "idea" (be it scholarly, pedagogical, professional, or other) of what a university is supposed to be. Having explained that "the universities can develop and gain substance without prior agreement on the idea of the university that should be implemented," Musselin adds that she finds it "fanciful to think that such an 'idea' might be possible. Universities are increasingly becoming complex and heterogeneous, and the logic of increasing disciplinary diversification and specialization is highlighting diversity within the 'university community'" (Musselin 2001: 153).
principles of legitimacy, most notably between academic or scientific and entrepreneurial, bureaucratic, or political legitimacy, a conflict that plays itself out within each discipline.

Concerning sociology, we note the rise of the sociology of labor and organizations. These are subfields that respond to bureaucratic demand and therefore espouse a definition of sociology that no longer sees it as an intellectually ambitious research discipline capable of competing with philosophy, or even a critical endeavor. This is in direct contrast to the way it was viewed in the 1960s, during the first massification of higher education, when sociology was breaking free of philosophy. It is now seen as a field of expertise and social engineering whose methods and knowledge may, for example, contribute to a dissemination of the new "culture of evaluation" desired by politicians and managers. This is highlighted by the vigorous growth of professional master's programs in this discipline, which recruit a fair share of their students from outside undergraduate sociology programs. These developments have thus altered the balance within the discipline itself. The contrast is particularly noticeable between supporters of a more instrumental and applied vision, who think that sociology must respond to social and professional demands (whether they emanate from business, the government, students, or society), and partisans of fundamental research for whom, following Durkheim among others, a break with preconceptions and common sense is required prior to engaging in any scientific endeavor ${ }^{24}$. In particular, this antagonism is reflected in hiring decisions. Thus, over the most recent period, an increasing number of advertisements describe jobs not in terms of general and cross-cutting disciplinary designations, but in terms of objects that are socially preconstructed, especially in response to bureaucratic demand. Newly hired staff increasingly tend to be specialists-e.g., on public policy, human resource management, risk prevention, or social work—rather than sociological generalists.

These developments forcefully raise the question of disciplinary autonomy and of the role of sociology (assuming it is a unified discipline) in the current reconfiguration of higher education. As early as the 1980s, Pierre Bourdieu spoke of "the distinctive role of the social sciences as a Trojan horse in the struggle for a renewed definition of legitimate culture" (Bourdieu 1984:159). The least that can be said is that today, sociology still occupies a particularly ambiguous position, which prompts us to reflect on the intellectual, social, and historical conditions of the possibility of scholarly autonomy. In view of the developments we have described, such as the policy of "poles of excellence" that is being implemented in French research, the greatest risk seems to us to be that the conception of sociology that sees it as autonomous, that is relatively independent of social, economic, and political demand, will be reduced to a purely decorative role. It will become a "solemn complement," as Marx said of religion, reserved to "institutions of excellence" and to a specially selected educational and social elite that is supposed to be more suited for this task because it is more detached from material and professional needs. It seems to us that at a time of "modernization," "Europeanization," or even "globalization" of higher education, this scientific and political problem merits a fresh approach, and not only in sociology.

Authorized translation from the French by Mischa Gabowitsch

24 One might also think of the Marxist tradition of breaking with "ideology," the "dominant ideology" in any given society being that of the "dominant class." The above-mentioned opposition between different types of sociologists highlights the ambiguities tied to the founding project of this discipline. From its inception, sociology was divided between an applied or instrumental conception, which tended to turn the sociologist into a "social engineer" or an "expert" supposed to solve social problems, and a more intellectual conception of the discipline.

## APPENDIX

Table 4
Changes in teaching staff numbers in the faculties of humanities and social sciences between 1986 and 2005

