PART I

THEMES AND PATTERNS

CHAPTER 1

THEMES

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INTRODUCTION

The **political upheavals of the French Revolution and Napoleon's conquests devastated the university landscape in Europe. In 1789 it was lled with 143 universities. In 1815 there were only 83. The 24 French universities had been abolished and in twelve towns these were replaced by special schools and isolated faculties. In Germany, eighteen of the 34 universities had disappeared, and in Spain only ten of the previous 25 had any life in them. After fteen new foundations, Europe had 98 universities by the middle of the nineteenth c**entury. On the eve of the Second World War, this gure had doubled. In around 200 universities, 600,000 students were taught by 32,000 professors, while during the 1840s when university statistics began to be compiled, there numbered around 80,000 students and 5,000 professors; this means an increase over one hundred years of 500 per cent for professors and 700 per cent for students.[1]

This extraordinary expansion in number and strength is all the more astonishing because the replacement of the universities by specialized and professional institutions coincided with the dominant trend in the Age of Enlightenment to orientate higher education towards practical knowledge and useful careers for the public good. Indeed, the 200 universities existing in the 1930s were surrounded by some 300 institutions of higher education in the military, technical, polytechnic, commercial, medical, veterinary, agricultural, educational, political and musical elds. But they had not replaced the universities and were attended by a relatively small minority of students.

In France, the universities were restored in 1895, and the new nation states in Eastern Europe were eager to set up their own universities, thus

[1] See chapters 2 and 4, 'List of European Universities and Similar Institutions'.

the awarding of degrees, the conformity of views held concerning of cial doctrines, and even personal habits such as the ban on the wearing of beards in 1852.

This model was implemented thanks to the *tabula rasa* of the Revolution and completed by Napoleon, but some essential traits, such as a centralizing state control, the isolation of the faculties and the establishment of special colleges, had already been evident in the Age of Enlightenment. The French model remained in force under successive regimes, and it was only in the last third of the nineteenth century that it was eroded under the in uence of the German model. Some French historians believe that it was not abandoned until 1968 by Edgar Faure's *loi sur l'orientation de l'enseignement supérieur*,[4] which was inspired by the reform programme drawn up on 6 January 1968 by the Rectors of the West German universities.

The German model bears the name of the Humboldt University. The credit must indeed go to the scholar and statesman Wilhelm von Humboldt, brother of the great naturalist Alexander, for persuading the King of Prussia, who favoured the French model, to found a university in Berlin in 1810 built on the liberal ideas of the theologian and philosopher Friedrich Schleiermacher. According to the latter, the function of the university was not to pass on recognized and directly usable knowledge such as the schools and colleges did, but rather to demonstrate how this knowledge is discovered, 'to stimulate the idea of science in the minds of the students, to encourage them to take account of the fundamental laws of science in all their thinking'.[5]

The manner of study, the content of the teaching, and the relations of the university with the authorities were to be characterized by 'freedom'. According to Humboldt, the state only had two tasks to ful l with regard to the universities: to protect their freedom and to appoint professors. This idealistic model did not lend itself to implementation as easily as Napoleon's interventionist model. Humboldt's plan to provide the new university with a large amount of land in order to ensure its nancial independence was abandoned by his successor; freedom of opinion was hampered in 1819 by control and censure measures, following student demonstrations, and was not restored until after 1848.

[4] Cf. chapter 4, 120; J. G. Passeron, 'L'explosion institutionnelle de 1968: légendes noires et dorées', in Verger (ed.), *Universités en France*, 378–89.

[5] F. Schleiermacher, *Gelegentliche Gedanken über Universitäten im deutschen Sinn. Nebst einem Anhang über eine neu zu errichtende* (Berlin, 1808), 32–3, see W. Rüegg, 'Der Mythos der Humboldtschen Universität', in M. Krieg and M. Rose (eds.), *Universitas in theologia – theologia in universitate, Festschrift für Hans Heinrich Schmid zum 60. Geburtstag* (Zurich, 1997), 162–6; cf. chapter 2, 48.

