



CHICAGO JOURNALS



History
of
Science
Society

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Reviewed work(s):

Source: *Osiris*, 2nd Series, Vol. 5, Science in Germany: The Intersection of Institutional and Intellectual Issues (1989), pp. 16-35

Published by: [The University of Chicago Press](#) on behalf of [The History of Science Society](#)

Stable URL: <http://www.jstor.org/stable/301791>

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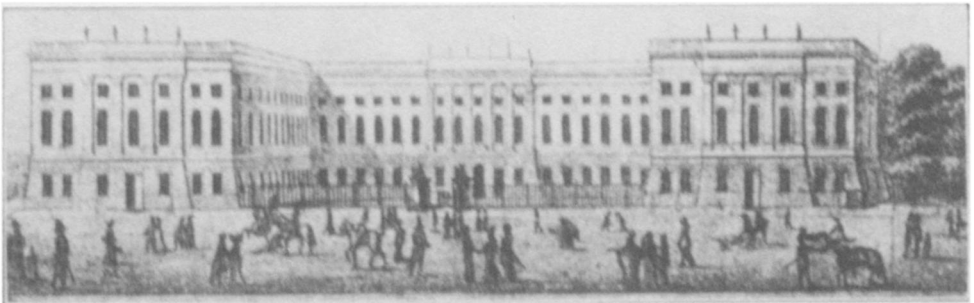


Figure 1. *Berlin University in 1820. From Norman Balk, Die Friedrich-Wilhelms-Universität zu Berlin (Berlin: Speyer & Peters, 1926).*

Kant, Schelling, and the Administration of Science in the Romantic Era

*By Frederick Gregory**

THE TRANSITION of the German university from what has been called its preclassical to its classical form took place during the first two decades of the nineteenth century.¹ The crisis in German political life occasioned by Napoleon's subjugation of the German states was the immediate cause of reform in German higher education. But in order to understand the problems raised by what Germans called *Wissenschaft* for university administrators in the Romantic period, one cannot simply confine one's attention to the first decades of the century. Instead, one must look to what Notker Hammerstein has called "a kind of transitional generation that stretched all the way from the middle of the Enlightenment to the founding of the University of Berlin."² In this essay I shall be concerned with science in the broad German sense of *Wissenschaft*, although the focus of my interest is on the special problems created for those involved in the administration of education in the Romantic period by academic disciplines in which the perception and treatment of nature were central.

Because what R. Steven Turner has referred to as *Wissenschaftsideologie* was a product of the German Enlightenment, there is a temptation to exclude it from consideration as a fundamental aspect of romantic thought.³ Nothing could be further from the truth. *Wissenschaft* cuts across any boundary separating the Romantic period from the Enlightenment. In the Romantic era, however, public discussions of the role of *Wissenschaft* in university education included at least two rival views, that originating with Immanuel Kant and that promulgated by Friedrich Schelling and his sympathizers. These two schools of thought had vastly different implications for disciplines in which the knowledge of nature was a major focus. In what follows I shall attempt to explain what those rival perceptions of science were and how they influenced German university officials.

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¹ Laetitia Boehm, "Wilhelm von Humboldt and the University: Idea and Implementation," *Mitteilungen der Alexander von Humboldt Stiftung*, 1975, 46:1.

² Notker Hammerstein, "Universitäten und gelehrte Institutionen von der Aufklärung zum Neuhumanismus und Idealismus," in *Samuel Thomas Soemmerring und die Gelehrten der Goethezeit*, ed. Gunter Mann and Franz Dumont (New York: Fischer Verlag, 1985), pp. 309–329, on p. 324.

³ See R. Steven Turner, "The Prussian Professoriate and the Research Imperative," in *Epistemological and Social Problems of the Sciences in the Early Nineteenth Century*, ed. Hans N. Jahnke and Michael Otte (Dordrecht: Reidel, 1981), p. 322; and Turner, "The Growth of Professorial Research in Prussia, 1818–1848—Causes and Context," *Historical Studies in the Physical Sciences*, 1971, 3:142, 147, 153, 156, 172.

I. THE ADVANCE OF THE PHILOSOPHICAL FACULTY

The German university came into its own in the eighteenth century. In contrast to the universities in France, Italy, and England, some eighteenth-century German universities were able to introduce discussions of the new sciences of nature and history into their programs. Unlike France, for example, where the leading intellectuals of the Enlightenment were associated with learned societies, salons, academies, and other institutions, in Germany the university was the center for intellectual discussion. In his work of 1768 on the Protestant universities in Germany, Johann David Michaelis noted that "most of our great scholars actually live at universities, and of the rest many either have once taught at universities as professors or had the intention in their youth of dedicating themselves to academic life." These scholars combined a confidence in reason with a belief that it could usefully be applied in society so as to make the university a singular focus, one in which the *Wissenschaften* eventually emerged as the crowning symbol of German Enlightenment.⁴

The magnitude of this achievement should not be underestimated. It involved no less than the social transformation of the group to which university educators belonged from *Gelehrtentum*, the class of university-trained professionals who achieved social recognition through their exclusive possession of a nonutilitarian intellectual culture, to *Bildungsbürgertum*, the functional counterpart of Enlightenment educators in the nineteenth century, whose value to society was measured more by what they could do than by what they knew.⁵

Coincident with this transformation there occurred an internal reshuffling of the roles of the individual faculties, from which the philosophical faculty emerged with renewed respect. Typically, German universities had forfeited, in practice if not in theory, the corporate freedoms they had enjoyed in medieval days. By the beginning of the eighteenth century they had become an instrument of the state, useful only in the production of civil servants. The impact of this development was most clearly visible in the plight of the philosophical faculty. Of the four faculties, three—law, theology, and medicine—were professional schools, whereas the philosophical faculty served these "higher" faculties by acquainting the student with materials frequently so general and preliminary that the border between university and gymnasium was blurred. Indeed, since late in the seventeenth century students had begun to matriculate directly into the professional faculties without any immediate contact with the philosophical faculty.⁶

In spite of the innovative trends evident in the newer universities of Halle and later Göttingen, in most institutions the status of the philosophical faculty improved only slowly. The highest social prestige and even some legal privileges went to the faculty of law, which vied with theology for the great majority of students. Since the disciplines of natural science were housed in the medical and

⁴ Hammerstein, "Universitäten und gelehrte Institutionen" (cit. n. 2), pp. 311 (quotation from Michaelis), 316. Hammerstein cites examples of the confidence in reason's potential as well as evidence of the increased social position of professors (pp. 314–317).

⁵ See the excellent treatment of this development by R. Steven Turner, "The *Bildungsbürgertum* and the Learned Professions in Prussia, 1770–1830: The Origins of a Class," *Histoire Sociale/Social History*, 1980, 13:105–135.

⁶ R. Steven Turner, "University Reformers and Professorial Scholarship in Germany 1760–1806," in *The University in Society*, ed. Lawrence Stone, 2 vols. (Princeton, N.J.: Princeton Univ. Press, 1974), Vol. II, p. 499.

philosophical faculties, the administration of natural science was a very minor concern in the eighteenth century.

