The Origins of Writing in the Disciplines

Traditions of Seminar Writing And the Humboldtian Ideal of the Research University

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The introduction of seminars to university teaching marks the onset of a new teaching philosophy and practice in which writing is used to make students independent learners and researchers. Although the beginnings of writing pedagogy at American universities are well documented, little is known about its origins in Germany. The article tracks the history of seminar teaching back to its roots and reviews its historical development from the very beginnings to the point when seminars became the pedagogical flagship of the Humboldtian research university. Twenty seminar regulations from Prussian universities, written between 1812 and 1839, are reviewed with respect to the prescriptions they contain about writing. They reveal that a writing-to-learn pedagogy was elaborated as early as about 1820. The most important claim of the article is that an early concept of writing in the disciplines was central to the development of the Humboldtian research university.

Keywords: history of writing; seminar pedagogy; academic writing; history of science; seminar paper; disputation

Introduction

Historically, the academic writing of students has been profoundly shaped by the seminar, a pedagogical practice that was introduced to teaching at the beginning of the 19th century in Germany. Seminars were founded to actively engage students in research by making them study original

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sources and write seminary papers on their investigations and the discussion in the seminar group. Seminars were thus part of the changes from an orally conceived teaching system to a writing-based system that relied on autonomous, interest-oriented learning with minimal external control (see Russell, 2002, pp. 83-87). Similar to the research laboratories that introduced students to experimentation within the natural sciences, seminars introduced students to dealing with thought- and language-related matters in a scholarly way. Seminars initiated students into the craft of knowledge production and into the discourse practices of their respective disciplines. The first university seminars were founded in the 18th century as institutions of teachers' education, theology, and classical philology before they were adopted, in the 19th century, by nearly all other disciplines. Today, seminars are still a preferred mode of teaching in Germany at all levels of university education, although not all disciplines have become or maintained writing disciplines (see Ehlich & Steets, 2003, for an overview).

It is crucial to consider the history of seminars to gain an understanding of the differences between the German or continental style of writing and, for instance, the Anglo American style (Clyne, 1987; Rienecker & Stray Jörgensen, 2003). The long tradition of seminar-type writing led to a unique genre, the seminar paper, which, in contrast to the research paper or research report (as Bazerman, 1988, or Swales, 1990, describe it), is more deeply integrated into existing research but less directed toward solving a problem or answering a single research question (Foster, 2002). German students extensively reproduce existing lines of reasoning within the rhetorical framework of their discipline, whereas the production of new knowledge seems to be of minor importance. The seminar paper is a powerful tool for learning, but as a genre, it exists for teaching purposes only and is not factually connected to ongoing discourses. Its omnipresence in German university education, however, has had a lasting influence on the continental style of academic writing. It will be demonstrated that several traditions of writing influenced its emergence.

There is one major difference between the U.S. American and the German tradition of seminar writing. Although in the United States writing has been a much debated part of teaching and academic performance, in Germany, writing has only recently been thought about as a craft (see, for instance, Kruse, Jakobs, & Ruhmann, 1999). To say that seminar writing was invented in Germany, but not reflected on there, may sound contradictory. As will be shown, seminar regulations did give detailed instructions about writing but did not instruct students about writing processes and genres. Writing was seen as an integral part of research but not as a learnable
skill in itself. As a consequence, writing has always and exclusively been writing in the disciplines. Today, there still are no specialized composition courses or composition teachers in Germany, nor are there writing across the curriculum or writing in the disciplines programs.

The article begins with a brief outline of the evolution of writing as a mode of teaching and learning by reviewing the kinds of changes universities had to undergo to dismiss the oral rhetorical practices of the Middle Ages. Next, I reconstruct the development of seminar pedagogy at the Prussian universities from the turn of the 19th century until today and show how seminar writing not only gradually pervaded the teaching of all disciplines but also actively shaped the disciplines by promoting specialization and distinction. I then take advantage of the fact that all Prussian seminars had to be approved by the Ministry of Education and therefore had to submit detailed seminar regulations allowing a close examination of how writing was pedagogically embraced in seminar teaching. The article closes with some remarks about the continuity of the writing philosophy implicit in seminar teaching from its beginnings until today.

From Medieval Disputation to Academic Writing

Many features of the modern university originate from developments that took place in Germany during the 19th century. The rise of the research university, as designed by Wilhelm von Humboldt, marks the change from the medieval teaching practices of handing down knowledge to the contemporary understanding of the university as a site for producing knowledge. Although widely associated with the name of Humboldt and the University of Berlin, the research university has to be seen as the result of a long development within a complex system of about 50 local universities, situated in one of the small, independent states that Germany dissolved into after the end of the medieval Roman Empire.