Similarly, the introduction of students to scientific research through seminars and laboratories only came about slowly.[6] However, liberal reform bore fruit. While, at the beginning of the century, Paris had been a Mecca for scholars and scientists from all over the world, from the 1830s the French Government sent representatives to Germany to enquire about progress in higher education. In the same way, young French people, as well as Americans later on, trained at German universities in the new scientific methods. From the end of the nineteenth century, the German model represented the modern university not only in Europe, but also in the United States and Japan.

SECULARIZATION, BUREAUCRATIZATION, SPECIALIZATION

This could not have occurred without the secularization and bureaucratization of nation states. The charts in the second volume of our 'History of the University in Europe', which stops at the end of the eighteenth century, distinguish between Catholic and Protestant universities. Although some countries had begun to be secularized during the Enlightenment, most universities remained essentially ecclesiastical institutions, to the extent that they were either directly supervised by the respective churches or strongly connected to them through the importance of religious profession for the appointment of teachers, the admission of students, and the ideological orientation of academic studies and careers. During the nineteenth century, public universities were transformed into lay institutions everywhere. The few faculties of Catholic theology reintroduced into France and Spain could not survive and disappeared from public education. 'Theology had taken refuge in the seminaries, while the state university continued for a decade with the studies which, for several centuries, had dominated and filled the auditoria.'[7]

At the same time, the universities became increasingly subjected to state bureaucracy, which managed university affairs as part of a national education policy. At the beginning of the century, the sovereign continued to be directly involved with the help of a trustworthy person and a rudimentary administration. When in 1806 Napoleon set up 'under the name of the Imperial University, a body *exclusively* responsible for teaching

[6] See B. vom Brocke, 'Die Entstehung der deutschen Forschungsuniversität, ihre Blüte und Krise um 1900', in R. C. Schwinges (ed.), *Humboldt International, Der Export des deutschen Universitätsmodells im 19. und 20. Jahrhundert*, Veröffentlichungen der Gesellschaft für Universitäts- und Wissenschaftsgeschichte 3 (Basle, 2001), 367–401.

[7] Peset, *Universidad Española*, 717. (Translation of quotations, if not otherwise attributed, by the author of this chapter.)

and public education throughout the Empire',[8] the official who ran it reported directly to the emperor and enjoyed great independence. Two years later he was the head of a central administration, and this was maintained, or even expanded, by later political regimes, to become the Ministry of Education in 1828.[9] After sixteen months of successful activity, Wilhelm von Humboldt resigned his position as Director of the Section for Ecclesiastical Affairs and Education at the Ministry of the Interior in 1810, just before the opening of the University of Berlin, because the King did not want to upgrade the Division into a Ministry of Education, which would have given it the necessary political clout.

Seven years later the upgrade took place. During the nineteenth century, all over the Continent, similar ministries were set up to cope with the growing importance that public education on every scale had assumed in the general policy and budgets of nation states. The ministerial administration decided on the type and composition of the whole higher education of the country, as was the case in Spain or Italy after unification; it governed access to the universities, and controlled their curricula and exams. It provided the universities with modern buildings and laboratories, as the French Government did after the defeat of 1871 – which a large section of public opinion attributed to the superiority of higher education in Germany.

In the end, however, the most important consequence of this process was the professionalization of university careers. On the European Continent the professor became a civil servant of the lay and bureaucratic state. The most significant example is the institution intended to train the elite of higher education teachers in France, the *École Normale (Supérieure)*. Its students, 'at least seventeen years of age', selected 'from secondary schools by examination and competition', agreed to serve in public education for at least ten years after graduation.[10] Public education was therefore run as a branch of state administration. The academic degrees and the means of selection by competition and examination, which had been established under the old regime, were integrated into a hierarchy: the baccalaureate was essential to obtaining a post in a college, the *license* allowed for promotion to college chairs and higher offices, the *agrégation*, a competitive examination, gave 'access to careers in administration . . . and chairs in higher education'.[11] The proof that this system of merit was linked to

[8] Loi du 10 mai 1806, Art. 1; V. Karady, 'De Napoléon à Duruy: origines et naissance de l'Université contemporaine', in Verger (ed.), *Universités en France*, 269. Cf. G. Schubring, 'The Impact of the Napoleonic Reforms on the Educational System in Europe', in L. Blanco and L. Pepe (eds.), *Stato e pubblica istruzione. Giovanni Scopoli e il suo viaggio in Germania (1812)*, *Annali dell'Istituto storico italo-germanico in Trento 1995*, 21 (Bologna, 1996), 435–43.