| Divisions of the National University Council | Total <br> 1986 | $\begin{aligned} & \text { Total } \\ & 2005 \end{aligned}$ | $\begin{array}{\|c} \hline \text { Changes, } \\ \text { 1986/ } \\ 2005 \end{array}$ | $\begin{gathered} \text { Full } \\ \text { pro- } \\ \text { fessors, } \\ 2005 \end{gathered}$ | Based in Paris, 2005 | ```Employed at IUTs, 2005``` | Women in 2005 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Sports science and technology (74) | 30 | 651 | 2.070.0\% | 18.1\% | 2.5\% | 0.2\% | 31.3\% |
| Information and communication sciences (71) | 133 | 663 | 398.5\% | 21.4\% | 12.1\% | 32.9\% | 43.4\% |
| Art (18) | 107 | 505 | 372.0\% | 27.1\% | 21.6\% | 2.0\% | 38.0\% |
| Regional cultures and languages [of France] (73) | 16 | 55 | 243.8\% | 45.5\% | 1.8\% | 0.0\% | 20.0\% |
| Educational studies (70) | 173 | 564 | 226.0\% | 26.6\% | 9.8\% | 5.1\% | 42.4\% |
| Environmental design and urban planning $(24)$ | 98 | 217 | 121.4\% | 38.7\% | 9.2\% | 3.2\% | 28.6\% |
| Epistemology, history of science and technology (72) | 41 | 73 | 78.0\% | 30.1\% | 17.8\% | 5.5\% | 28.8\% |
| Psychology (16) | 423 | 1.215 | 187.2\% | 25.5\% | 13.4\% | 6.3\% | 51.1\% |
| Sociology, démography (19) | 292 | 797 | 172.9\% | 28.4\% | 16.4\% | 7.8\% | 38.9\% |
| Anthropology, ethnology, prehistory (20) | 86 | 174 | 102.3\% | 37.4\% | 21.8\% | 1.7\% | 35.6\% |
| History and civilizations of the modern world (22) | 534 | 1.035 | 93.8\% | 38.4\% | 19.7\% | 1.1\% | 35.5\% |
| Ancient history/civilizations and archaeology (21) | 398 | 724 | 81.9\% | 38.0\% | 17.0\% | 0.3\% | 43.2\% |
| Physical, human, economic, and regional geography (23) | 497 | 799 | 60.8\% | 31.7\% | 12.1\% | 0.9\% | 31.3\% |
| Language and literature: Arabic, Chinese, Japanese, Hebrew (15) | 103 | 366 | 255.3\% | 27.9\% | 50.8\% | 0.0\% | 39.6\% |
| Language and literature: Romance languages (14) | 506 | 982 | 94.1\% | 27.1\% | 13.4\% | 0.6\% | 57.3\% |
| Language and literature: English (11) | 1.066 | 1.744 | 63.6\% | 23.6\% | 17.1\% | 4.3\% | 56.8\% |
| Language and literature: German, Scandinavian (12) | 403 | 549 | 36.2\% | 28.1\% | 15.3\% | 2.2\% | 54.6\% |
| Language and literature: Slavic (13) | 117 | 143 | 22.2\% | 28.0\% | 42.7\% | 0.0\% | 55.9\% |
| Language sciences (7) | 329 | 711 | 116.1\% | 33.2\% | 17.6\% | 2.3\% | 55.0\% |
| Theology (75) | 40 | 58 | 45.0\% | 58.6\% | 0.0\% | 0.0\% | 19.0\% |
| Comparative literature (10) | 158 | 225 | 42.4\% | 32.0\% | 12.4\% | 1.3\% | 54.2\% |
| French language and literature (09) | 816 | 1.073 | 31.5\% | 37.5\% | 15.9\% | 3.9\% | 50.2\% |
| Philosophy (17) | 300 | 382 | 27.3\% | 44.8\% | 22.8\% | 0.5\% | 22.5\% |
| Ancient languages and literatures (08) | 366 | 357 | -2.5\% | 37.0\% | 13.4\% | 0.0\% | 54.3\% |
| Interdisciplinary cluster (18, 24 and 70-74) | 598 | 2.728 | 356.2\% | 24.9\% | 10.8\% | 9.9\% | 37.3\% |
| Human sciences cluster (16, 19, 20) | 801 | 2.186 | 172.9\% | 27.5\% | 15.2\% | 6.5\% | 45.4\% |
| History/geography cluster (21-23) | 1.429 | 2.558 | 79.0\% | 36.2\% | 16.6\% | 0.8\% | 36.4\% |
| Language cluster (11-15) | 2.195 | 3.784 | 72.4\% | 25.7\% | 20.1\% | 2.5\% | 54.9\% |
| Literature cluster (7-10, 17, 75) | 2.009 | 2.806 | 39.7\% | 37.3\% | 16.4\% | 2.2\% | 47.9\% |
| Total, faculty of letters and social sciences | 7.032 | 14.062 | 100.0 | 30.0\% | 16.1\% | 4.2\% | 45.2\% |

Source: DPE A6. Data treatment: Brice Le Gall and Charles Soulié.