During the early modern era and the Enlightenment, the status of the universities had dramatically declined in favor of academies and private societies (Clark, 1989). At that time, universities were dedicated to teaching, not to research. They were underfinanced, stuck in the old four-faculty structure, and resistant to modernization. The four faculties that traditionally constituted the university were the faculty of arts, theology, law, and medicine. The faculty of arts functioned to prepare students for the three higher faculties and later changed into the philosophy al faculty, which formed the nucleus from which all other disciplines in the sciences and
humanities emerged. The reputation of universities was low at that time, and research was conducted by private societies and academies (Vierhaus, 1999). This was one of the reasons why, during the French revolution and the Napoleonic era, all French universities were closed and later transformed into rigidly controlled, specialized schools that demanded severe, often military-like, discipline from their students and conformity with official doctrines from their staff (Charle, 2004; Rüegg, 2004a). Prussia, in contrast, went another way to renew its universities. After Napoleon had conquered Prussia in 1806, it had to reorganize its system of higher education and decided to restore the authority of the universities instead of remodeling them on schools. This was possible as some of the German universities – mainly Goettingen, Jena, and Halle – had already encountered new ways of incorporating research into their work, thus freeing the university from its medieval restrictions (Hammerstein, 2001; Walther, 2001). The new Berlin University, founded in 1810, built on these innovations and attracted the best researchers from the German-speaking universities. As a result of Humboldt's politics, Prussian universities were granted the right to organize their internal affairs free from political and religious influence. In spite of continuing conflicts between the conservative Prussian monarchy and the progressive universities, the connection between real autonomy of the universities and governmental supervision proved to be successful in managing the transitions into modernity.

Among the many changes in this era, the shift from an orally oriented teaching system to a writing-based system has been of fundamental importance to both the identity of and the communication within the scientific and scholarly communities. This change took place roughly between 1750 and 1850 and resulted in a new understanding of teaching and student socialization. Both ways of teaching, the oral and the writing-based one, were closely connected with the existing discourse practices and knowledge producing procedures. Therefore, the change of the dominant mode of teaching reflected changes in the organizational, communicational, and epistemological principles of the universities.

Orally based teaching was centered on the disputation that, alongside lecturing, was the dominant mode with which to instruct students from the time the first European university was founded in the 13th century (with its predecessors in the centuries before) up to the 18th century. The disputation was a ritualized way of exploring a subject by arguing about a thesis or *quaesitio* (Latin for "question"). In the same way universities today have regulations concerning the handling of student compositions, the old universities had regulations concerning disputations (see Horn, 1893, for a review).
On outstanding events, for instance, universities held public disputations to demonstrate their intellectual authority. When students were visited by their parents, as another example, they could ask for a *diputatio ad parentem*, a disputation arranged for their parents to demonstrate progress in their studies. Disputations were held in a ceremonial atmosphere with the faculty members as audience. Disputations of students were seen as exercises to practice their dialectical and rhetorical skills but also functioned as examinations to test their knowledge. Not only students but faculty members had to participate in disputations on several occasions during the academic year. Some universities even asked for weekly disputations. The authority of the academic communities rested on its practice of disputation, pretty much as today it rests on its written publications.

The main person in a disputation was the *respondens*, who had to argue in favor of the thesis or had to propose a solution for the quaestio. He faced one or more *opponentes*, who would argue against his solutions and take up an opposite position. The referee, called the *praeses*, had to display a neutral position during the disputation but was entitled to find a solution (*determinatio*) if no agreement was reached (Miethke, 2004). At first, the primary text to be disputed was orally presented. Later, it was presented in written form, preferably as a one-page poster that was displayed publicly. In the late 16th and 17th century, however, the text to be disputated, at that time called a thesis or *dissertatio* (when it was part of a final examination), took the form of a booklet or book that opponents and spectators of the disputations had to read in advance (Amediek, 2003).

Surprisingly, theses and dissertations were not necessarily written by the *defendens*. More often, they had been produced by the praeses, who usually happened to be the teaching professor, or they had been produced cooperatively by both (Horn, 1893; Kleinert, 1982). We have to assume that the theses were usually transcripts of the lectures of the teaching professor and that the defendens was thus assumed to conform to his thinking by arguing in favor of it (Kleinert, 1982). Different from discussions today, the defendens was not meant to express his own thoughts or find his own position but was expected to find the right opinion that conformed to his teacher’s thoughts.

At German universities, disputation was still present during the 18th century but was already suffering from a lack of meaning and contradicted in many ways the new spirit of empirically based science that was slowly infiltrating the universities (Horn, 1893). Even in the 19th century, university or seminar regulations required disputations on certain occasions, but they seemed to have changed to mere rituals detached from their original meaning.
The practice of disputation was rooted in the scholastic idea that knowledge had to be deduced interpretatively from the old, authoritative writings. These were the primary sources of knowledge. More than 500 years, this fundamental belief was part of the identity of the academic world, a matter that has to be kept in mind to understand why the shift to a teaching system based on student writing was a revolutionary, rather than an evolutionary transition. This change was connected not only with a new kind of teaching but with an entirely new understanding of the university itself.