The new spirit also spread slowly because it was dependent on other social changes. According to Franz Schnabel it was the growth of the middle class that created the social base that permitted the cultivation of natural science to become valued. The sciences of experience, by which Schnabel meant the natural and historical sciences, bore "a bourgeois character." "They carried the presupposition," he continues, "that the scholar was disposed toward personal freedom and the security of external life and that he possessed sufficient time and leisure for the completion of his research." This set of requirements was met only slowly, and then in the wake of developments primarily at Halle and Göttingen.⁷

The story of the spread of Christian Wolff's influence on German thought is well known. Wolff changed German philosophy from an exegesis of Aristotelian Scholasticism as a propaedeutic for the study of theology to a search for truth based on natural science and mathematics in which the dependence of philosophy on theology was specifically denied. For this he was banished from Halle by Frederick William I after having taught there for sixteen years. His restoration in 1740 by Frederick the Great confirmed not only that the spirit of research and open inquiry could be seen as important but also that it was as appropriate for research to be conducted at the university as at the Berlin Academy, where Wolff could also have gone.

Historians frequently point out that it was in the academy, rather than in the university, that scientific research was carried out in the eighteenth century. But under the influence of the new university in Göttingen, founded in 1737, the modern dualistic concept of the professoriate began to form, and the arguments of those professors who opposed appending research to teaching began to lose their persuasiveness. By the 1780s the rapid build-up of alternative institutions for research such as academies and specialized societies was waning, and the model of Göttingen, which in 1751 tied the *Societät der Wissenschaften* closely to the university, held considerable attraction.⁸ After 1790 there was an assumption at the leading German universities that professors should engage in independent research. Just after the turn of the nineteenth century this growing expectation was made an explicit responsibility at Göttingen: in addition to teaching, guiding, and inspiring students, the professor must also preserve, propagate, and increase knowledge.

The leavening function of the *Erfahrungswissenschaften* in all this is not to be denied. Not only philosophy but all the disciplines under the jurisdiction of the philosophical faculty began to appreciate the approach of the new investigators of nature and history: free rational inquiry combined with a procedure that was objective and realistic and a method that was empirical.

At the same time other changes began to affect the university. Turner points to the growth of an urban intelligentsia with few ties to the old academic system as

⁷ Quotation from Franz Schnabel, *Deutsche Geschichte im neunzehnten Jahrhundert*, 8 vols., Vol. V: *Die Erfahrungswissenschaften* (Basel: Verlag Herder, 1965), p. 47. See also Turner, "The Prussian Professoriate" (cit. n. 3), p. 328; Schnabel, *Deutsche Geschichte*, Vol. II: *Aufstieg der Nationen* (1964), pp. 199-200; and Turner, "University Reformers," pp. 503ff.

⁸ Hammerstein, "Universitäten und gelehrte Institutionen" (cit. n. 2), pp. 322-323; Schnabel, *Deutsche Geschichte*, Vol. II, p. 200; and Turner, "University Reformers," p. 506.

the source of severe attacks on all aspects of university life. Even Wolffian philosophy was subjected to the charge of intellectual irrelevance. The older exposition of canonical texts was replaced with a systematic lecture; the academic year was divided into semesters (facilitating transfers among universities); seminars, in which students were expected to investigate on their own, replaced disputations; and German replaced Latin as the language of instruction.⁹

Under these conditions it was impossible for the stature of the philosophical faculty not to improve from what Kant called *ancilla theologiae* to a position of independence. Its free rational inquiry and empirical method spread to law, theology, and medicine as well. "The rise of the German universities in the eighteenth century," writes Friedrich Paulsen, "was primarily due to the rise of the philosophical faculty from servitude to leadership."¹⁰

One must not make the mistake of reading later developments into the changes in the eighteenth century. In the period before the Romantic era the improvements described here were accomplished in conjunction with the Enlightenment vision of the usefulness of knowledge. While the emphasis on utility was visible in the proliferation of societies and clubs from the 1760s through the 1780s, it was also frequently accepted in the universities, and, more significantly, by the state.

Noting the continuing rage for legal studies in 1768, Michaelis complained that they functioned simply to keep the student from being uneducated, commenting that no English nobleman would dream of sending his son to study law if he intended him to obtain a reasonable pastime for the future. "The main field for a person of position who wants to study for pleasure and culture must always be the sciences, which are handled in the philosophical faculty even though most are not philosophy in the strictest sense."¹¹ This defense of the utility of a scientific education unwittingly communicated an impression of the irrelevance of the study of the sciences. From the point of view of the state, education must possess a greater justification than merely providing an interesting pastime for otherwise idle noble youths.

Indeed, state regulation of education proceeded apace with the Enlightenment emphasis on the usefulness of knowledge. In Austria the reforms of Maria Theresa and her son were directed toward this end,¹² and a similar tendency was apparent in the German states. In Baden university professors were reminded in explicit and sometimes humiliating terms of the tight control the state intended to exercise over the contents of their courses, while in Prussia Julius von Massow, Wilhelm von Humboldt's predecessor in the Ministry of the Interior, made clear his position when he said: "From the fullness of my heart I subscribe to the view that instead of universities there should be only gymnasiums and academies for doctors, jurists, etc. To execute this in theory very correct thesis, however, would require so many preparations . . . that for the first fifty years we would still have to endure abnormal universities."¹³

⁹ Turner, "University Reformers" (cit. n. 6), pp. 495, 501–502.

¹⁰ Friedrich Paulsen, *The German Universities and University Study* (New York: Scribners, 1906), p. 48.

¹¹ Cited in Hammerstein, "Universitäten und gelehrte Institutionen" (cit. n. 2), p. 325.

¹² *Ibid.*, pp. 321, 326; Friedrich Paulsen, *German Education Past and Present* (New York: Scribners, 1912), p. 147.

¹³ Quoted in Hammerstein, "Universitäten und gelehrte Institutionen," p. 326.

But the professors who represented the new spirit of the universities began to lose patience with the state's desire for rigid control and its propensity to measure the worth of scholars with the yardstick of utility alone. They began to argue, each from his own vantage point, that professional studies should be subsumed under more-universal principles. As is well known, the appearance of German idealism at the end of the eighteenth and beginning of the nineteenth centuries produced several participants in the debate over university education. Fritz Ringer and others have clarified for us the nature of the new ideology enunciated by these writers.¹⁴

The sharp antagonism that existed between the disciplines of Immanuel Kant and the followers of Friedrich Schelling has only recently begun to receive the attention it deserves. The mutual dislike of the two schools stemmed from fundamental differences that held profound implications for the interpretation of natural science. Elsewhere I have tried to assess Kant's influence on natural science in this era and to analyze why he was superseded by Schelling in the early 1800s only to reemerge as the preference of many German natural scientists after mid century.¹⁵ In this essay I should like to examine how the sharp differences between the Kantians and the *Naturphilosophen* affected institutional choices in the educational reforms of the Romantic period.

II. KANT'S ENCOURAGEMENT OF THE EXPERIMENTAL TRADITION

Both Kant and Schelling took up their pens in criticism of the older conception of education, which had not been based on the new ideal of *Wissenschaft*. In Kant's case the occasion was his censure by Friedrich Wilhelm II for publishing his *Religion within the Limits of Reason Alone* in spite of the king's displeasure over its "distortion and abasement of some of the main fundamentals of Holy Writ and of Christianity" and over Kant's irresponsible actions "against [his] duty as a teacher of youth and against the sovereign's intentions that were well known [to him]."¹⁶ Although he complied with the order to conform to the state's intent in the future exercise of his professional labors, Kant published his famous *Streit der Fakultäten* in 1798, just after the king's death.