[9] Karady, 'Napoléon' (note 8), 284. [10] *Ibid.*, 277.

[11] Gerbod, *Condition universitaire*, 57–64; quotation 64.

bureaucratization and secularization is provided by the reactionary elements that regained power in France between 1822 and 1830: they closed the *École Normale* and entrusted 'numerous posts . . . to members of the clergy, often without degrees'.[12]

From the inception of the universities, the doctorate attested that the holder had mastered his academic discipline to such a point that he was quali ed to teach it at university level. At the end of the eighteenth century, the examination consisted of the presentation and discussion of a thesis that developed a subject without scienti c originality and value over several printed pages. After 1830, the theses defended before the faculties of letters and sciences in Paris began to give way to more extensive research and were often distinguished by having real scienti c value.[13] The man chie y responsible for this change of direction was Victor Cousin who, after losing his chair in philosophy because of his liberal ideas inspired by Kant and Fichte, became the head of the re-established *École Normale* following the revolution of July 1830. He undertook a journey to Germany to study the state of public education there and published a report on his ndings. [14] Although the reforms which resulted met the combined opposition of the clerics and the leftists, Cousin, because of his key position in the training of professors, was able to introduce scienti c criteria into doctoral theses[15] as they were applied in Prussia. There scienti c education, which had been the founding idea behind the University of Berlin, needed to be re ected in a 'masterpiece'[16] that inaugurated a career characterized by the scienti c spirit.

The German university professor was also a state functionary. But there were several German states, and he was free to accept the best position offered to him. His career did not unfold, as in France, among a hierarchical body of functionaries who remained subordinate to their superiors. In general, the German professor began his university career as a *Privatdozent* who, after demonstrating to the faculty his ability to teach his discipline, was entitled to do so at will, but also at his own expense. He thus learned and earned with great dif culty to practise the *libertas docendi* and, if lucky, persisted in it when he became a professor.

The French model, based on scienti c merit in the framework of a closed and centralized body, gave as much power and prestige to the professor as the German model, based on competition and freedom. He was entrusted by the state with a public of ce, the importance of which for the common good continued to grow, and he won increasing

[12] *Ibid*., 57. [13] *Ibid*., 65.
[14] V. Cousin, *De l'instruction publique dans quelques pays de l'Allemagne, et particulièrement en Prusse* (Paris, 1832), 2 vols.
[15] Cf. Gerbod, *Condition universitaire*, 74–5.
[16] U. von Wilamowitz-Moellendorff, *Reden und Vortrage*, 3rd edn (Berlin, 1913), 107.

power through the monopoly for awarding diplomas and degrees that allowed access to the professions. On the other hand, his personal prestige depended increasingly on the collective prestige of his professional or scienti c specialization.

In France, the *polytechnicien*, the *normalien* and graduates of other *grandes écoles* referred to themselves by their school, taking advantage of its reputation. In the university systems of the German model it was the specialization of the scienti c disciplines that introduced new forms of communication, identi cation and reputation for the professors. The *sancta quaedam communitas eruditorum*, set up in the Middle Ages under the protection of the papacy and preserved throughout the denominational scission by the humanist dialogue in the exchange of letters as well as in scholarly academies and their journals of general interest, was increasingly divided in the nineteenth century into a number of scienti c disciplines. The professors began to exchange their ideas and their work in specialized journals, to meet at national conferences (even international conferences after the end of the century) and to organize societies by discipline.[17] Consequently, it was no longer only individual performance and glory, but also belonging to a recognized discipline that rst and foremost endowed the professor with his social prestige. The specialization of scienti c disciplines, accompanied by the modi cation of their rank in the academic and social hierarchy, characterizes the modern university.