Table 5
Changes in teaching staff numbers in the faculty of natural sciences between 1986 and 2005

| Divisions of the National University Council | $\begin{aligned} & \text { Total } \\ & 1986 \end{aligned}$ | $\begin{aligned} & \text { Total } \\ & 2005 \end{aligned}$ | Total 1986/ 2005 | Full professors, 2005 | $\begin{array}{\|c\|} \hline \text { Based } \\ \text { in Paris, } \\ 2005 \end{array}$ | Employed at IUTs in 2005 | Women in 2005 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Computer science (27) | 753 | 2.945 | 291.1\% | 26.7\% | 12.0\% | 20.6\% | 24.3\% |
| Computer engineering, control engineering, signal processing (61) | 467 | 1.581 | 238.5\% | 29.5\% | 2.5\% | 30.7\% | 14.5\% |
| Mechanics, mechanical engineering, civil engineering (60) | 719 | 2,073 | 188.3\% | 31.4\% | 9.7\% | 24.0\% | 13.6\% |
| Energy science, chemical engineering (62) | 531 | 1.032 | 94.4\% | 33.0\% | 4.7\% | 27.7\% | 24.0\% |
| Electronics, optoelectronics, and systems engineering (63) | 892 | 1.732 | 94.2\% | 33.5\% | 5.5\% | 30.0\% | 14.3\% |
| Applied mathematics (26) | 759 | 1.732 | 128.2\% | 33.0\% | 15.6\% | 9.0\% | 25.1\% |
| Mathematics (25) | 872 | 1.526 | 75.0\% | 36.8\% | 11.9\% | 2.1\% | 15.7\% |
| Biochemistry and molecular biology (64) | 442 | 1.036 | 134.4\% | 29.1\% | 10.2\% | 13.7\% | 41.3\% |
| Neuroscience (69) | 167 | 349 | 109.0\% | 30.4\% | 14.3\% | 0.9\% | 40.1\% |
| Cell biology (65) | 447 | 896 | 100.4\% | 27.7\% | 21.3\% | 6.5\% | 48.1\% |
| Population biology and ecology (67) | 385 | 604 | 56.9\% | 25.3\% | 10.6\% | 3.8\% | 35.8\% |
| Biology of organisms (68) | 408 | 518 | 27.0\% | 26.8\% | 13.5\% | 11.8\% | 36.7\% |
| Physiology (66) | 621 | 758 | 22.1\% | 26.6\% | 17.0\% | 5.3\% | 43.1\% |
| Meteorology, physical oceanography, environmental physics (37) | 67 | 170 | 153.7\% | 33.5\% | 20.6\% | 3.5\% | 27.6\% |
| The structure and evolution of Earth and other planets (35) | 281 | 495 | 76.2\% | 36.2\% | 17.6\% | 0.4\% | 23.8\% |
| Astronomy, astrophysics (34) | 95 | 160 | 68.4\% | 36.3\% | 28.8\% | 6.9\% | 24.4\% |
| Solid Earth science, upper mantle geodynamics, paleobiology (36) | 385 | 425 | 10.4\% | 30.4\% | 11.1\% | 0.2\% | 21.6\% |
| Materials chemistry (33) | 482 | 839 | 74.1\% | 34.9\% | 9.4\% | 12.6\% | 31.8\% |
| Theoretical, physical, analytical physics (31) | 635 | 976 | 53.7\% | 33.6\% | 12.8\% | 11.0\% | 30.6\% |
| Organic, mineral, and industrial chemistry (32) | 1.159 | 1.457 | 25.7\% | 31.2\% | 11.1\% | 12.4\% | 32.3\% |
| Dense media and materials (28) | 1.021 | 1.463 | 43.3\% | 36.3\% | 12.0\% | 12.3\% | 22.6\% |
| Diluted media and optics (30) | 553 | 689 | 24.6\% | 34.5\% | 13.5\% | 7.7\% | 21.2\% |
| Particle physics (29) | 384 | 441 | 14.8\% | 42.6\% | 17.5\% | 7.5\% | 15.9\% |
| Mechanics/computer science/ electronics cluster (27 and 60-63) | 3.362 | 9.363 | 178.5\% | 30.2\% | 7.9\% | 25.6\% | 18.4\% |
| Mathematics cluster (25-26) | 1.631 | 3.258 | 99.8\% | 34.8\% | 13.9\% | 5.8\% | 20.7\% |
| Biochemistry and biology cluster (64-69) | 2.470 | 4.161 | 68.5\% | 27.6\% | 14.7\% | 7.9\% | 41.6\% |
| Earth sciences cluster (34-37) | 828 | 1.250 | 51.0\% | 33.8\% | 17.2\% | 1.6\% | 23.7\% |
| Chemistry cluster (31-33) | 2.276 | 3.272 | 43.8\% | 32.9\% | 11.2\% | 12.0\% | 31.7\% |
| Physics cluster (28-30) | 1.958 | 2.593 | 32.4\% | 36.9\% | 13.3\% | 10.3\% | 21.1\% |
| Faculty of natural sciences total | 12.525 | 23.897 | 90.8\% | 31.6\% | 11.4\% | 15.0\% | 25.1\% |