In his work Kant attacked the basic issue head-on: the state's presumption that it must control the search for truth according to principles of utility. The very division and designation of the faculties into three "upper" and one "lower," wrote Kant, did not come from the scholarly class but from the state, which specified as upper those faculties it viewed as exerting the strongest direct influence on the people and which it therefore wished to control. In these faculties the

¹⁴ Fritz K. Ringer, *The Decline of the German Mandarins: The German Academic Community, 1890–1933* (Cambridge, Mass.: Harvard Univ. Press, 1969), pp. 85–96. For additional sources, see Turner, "University Reformers" (cit. n. 6), p. 496, n. 2.

¹⁵ See Frederick Gregory, "Kant's Influence on Natural Science in the German Romantic Period," in *New Trends in the History of Science*, ed. R. P. W. Visser et al. (Amsterdam: Rodopi, 1989), pp. 53–66. See also Gregory, "Die Kritik von J. F. Fries an Schellings Naturphilosophie," *Sudhoffs Archiv*, 1983, 67:145–157; Gregory, "Neo-Kantian Foundations of Mathematics in the German Romantic Period," *Historia Mathematica*, 1983, 10:184–201; and Gregory, "Romantic Kantianism and the End of the Newtonian Dream in Chemistry," *Archives Internationales d'Histoire des Sciences*, 1984, 34:108–123.

¹⁶ See Kant's publication of the letter of censure in *Kant's Werke*, Vol. VII (Berlin: Reimer, 1917), p. 6.

pursuit of truth was irrelevant, since they existed merely to fulfill their useful function as prescribed by the state.¹⁷

From this platform Kant argued, consistent with the values of *Wissenschaft*, that it was in the interest of the state to keep the philosophical faculty free from external control. Theologians, jurists, and physicians were scholars who dealt with a received canon of authoritative literature immune to the criticism of subjective reason. "As soon as one of these faculties dares to mix in something borrowed from reason," wrote Kant, "it offends the authority laid on it by the regime and comes into the preserve of the philosophical faculty, which . . . proceeds with the state on a footing of equality and freedom."¹⁸ In other words it was the task of the philosophical faculty to evaluate the knowledge and assumptions of the so-called higher faculties according to the canons of critical philosophy.

Kant's stance was not directed against the growing usurpation by the state of the old corporate right of universities to make their own professorial appointments. For some time the authority to make appointments had in practice been shifting away from the body of professors toward certain state bureaucrats. In fact, numerous university reformers in the eighteenth century had argued for increasing state control of appointments. In this way, some asserted, faculty jealousies or misplaced competencies would not interfere, as they frequently had in the past, with the selection of the best person for a vacant post. Curiously, state control of appointments was never substantially questioned in the shift from *Gelehrtentum* to *Bildungsbürgertum*, even in the idealistic program of university reform of Wilhelm von Humboldt. Instead, there was a gradual shift from the individual criteria used to evaluate professors in the Enlightenment to the disciplinary criteria employed more and more by the state in the nineteenth century.¹⁹

Nor was Kant's proposition by any means a rejection of practical or utilitarian considerations in the pursuit of knowledge. Indeed, the nature of his philosophical system encouraged a healthy respect for practical philosophy. Kant in no way meant to challenge the social function filled by the faculties in law, theology, and medicine in producing civil servants, clerics, and physicians.

Further, because Kant did not hesitate to acknowledge the necessary dependence of the natural sciences on experimentation and empirical data, his views on education did not threaten the well-established experimental tradition in physics and chemistry. Sense intuition played a central role in his thought, as did his claims regarding the necessity of what may loosely be called mechanical explanation in the natural sciences. All in all, it should not be surprising to find it said of Kant that "no other thinker of modern times has been throughout his work so penetrated with the fundamental conceptions of physical science."²⁰

Although it was in principle possible to use Kant's approach to argue that

¹⁷ *Ibid.*, pp. 18–19. In the section dealing with the *Streit* between the philosophical and law faculties Kant argued that for the latter only empirical relations of power expressed the law; no ideal factors such as the progressive improvement of humanity could serve as legal foundations. See pp. 77–94.

¹⁸ *Ibid.*, p. 23.

¹⁹ For the arguments of eighteenth-century critics against self-determination of appointments, see Turner, "University Reformers" (cit. n. 6), pp. 512–515. On Humboldt, see below. For the shift from institutional to disciplinary criteria of evaluation, see Turner, "Growth of Professorial Research" (cit. n. 3), pp. 167–173, 176–177.

²⁰ Robert Adamson, "Immanuel Kant," in *Encyclopaedia Britannica*, 9th ed. (1881), p. 846.

university students should receive laboratory training in their natural science courses, such an expectation had never been part of the German university tradition, and no one at the turn of the century made such a suggestion. As late as 1830 laboratory training was still confined to the polytechnical schools and excluded from university science curricula.²¹ What more commonly marked Kantian natural scientists of the early decades of the century was, as we shall see, their insistence on the central role of experimentation in preference to unbridled speculation.

Nevertheless, Kant's understanding of *Wissenschaft* held great promise for those who later wished to defend the notion that a university professor of natural science should incorporate experimentation and laboratory exercises in the training of future scholars.²² When natural scientists and others at mid century looked around for a philosophical foundation to support their convictions of the relevance of experimental natural science to the social and intellectual problems of the day, they found what they needed in Kant's thought. But why had it become necessary to revive Kant around 1850? Were there not Kantian philosophers throughout the intervening period? There were of course neo-Kantians aplenty well before the "Back to Kant" movement at mid century, and Kant's influence on science can be seen throughout the Romantic period, particularly in the impact of his philosophy on physics textbooks.²³ But Kant had not been alone in turning his attention to the implications of the ideal of *Wissenschaft* for university education and administration. There was also F. W. J. Schelling.

III. SCHELLING'S REJECTION OF UTILITARIAN SCIENCE

Soon after the turn of the century, Schelling, in his *Lectures on the Method of Academic Study* (1803), had introduced a new twist into the debate. Schelling agreed with Kant that the philosophical faculty played a unique and central role in the university by seeking universally valid solutions to questions about the scope of human knowledge, but he went on to urge that in their relation to philosophy as the point of integration of all knowledge, other disciplines, including the natural sciences, were to be viewed *separately* from any practical dimension they might possess.²⁴

²¹ Arleen M. Tuchman, "Science, Medicine, and the State: The Institutionalization of Scientific Medicine at the University of Heidelberg" (Ph.D. diss., Univ. Wisconsin, 1985), pp. 50–51.

²² Tuchman has argued that, for the case of Heidelberg, the crucial decades for the transition to instruction based on laboratory exercises in the sciences were from the 1830s to the 1850s. In her treatment she is careful to emphasize that, in the German context, the transition from traditional methods of teaching science to more modern ones incorporating laboratory training did not involve the adoption of an antiphilosophical attitude in which only utility was respected and the ideal of *Wissenschaft* abandoned. Instead, the transition, she writes, "would not occur because the universities would eventually accept a utilitarian approach to scientific research, but rather because active participation in problem solving, as exemplified by the laboratory setting, would become not only the model for the way in which science should be done, but the model as well for the kind of *geistige Bildung* needed by a society trying to deal with modernization" (*ibid.*, p. 53). In his article on Liebig in this volume, Frederic L. Holmes details how laboratory training became a recognized component of the educational training of chemists at Giessen.

²³ Christa Jungnickel and Russell McCormach, *Intellectual Mastery of Nature: Theoretical Physics from Ohm to Einstein*, 2 vols. (Chicago: Univ. Chicago Press, 1986), Vol. I, pp. 23–27.