THE EUROPEAN ADOPTION OF THE TWO MODELS

In the states annexed by Napoleon, the universities that had not been abolished but rather replaced by faculties were re-established after 1815, but they kept the division between the faculties of letters and sciences. Special colleges, *écoles normales*, *écoles supérieures*, and professional colleges, which spread throughout these countries, did not reach the level and rank of the French *grandes écoles* or the German *Hochschulen* and were only

[17] L. Daston, 'Die Akademien und die Einheit der Wissenschaften. Die Disziplinierung der Wissenschaften', in J. Kocka *et al.* (eds.), *Die Königlich Preussische Akademie der Wissenschaften zu Berlin im Kaiserreich* (Berlin, 1999), 73–4. (Comparative table of German, French and British scienti c journals; quotation of a work by Hermann Diels, who in 1906 regretted 'the huge number of excessively specialized scienti c associations' and counted 892 scholarly societies in Germany in 1887, and 1,278 journals in the mathematical and natural sciences in 1900.) According to C. Grau, 'Pro ldifferenzen und Pro ldifferenzierung der Preussischen Akademie und anderer deutscher Wissenschaftler-Gemeinschaften im 19. Jahrhundert', in Kocka *et al.* (eds.), *Preussische Akademie*, 48, the *Gesellschaft deutscher Naturforscher und Ärzte*, which was divided into seven sections in 1828, numbered 41 in 1894. The *Societas pro Fauna et Flora Fennica*, founded in 1821, was one of the rst specialized societies in the eld of the natural sciences; cf. A. Leikola, 'The Importance of Scienti c Societies for Biological Research in Finland', *Memoranda Soc. Fauna Flora Fennica*, 72 (1996), 99–102.

integrated into the universities in Italy, and not until 1933–37. The French model, which Napoleon imposed on the annexed countries, did not leave deep traces; the centralizing tendencies characteristic of this model were the inheritance of an enlightened absolutism which had affected higher education in the eighteenth century in France, Spain and Austria. Outside Napoleon's ephemeral empire, only Romania, a small country with a Latin language, adopted the French model in its organization of studies and the route from university of ce to public of ce. The main university in the capital of the new state, founded in 1861, trained the ruling class.

One of the jewels of the French model, the *Ecole Polytechnique*, which was set up to train engineers and of cers of the artillery, had a widespread and signi cant in uence through its theoretical orientation. The mining and civil engineering colleges, founded in the eighteenth century by the German, Austrian, Hungarian and Russian governments, and intended for the practical training of civil servants, were transformed in the nineteenth century into *Higher Polytechnical Schools* by introducing advanced theoretical teaching in mathematics and the physical sciences. But they did not adhere to the other aspect of the French model, the military and meticulous control by the state. On the contrary, they aspired to the basic rights of the universities. First they received the corporate autonomy of internal organization, then the right to accredit *Privatdozenten*, and, by the end of the century, the right to confer the title of doctor, which put them in the ranks of the universities.

Quite another form of in uence arising from the French model characterized the development of the Russian universities. They rejected the French college model and adopted the German university model, a choice reinforced by the appointment of German lecturers or Russian lecturers trained in Germany. But at the same time, the state assigned these universities, which were dedicated in principle to science and enjoyed at least theoretical autonomy, the function of training its bureaucracy, as the French *grandes écoles* did. This antagonism between the two models marked the alternating phases of liberalism on the one hand and repression and militarization on the other. After the revolutionary events of 1830, the authorities made the students wear uniform, thus integrating them into the administrative hierarchy. After 1848 they reacted with the ministerial appointment of rectors, purged the teaching body, suppressed dangerous disciplines such as constitutional law and philosophy, and introduced strict educational control of studies and students, measures that typi ed the Tsarist university model throughout the liberal periods. It was to be taken up again and perfected by the Soviet regime, which in 1930/31 tried to dissolve the universities into specialized institutes. Two years later they