Source: DPE A6. Data treatment: Brice Le Gall and Charles Soulié.

## REFERENCES

Abélard [collective pseudonym]. 2003. Universitas calamitatum, le livre noir des réformes universitaires. Bellecombe-en-Bauges: Éditions du Croquant, 2003.

Bourdieu, Pierre. 1984. Homo academicus. Paris: Minuit [English translation by Peter Collier: Stanford: Stanford University Press, 1988].

Bourdieu, Pierre. 1989. La noblesse d'Etat, grandes écoles et esprit de corps. Paris: Minuit [English translation by Lauretta C. Claugh: State Nobility: Elite Schools in the Field of Power. Stanford: Stanford University Press, 1996].

Courson, Jean-Pierre, and Chantal Madinier. 2000. "La France continue de vieillir," Insee Première, no. 764, novembre.
de Montlibert, Christian. 2004. Savoir à vendre, l'enseignement supérieur et la recherche en danger, Paris: Raisons d'agir.

Dercourt, Jean. 2004. Les flux d'étudiants susceptibles d'accéder aux carrières de recherche. Rapport à l'Académie des sciences, juin.

Dupont, Jean-Léonce. 2005. Commission des affaires culturelles. Projet de loi de finances pour 2005. Vol. 5: enseignement supérieur.

Faure, Sylvia and Charles Soulié, "La recherche universitaire à l'épreuve de la massification scolaire," Actes de la recherche en sciences sociales. 164: 61-74.

Godechot, Olivier, and Alexandra Louvet. 2008. "Le localisme dans le monde académique: un essai d'évaluation," http://olivier.godechot.free.fr/hoparticle. php?id_art=502 (dated April 22, 2008, retrieved June 3, 2009).

Le Gall, Brice and Charles Soulié. 2008. "Massification, professionnalisation, réforme du gouvernement des universités et actualisation du conflit des facultés en France," Pp. 173-208 in Les ravages de la "modernisation" universitaire en Europe, edited by Christophe Charle and Charles Soulié. Paris: Syllepse.

Lorenz, Chris. 2008. "'L'économie de la connaissance', le nouveau management public et les politiques
de l'enseignement supérieur dans l'Union européenne," Pp. 33-52 in Les ravages de la "modernisation" universitaire en Europe, edited by Christophe Charle and Charles Soulié. Paris: Syllepse.

Marchal, Nathalie, Mickaële Molinari-Perrier, and Jean-Claude Sigot (2004): "Génération 2001. S'insérer lorsque la conjoncture se dégrade," Bref du Céreq no. 214, décembre.

Ministère. 1965. Ministère de l'Education nationale, Direction de l'enseignement supérieur, Evolution du personnel enseignant des universités de 1928-29 à 1963-64, document no. 1511, janvier.

Ministère. 1981. Ministère de l'Education nationale, Informations statistiques sur les personnels de l'enseignement supérieur (Note d'information no. 81-38), novembre.

Ministère. 2005. Ministère de l'Education nationale, Repères et références statistiques. Edition 2005.

Ministère. 2006. Ministère de l'éducation nationale. Direction de l'évaluation et de la prospective. Evolution des effectifs universitaires, par grandes disciplines, de 1945-46 à 2003-2004 (Hors collection no. 8).

Ministère. 2007. Ministère de l'Education nationale, Repères et références statistiques. Edition 2007.

Musselin, Christine. 2001. La Longue marche des universités françaises. Paris: PUF, 2001.