²⁴ Friedrich Jodl, "Friedrich Wilhelm Joseph Schelling," in *Allgemeine deutsche Biographie*, Vol. XXXI, pp. 11–12.

Schelling warned his listeners in the first of his fourteen lectures that everywhere there were those who viewed knowledge as a means to a practical end and who saw philosophical knowledge as an esoteric study that “was not everybody’s thing.” The apostles of utility (*Nützlichkeitsapostel*) who thought this way, Schelling continued, still approved of philosophy because they believed that through it one could unambiguously demarcate proper from improper moral action. Their general appreciation of *Wissenschaft*, however, was based on their belief that it placed humans in a position of control. “Geometry, they think, is a beautiful science, not because it is the purest evidence and objective expression of reason itself, but because it teaches them how to measure the field and build houses, or make sea trade possible. But, since it also serves [them] in waging war, its value is reduced, for war is totally against the general love of human beings for one another.” Schelling argued that the study of absolute *Wissenschaft* prevented such false distinctions from arising. He summarized the basis of his entire investigation as

the idea of a knowledge which in itself is unconditioned, which consequently is one and in which all knowing is also one, a primary knowing which, in being split into branches in the different levels of the ideal world of appearance, spreads itself out into the unfathomable tree of knowledge. As the knowledge of all knowledge it must be that which fulfills and contains all challenge and presupposition . . . most completely, and not merely for the special case, but also for the general.

Only by immersing himself at this level could the student coming to the university find a sense of orientation amid the chaos represented by the individual sciences, “that wide ocean onto which he finds himself transported without compass or guiding star.”²⁵

Schelling’s ideas had direct implications for university study of natural science and technology. In preferring to emphasize such a high-level approach to *Wissenschaft*, Schelling wished to avoid the sharp distinction between theoretical and experimental natural science and to reject outright the inclusion of technology in university study. Three of the fourteen lectures were directed to natural science. In the first, “On Natural Science in General,” he refuted the alleged opposition between theory and experience in terms that sound quite modern. “The theoretical concept already contains a relation to the particular and therefore to experience.”²⁶

But it was not in the lecture on physics and chemistry or in the one on medicine and the organic sciences that Schelling eschewed practical science. Only in the final lecture, on the relation of academic study to the science of art (by which he meant the manipulation and artificial representation of reality), did the subject arise, and when it did there was no ambiguity. “Universities are not schools of art,” he wrote. “Still less therefore can their sciences be taught with a practical or technical intention.”²⁷

Elsewhere in this volume Thomas Broman traces the impact of Schelling’s convictions on the university medical communities, arguing that the appeal of

²⁵ F. W. J. Schelling, *Sämtliche Werke*, Vol. V (Stuttgart: Cotta, 1859), pp. 218–221, quoting from pp. 221, 215, 211.

²⁶ *Ibid.*, p. 322.

²⁷ *Ibid.*, p. 344.

Naturphilosophie to some members of medical faculties lay in its promise of separating their role as *Wissenschaftler* from the long-established expectation that they were also responsible for curing sick people. Perhaps no discipline produced more loyal followers for Schelling than did medicine. Broman holds that *Naturphilosophie* created a new group of physicians, the professors of medicine, who declared that their business as scholars was based on a rejection of Kantian *Wissenschaft* in favor of that of Schelling.²⁸

Although there were various disagreements among those followers of Schelling who called themselves *Naturphilosophen*, one thing common to their understanding was their opposition to Kant. The stance of Schelling and the *Naturphilosophen* had a markedly different emphasis from that of Kant, and still more from that of the romantic Kantians, both of whom placed no prohibition on the practical side of the sciences. The fundamental opposition between the two positions can be seen in the way each validated answers to cognitive questions. Kant believed it was impossible to use other than empirical means to confirm the conclusions of scientific investigation. Schelling's rejection of Kant's sense intuition in favor of his own intellectual intuition betrayed his ultimate loyalty to speculative as opposed to critical thought. Schelling allowed but one aspect of the artisan's world in the academic curriculum. Having banned all practical and technical intention, he noted that "there remains left only the wholly speculative [intention], which is not directed to the cultivation of the empirical but to the intellectual intuition of art."²⁹ Kant had specifically rejected the possibility of an intellectual intuition, and later Kantian critics of Schelling made this issue a central feature of their attack.³⁰

Schelling's opposition to the Enlightenment value of utility, then, was radical. Where natural science was concerned, his rejection of the notion that empirical verification was a sufficient means of validating knowledge meant that German academic study should deliberately contradict the French educational model being implemented under Napoleon. There the specialized schools consciously integrated science and technology. In Schelling's German romantic perspective, science and technology were deliberately kept apart.

IV. CHOOSING A MODEL FOR UNIVERSITY REFORM: HEIDELBERG

Just as this difference between Schelling and Kant was becoming clear, external political events emerged as the dominant influence in the administration of German higher education. Religious considerations of the kind that sparked Kant's *Streit der Fakultäten* took a backseat to the forces arising from foreign occupation and military defeat. In the wake of Jena-Auerstadt in 1806 the push for educational reform already under way received a boost, and the attraction of a system of education that was uniquely German and also in direct opposition to the French model proved hard to resist. In the very year of Schelling's *Lectures*

²⁸ See the essay by Thomas Broman in this volume.

²⁹ Schelling, *Sämtliche Werke* (cit. n. 25), Vol. V, pp. 344–345.

³⁰ Kant's rejection of intellectual intuition may be found in the second edition of *Die Kritik der reinen Vernunft*, Bx1, n., B68–69, B72, B159, B307–309. From the first edition see A225–226. The Kantian Jakob Fries spelled out the problems arising from Schelling's claim of an intellectual intuition. See Jakob Friedrich Fries, *Sämtliche Schriften*, 24 vols. (Aalen: Scientia Verlag, 1967–1982), Vol. III, pp. 105, 464; Vol. XXIV, pp. 145, 345, 585, 609.

on the *Method of Academic Study*, several small German universities perished because of the French confusion. With the loss of Halle in the Peace of Tilsit in 1807 Prussia determined not only to replace Halle but also, as Friedrich Schleiermacher put it in his *Timely Thoughts on Universities in the German Sense* of 1808, “to begin anew.” Friedrich Wilhelm III’s famous remark of 1807, that “the state must replace intellectually what it has lost physically,”³¹ was an early indication that the foundation for the new university would draw heavily on the ideals of *Wissenschaft*.

But which ideal of *Wissenschaft*? Should it be Kant’s, which emphasized the freedom of inquiry and the autonomy of reason but retained a central role for sense experience and an appreciation for the realm of the practical? Or should universities embrace Schelling’s vision, which explicitly excluded practical intentions from university education (presumably continuing to leave them to technical schools and academies) and placed intellectual intuition above sense intuition as the ultimate validator of cognitive knowledge?

The choice between Kant’s and Schelling’s understanding of the role of *Wissenschaft* was significant enough to filter down to the level of those in charge of administering university education in the first decade of the new century. This was particularly true for posts with teaching duties that dealt with natural science, housed for the most part in philosophical faculties. The decision facing administrators hiring new faculty in any number of disciplines was whether to go after a follower of Schelling—one of the so-called *Naturphilosophen* who sought to show how ideal dimensions were expressed in the real world and who demonstrated little patience for the practical dimension of natural science—or to seek out followers of Kant, who were also preoccupied with the a priori conditions affecting scientific knowledge but who retained a deep respect for mechanistic explanation, experimentation, and empirical verification. Administrators in the early nineteenth century found it hard to defend the hiring of a straightforward experimentalist who cared little for philosophical issues.³² It could not go unnoticed that among those prominent university professors leading the way in university reform there were relatively few natural scientists; furthermore, among the experimentally oriented figures in the German scientific community, most seemed to prefer the French or English definition of their roles.³³ But the times called for a clearly *German* professorial type, the kind of professor Karl von Savigny recommended to university officials in Heidelberg. One should demand not only that a teacher prepare his science with sense and good taste but also “that he has before his eyes an ideal of it.”³⁴

The dilemma facing university administrators when hiring new members to the

³¹ Quoting Schleiermacher from Paulsen, *The German Universities* (cit. n. 12), p. 50; Friedrich Wilhelm III from Hammerstein, “Universitäten und gelehrte Institutionen” (cit. n. 2), p. 327.

³² On the suppression of what has been called “scientifische Naturphilosophie” until later in the century see Dietrich von Engelhardt, *Hegel und die Chemie: Studie zur Philosophie und Wissenschaft um 1800* (Wiesbaden: Pressler Verlag, 1976), p. 5.

³³ Joseph Ben-David, *The Scientist’s Role in Society* (Englewood Cliffs, N.J.: Prentice-Hall, 1971), p. 113. Among the scientists concerned with educational reforms during the first two decades of the century was Ernst Gottfried Fischer, gymnasium teacher, lecturer at Berlin, and author of *Lehrbuch der mechanischen Naturlehre*.

³⁴ See the report to Heidelberg University as given in Franz Schneider, “Karl Friedrich von Savignys Denkschrift und die Reorganization der Universität Heidelberg 1804,” *Zeitschrift für die Geschichte des Oberrheins*, 1913, 28:619.

philosophical faculty in this period is well illustrated by the choices facing Heidelberg in 1803 and Berlin after 1810. Both universities were engaged in a building effort, Heidelberg to revitalize a stagnant program and Berlin to create a university from the ground up. But the difference between the two is especially instructive, for Heidelberg's rebuilding program coincided with the inauguration of new *administrative* control in the state of Baden, while the establishment of the University of Berlin was in part a response to Prussia's *military* defeat in 1806. The impact of political developments in the early years of the nineteenth century can be seen in the way in which administrators at both universities carried out educational reform.

Having lagged behind other German universities during the spurt of development at the end of the eighteenth century, Heidelberg was removed from the responsibility of the Palatine Elector by the Treaty of Luneville in 1802 and placed under the jurisdiction of Baden. The philosophical faculty at Heidelberg was in a sorry state at the turn of the century; most posts were in fact occupied by clerics. But the new administration in Baden moved deliberately to upgrade the university and in the process to assert a much more rigorous control over university affairs than had been asserted in the past.³⁵

It was a propitious moment for Heidelberg. Jena University was clearly declining from the leading position it had held around 1800 and many scholars had already left, including the philosophers Johann Gottlieb Fichte and Karl Leonard Reinhold, the anatomist Justus von Loder, the theologian Heinrich Paulus, and the physician Christoph Wilhelm Hufeland; still more were inclined to leave.³⁶ Other universities also noticed the exodus and exploited it to their advantage. Würzburg, for example, was successful in landing Schelling himself in 1803.

At Heidelberg the student population rose rapidly after 1803, no doubt because of the revitalization under way and the new faculty being assembled. From a low of 102 in 1803/4 the number of students rose to 176 the following year and to 248 in 1805/6.³⁷ A weak spot in Heidelberg's faculty was a philosopher named Weise, who, owing to a combination of personal problems and genuine incompetence, had to be removed.³⁸ The deliberations surrounding the decision over Weise's replacement provide a revealing glimpse into the mechanics of university politics at the time.

One of those whom the university had tried to lure to Heidelberg was the noted Marburg jurist Karl von Savigny. Although he turned down the offer, Savigny consented to assist the university in its rebuilding program by preparing a report in which he both evaluated the existing faculty and made specific recommendations of new candidates for the faculties of medicine and philosophy. For the philosophy post Savigny recommended the Kantian Jakob Fries in Jena, who, together with Hegel, was about to become an *außerordentlicher Professor* there.

³⁵ Franz Schneider, *Geschichte der Universität Heidelberg im ersten Jahrzehnt nach der Reorganisation durch Karl Friedrich (1803–1813)* (Heidelberg: Winter, 1913), pp. 4–8, 32, 40–41, 59–66.

³⁶ On the decline of Jena see *Geschichte der Universität Jena 1548/58–1958: Festgabe zum vierhundertjährigen Universitätsjubiläum*, 2 vols. (Jena: Gustav Fischer, 1958), Vol. I, pp. 240–241; Gunther Nicolin, ed., *Hegel in Berichten seiner Zeitgenossen* (Hamburg: Meiner, 1970), pp. 59, 65–69; and Ernst Borkowsky, *Das alte Jena und seine Universität* (Jena: Diederichs, 1908), p. 155.

³⁷ Ernst Henke, *Jakob Friedrich Fries: Aus seinem handschriftlichen Nachlasse dargestellt* (Leipzig: Brockhaus, 1867), p. 104. Henke lists here several names of new faculty attracted to the university.

³⁸ Schneider, *Geschichte der Universität Heidelberg* (cit. n. 35), pp. 84, 100.

Fries, whose avid interest in natural science was evident from his academic preparation and from his publications, was the author of *Reinhold, Fichte, und Schelling* (1803), in which he clearly recorded his opposition to Schelling's *Naturphilosophie*.³⁹ Fries's study, as the most extensive and reasoned critique of Schelling's interpretation of natural science to have appeared, was an indication of the decided opposition that existed between the Kantians and the *Naturphilosophen*. Writing from Halle in 1804, for example, the newly appointed *Naturphilosoph* Henrik Steffens informed his friend Schelling that the Kantians there, whose "number is legion," hated him, as was to be expected.⁴⁰ For his part Savigny approved of Fries's Kantian brand of philosophy, while, incidentally, expressing doubts about Hegel's abilities. Indeed, it was apparently due to Savigny that Fries applied for the Heidelberg job in the first place.⁴¹

In his letter of application to Heidelberg, Fries left no doubt about his opposition to *Naturphilosophie*. To its untempered speculation he contrasted his own prudent speculation; to its lack of concern for application he compared his conviction that without application philosophy has no value. Because of the overblown claims of Schelling's followers, wrote Fries to the curator for Heidelberg, young people were staying away from the truly applicable sciences. "My own effort," he concluded, "is to work against this confusion."⁴²

Heidelberg officials also received advice not to take Fries. Georg Arnold Heise, a new faculty member in law enticed to Heidelberg from Göttingen, was understandably interested in helping to build up the academic program at his new university.⁴³ Heise solicited the confidential sentiments of his friend Johann Dietrich Gries in Jena. Gries had met almost all of the great figures who were or had been in Jena, including the Schelling-Schlegel circle that sometimes convened around his *Teetisch*.⁴⁴ Gries's reply to Heise concerning Fries was not encouraging. Having sought the views of his colleagues, Gries reported that although Fries was deemed acceptable as a scholar, he was not a good teacher. For himself, Gries commented that the reviews of the book on Reinhold, Fichte, and Schelling were not impressive, adding, "In such a short time he cannot possibly have thought through as much as he has written." Once again Hegel's name came up, as did that of Johann Friedrich Herbart in Göttingen. Gries considered Hegel a

³⁹ Fries had directed two works at Schelling: *Reinhold, Fichte, und Schelling* (1803) and "Sonnenklar Beweis, dass in Professor Schellings Naturphilosophie nur die vom Hofrat und Professor Voigt in Jena schon längst vorgetragenen Grundsätze der Physik wiederholen werden" (1803). For further discussion of Fries's works, see Frederick Gregory, "Regulative Therapeutics in the German Romantic Era: The Contribution of Jakob Friedrich Fries," *Clio Medica*, 1983, 18:179-189; Gregory, "Romantic Kantianism," pp. 108-123; and Gregory, "Kritik von Fries" (both cit. no. 16), pp. 145-157.