Schultheis, Franz, Marta Roca i Escoda, and PaulFrantz Cousin. 2008. Le cauchemar de Humboldt, les réformes de l'enseignement supérieur européen. Paris: Raisons d'agir.

Soulié, Charles. 1998. "Le destin d'une institution d'avant-garde: histoire du département de philosophie de Paris VIII," Histoire de l'éducation 77: 47-69.

Weber, Max. 1978 [1922]. Economy and Society. An Outline of Interpretive Sociology. Edited by Guenther Roth and Claus Wittich. Berkeley/Los Angeles/London.

Zetlaoui, Jodelle. 1999. L'universitaire et ses métiers. Contribution à l'analyse des espaces de travail. Paris: L'Harmattan.


[^0]:    12 The functions of the National Council of Universities are described below.
    13 One of the major features of both higher education and research in France is that both systems are concentrated in Paris. This creates powerful effects of symbolic domination and hierarchy.

[^1]:    14 The French system of higher education is characteristically split into two tracks. In addition to the universities, there is a whole network of "grandes écoles" (Écoles normales supérieures, École polytechnique, Écoles centrales, École nationale d'administration, Écoles de commerce and others) as well as special classes that prepare students for entrance examinations at these schools (classes préparatoires). They drain away a large part of the best high school students and provide access to the highest positions of power in French society, be it in intellectual, economic, or political life. The schools and preparatory classes admit students with a particularly high social and academic background. The relative share of the classes préparatoires among the entire student population has remained stable over the past forty years despite the explosion in overall student numbers. This system plays an essential role in the reproduction of the French elites and of what Pierre Bourdieu called the "state nobility" (Bourdieu 1998 [1989]). For attentive students of French higher education, the entire system, including its closed and open sectors (the écoles and the universities, respectively) represents a kind of extremely hierarchical layer cake. This hierarchy is related to the very fine social hierarchies which structure French society as a whole and which often elicit surprise (to say the least) among foreign visitors.

[^2]:    15 Khâgneux are graduates of the preparatory classes for the grandes écoles. Agrégés are students who have passed a very difficult examination, known as agrégation, which gives them access to a highly selective category of secondary-school teaching positions. A large proportion of agrégés also previously go through the classes préparatoires, which can be said to be the cradle of the French intelligentsia.
    16 French universities' increasing adjustment to social and entrepreneurial demand manifests itself, among other things, in the creation of new disciplines even as the old disciplines are being transformed, albeit at a slower pace due to an inertia that appears to be correlated with both institutional seniority and legitimacy (two dimensions which are in turn interrelated). This contrasts with the Russian case, where the process of differentiation occurs through the development of new special subjects within established disciplines. We are thinking, for example, of the case of Russian sociology, which has seen the development of programs in marketing, public relations, management, tourism, or local administration within its disciplinary boundaries. However, sociology was also institutionalized as an autonomous university discipline earlier in France (in 1958) than in Russia (in 1989). In the French case, this institutionalization was based on an intellectual project that went back at least as far as Durkheim, whereas in the Russian case the sociological tradition seems to have been more fragile, and the discipline was created primarily to respond to demand of a bureaucratic or political type. This may explain Russian sociology's lower level of autonomy.

[^3]:    17 This crisis of science as a vocation is visible in many European countries. On the French case, see Dercourt 2004.
    18 This association, which was launched in 2003, grew out of an appeal signed by over 7,000 researchers, who, among other things, criticized the low levels of public funding of research in France.
    19 The CNRS (Centre national de la recherche scientifique, National Center for Scientific Research) is a large, nationwide, multi-disciplinary public organization that engages in fundamental research. The INSERM (Institut national de la santé et de la recherche médicale, National Health Institute of Health and Medical Research) is also a public research-only organization.-Translator's note.

[^4]:    20 Having said this, the struggle against the law on "Liberties and Responsibilities of the Universities" led to the creation of a new movement that unites opponents of the current reforms, known as Sauvons l'Université. This association intends to counteract the most pernicious effects of the new law. However, it is too early to judge its capacity to achieve any real outcomes.

    21 Several new types of positions have been created over the past twenty years or so, most significantly that of Full-time Associate Professor in 1985, and that of Part-time Associate Professor in 1992. The latter are management-level private - or public-sector employees who continue their regular professional activities and teach at universities half-time. In order to advance full-time associates' integration into the university system, in 2002 the ministry extended their contracts from three years to six years.