⁴⁰ F. W. J. Schelling: *Briefe und Dokumente*, ed. Horst Fuhrmanns, Vol. I (Bonn: Bouvier Verlag H. Grundmann, 1962), p. 319.

⁴¹ Savigny's contact with Fries went back at least to 1802, when the two corresponded over Euclid's parallel postulate; see Henke, *J. F. Fries* (cit. n. 37), pp. 297-298. In 1804 Savigny recommended Fries to the Heidelberg philologist and Schelling enthusiast Georg Creuzer. Savigny eventually advised Fries directly on the call to Heidelberg; *ibid.*, p. 95; and Friedrich Lautenschlager, "Die Berufung des Philosophen J. F. Fries und des Dichters J. H. Voss von Jena nach Heidelberg," *Z. Gesch. Oberrheins*, 1936, 50:149-152.

⁴² J. F. Fries to Heidelberg Univ. Curator, 1 Oct. 1804, Fries Archiv, University of Düsseldorf.

⁴³ Heise was used to recruit Anton F. J. Thibaut and Christoph R. D. Martin to the Heidelberg faculty of law. Lautenschlager, "Berufung des Fries" (cit. n. 41), p. 143.

⁴⁴ Friedrich Johann Frommann, "J. D. Gries," *Allgemeine deutsche Biographie*, Vol. IX, p. 658.

deeper thinker than Fries. Surprisingly, he also recommended Hegel because he allegedly possessed a careful acquaintance with all branches of natural science, "without which," Gries continued, "it is impossible these days to be a philosopher."⁴⁵ There were other candidates as well. In addition to another Kantian from Leipzig there was Fries's colleague Karl Krause in Jena, a *Privatdozent* and an outspoken *Naturphilosoph*. Christoph Bardili, another partisan of Schelling, was also in the running.⁴⁶

By their decision university officials revealed the strategy they intended to follow. They were clearly aware that they had to choose between the two contrary perspectives represented by the Kantians and the *Naturphilosophen*. Furthermore, they realized that the ultimate success of their attempts to improve the university depended largely on the prudent selection of new faculty. As they assessed their needs, the administrators decided against casting their lot with one side or the other; they opted instead to try to balance representation of the two factions in the faculty.

A survey of existing faculty in Heidelberg in 1805 reveals good support for Schelling's perspective already in place. In theology Karl Daub and P. K. Marheinecke could be counted, as could Franz Shelver and Johann Jakob Loos in medicine. In the philosophical faculty itself the situation was less clear. Clemens Brentano's preference for Fries might be explained by personal reasons: he was related to Savigny, who had recommended Fries, and he himself had once roomed with Fries in Jena. Yet Georg Creuzer clearly viewed nature and religion in a manner sympathetic to Schelling.⁴⁷

The university chose to go after a Kantian. Heise was successful in getting the officials to consider Herbart in Göttingen over Fries in Jena; but when the former could not be moved, Fries received the call.

V. THE MODEL FOR REFORM IN BERLIN

Six years later the University of Berlin, facing the same decision, came to a different conclusion. With the selection of Wilhelm von Humboldt in 1809 to direct the creation of a new university in Berlin, the Prussian regime gave notice of its willingness to abandon the assumptions on which educational policy had been based in the previous century and to entertain the new values associated with German *Wissenschaft*. There would be no idea of imitating the rigorous control of the curriculum for state purposes that existed in France; instead, students would be trained to think for themselves through unfettered study and independent research.

These ideals represented a real turn around from the position King Friedrich Wilhelm III had taken on his ascension to the throne but twelve years earlier. Then he had voiced sympathy for the older, utilitarian view that useful arts and applied science were worthy of state support, but abstract scholarship for its own sake was not.⁴⁸ Military defeat, however, nurtured the nascent sense of German

⁴⁵ Quoted in Lautenschlager, "Berufung des Fries" (cit. n. 41), p. 143.

⁴⁶ Schneider, *Geschichte der Universität Heidelberg* (cit. n. 35), p. 123.

⁴⁷ On Daub, Marheinecke, Shelver, and Loos see *ibid.*, pp. 231, 243. On Brentano see n. 36 above. On Creuzer see L. Urlichs, "Georg Friedrich Creuzer," *Allgemeine deutsche Biographie*, Vol. IV, pp. 594–595; and Henke, *J. F. Fries* (cit. n. 37), pp. 104–105.

⁴⁸ Boehm, "Wilhelm von Humboldt and the University" (cit. n. 1), p. 2.

nationalism, which, where education was concerned, expressed itself in the gradual acceptance of a German understanding of intellectual freedom.

Wilhelm von Humboldt's vision of academe was closer to Schelling's than to Kant's. "The Humboldtian ideal of the university," writes Steven Turner, "was an uneasy amalgam of concepts from idealist philosophy and neo-humanism, and it largely ignored the professional functions of the upper faculties or treated them with suspicion."⁴⁹ In the middle of the first decade of the century, when Heidelberg was conducting its search, the repudiation of utility explicitly announced in Schelling's view of university education was not yet persuasive enough to dominate university policy. But after the defeat at Jena-Auerstadt in 1806, the extreme view of the purely spiritual, nonutilitarian value of scholarship and education achieved its greatest level of appreciation and sympathy.

Humboldt's program for the new university contained the radical notion of "pure scholarship and self-education untainted by utilitarian aims." In Humboldt's view academic degrees and civil service examinations would have no connection with each other. He also wanted the new institution in Berlin to be free from state interference with educational responsibilities. According to Humboldt the duty of the state was to be restricted mainly to providing money and to ensuring freedom to professors in their work.⁵⁰ In spite of his theories of academic freedom, however, he was convinced that "the appointment of university professors must be reserved exclusively to the state," allowing that the faculties should have some influence in appointments, but no more than a council of representatives of the state. Both Humboldt and his successor in the Interior Ministry, Kaspar Friedrich von Schuckmann, took an active and direct role in the appointment of new faculty in the period of reform before 1818.⁵¹

In a climate such as this the Prussian university in Berlin came to a decision different from that the Baden university in Heidelberg made in 1805, just a few years earlier. The founding chair in philosophy in Berlin went to the speculative philosopher Fichte, one of the active voices of educational reform at the time. When in 1811 officials were seeking to fill a second slot on the philosophical faculty to complement Fichte, the choice once again came down to a Kantian or a *Naturphilosoph*. This time there was no contest. Prussian officials clearly sensed the widespread popularity of *Naturphilosophie*. Kaspar von Schuckmann, who took over for Wilhelm von Humboldt in the fall of 1810, confessed to the theologian and Fries supporter W. L. M. De Wette that in spite of his personal dislike for the "Fichtean-Schelling philosophy," which De Wette had castigated as "false mystical philosophy" in contrast to the "reasonable philosophy" of Fries, students were enamored of it and Fries would be hard-pressed to survive against it. In the end the relatively unknown *Naturphilosoph* Karl Solger was named over the Kantian Fries.⁵²

The university in Berlin seemed to prosper quickly. By April of 1811 the

⁴⁹ Turner, "Bildungsbürgertum" (cit. n. 6), pp. 110–111.

⁵⁰ *Ibid.*, p. 7.

⁵¹ Quoted in Turner, "Growth of Professional Research" (cit. n. 3), p. 164. After 1818 the Prussian ministry assumed rigid control of appointments. See pp. 165–167.

⁵² Schuckmann quoted in Max Lenz, *Geschichte der königlichen Friedrich-Wilhelms-Universität zu Berlin*, Vol. I (Halle: Waisenhaus, 1910), p. 393. On Schuckmann see Wippermann, "Kaspar Friedrich von Schuckmann," *Allgemeine deutsche Biographie*, Vol. XXXII, pp. 647–650.

number of students was already approaching four hundred, by fall of the same year six hundred. De Wette reported to Fries, however, that not everyone was enjoying unalloyed success. He seemed delighted to report that the partisans of the mystical school were experiencing difficulties. There were complaints about Schleiermacher's and Marheinecke's incomprehensibility, and Fichte's rectorship was foundering. According to De Wette, Fichte had alienated students, and one had even attempted to harm him physically.⁵³

With the coming of the Wars of Liberation attendance dropped in Berlin as it did everywhere else. In February of 1813 De Wette wrote to Fries that Schuckmann now wished he had appointed Fries, and that he had told him he still might do so once peace came.⁵⁴ With Napoleon's abdication and the vacancy caused by Fichte's death in 1814 Schuckmann had the opportunity he needed. But at this stage in the young university's life, complicated as it was internally by the expectations of Humboldt's idealized program and externally by the challenge and excitement of the Wars of Liberation, the state had not yet made explicit where administrative authority would lie. The new university's statutes were, with the famous theologian Friedrich Schleiermacher's assistance, still being drafted, and the whole Ministry of the Interior was in the throes of reorganization.⁵⁵ In such an atmosphere faculty opinion became an even more important influence than it might otherwise have been, especially given the dominance of a perspective like Schelling's that cut across faculty disciplines.

By 1814 life in Heidelberg had become burdensome for Fries, and he was actively seeking a new post. In addition to his normal teaching duties in philosophy and mathematics, he had taken over the lectures in physics when Karl Wilhelm Kastner left in 1812. Though his salary was raised as a result, the combined responsibilities, especially because of the demonstrations in physics, required enormous effort and time. Then a dispute involving political views between two colleagues in the faculty of law brought a tinge of suspicion his way when he publicly sided with the liberal cause. In vain Fries sought help in his attempt to leave Heidelberg from his former colleague Heise, now in Göttingen.⁵⁶

Naturally Fries was interested to hear of the opening in Berlin. Knowing of Schuckmann's dislike of Fichte and Schelling and having heard of his regrets over having hired Solger, Fries had reason to be optimistic. But, in conformity with what Humboldt had argued when the university was founded and with what many deeply believed, decisions regarding the university could not be made simply and solely according to the preferences of the representatives of the state.

De Wette kept Fries informed of his colleagues' views on future appointments in the philosophical faculty. In March of 1815 he reported that he had given Schuckmann a book by Fries and that his colleague August Böckh had passed the same title along to the liberal *Staatsrat* Johann Süvern. He also reported that

⁵³ De Wette's letters, in Henke, *J. F. Fries* (cit. n. 37), pp. 347–349.

⁵⁴ *Ibid.*, p. 351.

⁵⁵ Originally the Interior Ministry had responsibility for industry, trade, worship, and public instruction. Soon after Schuckmann became minister in 1814 the ministry underwent a series of organizational changes in which individual sections were reshuffled or even removed completely from the ministry's jurisdiction.

⁵⁶ For an account of the matter see Henke, *J. F. Fries* (cit. n. 37), pp. 152–153. Heise's reply to Fries is given on pp. 339–341.

there had been a new turn of events—rumor had it that Hegel was being considered. “Mysticism is monstrously dominant here,” he wrote. “The thought of Hegel shows how deep they have sunk.”⁵⁷

Hiring preferences then as now were not formed solely on the basis of the publications, scholarly reputation, and disciplinary stance of a candidate. Teaching ability and personality also played a part. The consideration of Hegel in 1814–1815, however, represented a compromise solution between the Kant and Schelling factions, each of which had partisans on the faculty.

As a teacher Hegel was at best an unknown quantity. Many found his major effort, the *Phenomenologie des Geistes* of 1807, unreadable. Before its appearance, when both Fries and Hegel were on the job market for the first time, Heidelberg had chosen Fries over Hegel in spite of concerns about Fries’s teaching abilities. Time seemed to have confirmed the wisdom of that decision, since for over a decade no other university had been willing to hire Hegel.⁵⁸

A speculative philosopher who was known to be severely critical of both Kant and Schelling, Hegel nevertheless clearly stood closer to the dialectical idealism of Schelling. Because of this De Wette did not see him as a compromise candidate but dismissed him as just another of the false mystics. De Wette’s casual treatment of Hegel’s philosophy is a reminder of Hegel’s relative lack of influence on German thought before 1820. In the fall of 1815, for example, when F. H. Jacobi heard that Berlin could not make up its mind about Fichte’s replacement and that an unknown Erlangen professor was being proposed, he wrote to his friend Georg Nicolovius, who, as an official of the Ministry of the Interior, was close to the deliberations, “How in all the world can such an average subject be preferred to a Fries?” Jacobi then did mention Hegel’s name too but added that he did so to fulfill a promise to Hegel, that Hegel was not the thinker he had once been, and that he himself preferred Fries.⁵⁹

In the spring of 1816 the philosopher Böckh rose in the University Senate to call on the state to fill the gaps in the philosophical faculty. For some reason Schleiermacher as rector opposed the move, perhaps because he was privy to the reasons that the state was dragging its feet.⁶⁰ But the senate overruled him, prompting the regime to reply by requesting specific recommendations from the senate.

Schleiermacher’s next move was to propose that each faculty confer individually, a procedure Böckh and De Wette, who knew of Schleiermacher’s antipathy to a Kantian, opposed because they suspected it was designed to give him maximum control over the eventual recommendations. When the senate approved Schleiermacher’s proposal it confirmed the importance with which the appointment was viewed by the faculty. The results were mixed. Theology, except for

⁵⁷ *Ibid.*, p. 353. From a later reference it can be inferred that the book in question was Vol. I of Fries’s *Julius und Evagoras oder: Die Schönheit der Seele: Ein philosophischer Roman*, a romantic work containing explicit allusions to the German national question.

⁵⁸ On Hegel’s disastrous lecture style in the early years of Jena see Walter Kaufmann, *Hegel: A Reinterpretation* (Garden City, N.Y.: Doubleday, 1966), pp. 95–97. Even later, when he was famous, one had to come to appreciate Hegel’s style (p. 225).

⁵⁹ Nicolin, *Hegel in Berichten* (cit. n. 36), p. 119.

⁶⁰ De Wette had written Fries a year earlier that Schuckmann had informed him no calls were about to be issued. See the letter in Henke, *J. F. Fries* (cit. n. 37), p. 353. Since no one was called until 1818, the delay had to have been deliberate.

De Wette, fell in line behind Schleiermacher, who proposed asking for two positions, one in speculative philosophy, for which he named Hegel, and another in practical philosophy, for which he preferred the little-known David Suabedissen.

In the philosophical faculty a majority preferred Schelling but, realizing that he probably could not be lured from Munich, added Fries and Hegel to their preliminary list. Medicine also came down strongly for Schelling, though not without the decided opposition of Karl Rudolphi and the Kantian H. F. Link. Law, influenced by Schleiermacher, proposed Hegel, G. H. Schubert, and Schleiermacher's friend Johann Delbrück.⁶¹ The stage was set for the senate meeting to select the names to be submitted to the authorities.

Schleiermacher got the senate to go along with the proposal he had introduced in the theology faculty, namely, to split the position into two. The senate, made up of sixteen of the approximately sixty members of the teaching faculty, agreed to give the regime three names in rank order for each position. To select the names, the vote would be for first, second, and third place for each post. The winners for the position in speculative philosophy were, in rank order, Hegel, Schelling, and the *Naturphilosoph* G. H. Schubert.⁶²

When the floor opened for nominations for practical philosophy, De Wette, in a surprise move, named Fries for a fourth straight time. This time, much to Schleiermacher's dismay, Fries carried the day, with Delbrück and Suabedissen recommended in second and third place, respectively. De Wette's evaluation of the situation to Fries was optimistic. Since Schuckmann, now minister of the interior, personally hated *Naturphilosophie*, there was no way he would allow either Schelling or Schubert. De Wette would try to get rid of Hegel by showing him to be another Schelling. Delbrück most likely would not come since he had just become a *Regierungsrat* in Koblenz.⁶³ That left Fries and Suabedissen, the latter of whom, as *Hofmeister* of the crown prince in Hesse-Cassel, might either decline or appear too insignificant to the minister. "One could therefore count on your call with great probability," concluded De Wette to Fries. However, he sounded one hesitant note. Worried about Schuckmann's political conservatism, De Wette wrote, "I regret that I gave him your *Evagoras*."⁶⁴

Of the six names given to the minister only one was a Kantian; of the four who had established reputations, three represented what De Wette identified as "mystical philosophy." In the face of the clear faculty preference against a Kantian the state was glad to find a reason why Fries was unacceptable. It was not Schuckmann but Nicolovius who objected to the nationalism so evident in Fries's romantic vision of Germany's future in his *Julius und Evagoras*. In any event, Fries did not receive the call.

When it became clear to Fries that he would not be appointed, he promptly accepted an appointment at his old university in Jena. In fact, neither Hegel nor

⁶¹ See *Briefe von und an Hegel*, ed. Johannes Hoffmeister, Vol. II of *Hegels Sämtliche Werke* (Hamburg: Meiner, 1953), p. 401; and Lenz, *Geschichte der Universität Berlin* (cit. n. 52), pp. 572–573.

⁶² Fries lost first place to both Schelling and Hegel, second place to Schelling alone, and third place to Schubert when Schleiermacher as rector broke an 8–8 tie in favor of Schubert.

⁶³ De Wette apparently did not know that Delbrück had also been recovering from a serious illness for some time. While correct that he had just begun new duties, De Wette erred in locating him in Koblenz. Delbrück was in Düsseldorf until 1818, when he took a position in Bonn.

⁶⁴ Henke, *J. F. Fries* (cit. n. 37), pp. 356–357.

anyone else was appointed at Berlin for some time thereafter.⁶⁵ Hegel finally landed a university position when he filled the vacancy Fries's departure from Heidelberg created. Not willing to wait for Berlin to make up its mind once he had an offer in hand, Hegel would not go to Berlin until 1818. After 1820 neither Kant nor Schelling could compete with Hegel's version of speculative philosophy, which dominated the philosophical faculty in Berlin and spread its influence elsewhere as well.

The speculative spirit of *Naturphilosophie* clearly dominated among those involved in physics and chemistry in Berlin for the first decade of the university's existence. After the initial appointments in 1810, it was not until 1822 that a strict experimentalist, the chemist Eilhard Mitscherlich, was appointed. Yet a *Naturphilosoph*, Georg Pohl, was given a post in physics as late as 1830. Interestingly, several of those who occupied the initial chairs in the natural sciences appreciated the need for experimental research, including the Kantians Ernst Gottfried Fischer in physics and mathematics and Christian Weiss in mineralogy. Among the physicists one, Paul Erman, became an outspoken critic of *Naturphilosophie*. At least one other opponent of *Naturphilosophie* among the initial appointees was the anatomist Karl Rudolphi in the medical faculty. Rudolphi's stance was balanced by Johann Reil, a defender of Schelling who also came in 1810. Rudolphi was supported in 1815 when the Kantian and Schelling critic H. F. Link was called to the medical faculty in botany. Unlike Rudolphi, however, Link was convinced that a philosophical study of natural science was of vital importance. As we have seen, though, the medical faculty as a whole supported Schelling. After 1820 a few experimentalists began to obtain appointments, including the chemist Heinrich Rose in 1823 and the physicist Heinrich Dove in 1829. But it was not really until the call of Johann Poggendorff in 1834 that the complexion of the physics faculty began to change decisively.⁶⁶

VI. THE COMMON HERITAGE OF KANT AND SCHELLING

Wilhelm von Humboldt's vision of the German university was, of course, too idealistic to survive intact. Indeed, even by the time the statutes of the new university were published in 1816, it was clear that university administration would never be completely independent of state control. Although the statutes for the most part affirmed self-administration, they also contained the important and tradition-breaking concession that the state alone had the right to appoint professors, without the assistance of the faculties. It also became clear that the totally nonutilitarian conception of university education favored by Schelling and Humboldt had shown itself to be inconsistent with the practical needs of German society.

When the dust of the Romantic era eventually settled, the German university had not, as some had once hoped, replaced the older, practical aim of training

⁶⁵ Between 1814 and 1818 there were five *Privatdozenten* in philosophy, four of whom left within two years. Only one, A. H. Ritter, remained and ultimately received an appointment as *außerordentlicher Professor* in 1824. Ritter was primarily a historian of philosophy, though some of his later writings were explicitly anti-Kantian.

⁶⁶ For an analysis of the rise of German physics as a self-conscious discipline, see, in addition to the works of Turner already cited, Rudolf Stichweh, *Zur Entstehung des modernen Systems wissenschaftlicher Disziplinen: Physik in Deutschland 1740–1890* (Frankfurt: Suhrkamp, 1984).

professionals with the goal of pure scholarship and self-education. Specialized education was too deeply engrained in the German university tradition and played too great a part in German social and political life to be easily removed or altered. Following the demise of *Naturphilosophie* there was a brief time when natural scientists seemed to want to avoid all contact with the philosophical examination of their disciplines. When they did again look around for a philosophical foundation for natural science that would appreciate the practical results of empirical labors, they found it in the neo-Kantian revival after mid century.

One should not infer from the dissolution of Humboldt's reform program into what Wilhelm Dilthey has called "the period of standstill and disappointment"⁶⁷ that the most general ideals of *Wissenschaft* were without fundamental influence on the structure of the German university. What had been accomplished was a permanent broadening of the university's mission to include a clear and lasting expectation that both professor and student were responsible for producing original and creative scholarship. That, after all, was an expectation common to both Kant's and Schelling's understanding of what education was all about.

⁶⁷ Wilhelm Dilthey, "Johann Wilhelm Süvern," *Allgemeine deutsche Biographie*, Vol. XXXVII, p. 207.