The dominance of oral over written discourse in the early European university can also be understood if viewed from a different perspective, that of the limitations of communicative media. At all times, science depended on the exchange of ideas. But it was not until the invention of the printing press that written compositions could be published fast enough to exchange ideas on paper in a reasonable space of time. However, the printing press by itself was still not sufficient for an effective exchange of ideas on paper as long as the mailing system was still underdeveloped. Besides that, libraries were rare and not yet equipped with catalogues. It took another 300 years after the invention of the printing press until another invention made written discourse work. This was the invention of the scientific journal in 1665, which happened independently in London, where the Philosophical Transactions of the Royal Society was published and in Paris, where the Journal des Scavans came into being. Journals became the most important media for the exchange of information and revolutionized discourse practices in all disciplines. There was a veritable explosion in the number of journals during the next 100 years. Although in the 17th century, only a few new general scientific journals were established (in addition to the two initial ones), we find hundreds of specialized journals founded during the 18th century. In Germany, for instance, from 1665 to 1790 as many as 3,440 journals were founded, including 470 general scientific ones (Kirchner as cited in Kronick, 1976). Not all journals lasted the whole period reviewed by Kirchner, and most of them did not even survive for 5 years.

All the journals had a similar structure. They mainly contained four different kinds of contribution: (a) original research articles, (b) abstracts of articles in other journals or of books, (c) reviews of books and (d) news from universities and communities (Kronick, 1976). This structure indicates that the publication of original research was only one objective of the journals. Interaction and exchange with others was at least as important. Scientific journals revolutionized communication among scientists and scholars and allowed authors to link up their writings much more quickly, and in much more detail, than books were able to. Abstracts informed the
academic world instantly about new writings, whereas reviews encouraged the journal editors and their respective communities to respond to every new publication. Discussion could now be carried out on paper and did not need to be held in the presence of opponents and the public. Conventions for quotations were established and references enabled authors not only to refer precisely to others but also to document discourses and make arguments permanently accessible to all readers. Besides that, journals proved to be a perfect organizational focus for the emerging scientific and scholarly societies.

By now, it should have become clear that this shift from oral to written communication disregarded the old rituals of disputation. It was no longer the talking that mattered but the writing. It seemed inevitable that the universities should adapt their teaching practices to this new development. Nevertheless, it was not until the beginning of the 19th century that the seminars proved that writing can be a successful mode of teaching and learning. Students now had to learn how to make use of the new communicative media and were introduced to the conventions of the new genres by having to quote sources, use footnotes and refer to the existing body of knowledge. In the next section, I will show how this transition took place.

The Beginnings of Seminar Pedagogy

*Seminarium* is the Latin name for "plant school" or "plant garden," but it was already used in ancient Rome to refer to educational institutions (Thiele, 1938, p. 356). At the time of the Reformation, a school that provided lodgings and scholarships for its students was called a seminar as was a place where priests or teachers were educated. In 1737, the newly founded University of Göttingen opened a *Seminarium Philologicum* as an institution for the training of teachers. The seminar provided its participants with a 2-year curriculum of subjects useful for teachers, such as philosophy, mathematics, physics, history and geography, old and modern languages, pedagogy, and psychology. However, this changed after a time, when the seminar concentrated, as its name indicates, on the teaching of the old languages Latin and Greek (Clark, 1989). In addition to lectures, students had to do exercises, and had to visit schools to gain firsthand knowledge about teaching. Exercises consisted mainly of language learning practice and interpretative tasks in Latin and Greek. Nine participants were accepted at the seminar and were selected from the best students. Training in the seminar was more intensive than in the regular study programs and students were committed to maintaining a high standard of excellence.
In the following 50 years, similar seminars were founded (Clark, 1989) in Erlangen 1777, in Helmstedt 1779, in Berlin 1787, and in Halle 1787. Of special importance was the seminar at the University of Halle, founded by the classical Prussian philologist Friedrich August Wolf, which was later to become the model für a whole new generation of such institutions. Similar to other seminar directors, Wolf received a grant from the Prussian government to provide his students with scholarships and a library and himself with an extra salary.

In his conception of the seminar, Wolf (1787/1924) argued that in order to get better school teachers, students should be encouraged to participate in a teachers' training program by an excellent curriculum and by the prospect of working in an attractive group of highly qualified students (Ebert, 1989; Jackstel, 1989; Kern, 1924). Teaching should not consist of lectures, but of writing, discussions, and exercises (which were mostly language learning and interpretation tasks in Greek and Latin). Lectures could be prepared and held by one of the students, teaching in a team with the professor. Wolf did not create a broad curriculum of different subjects such as the Goettingen seminar had done at first, but taught classical philology only, thus educating specialized language teachers, not generalists. He expected that his students had already learned enough about mathematics, history, languages, etc. to be qualified as teachers. The seminar would offer them additional qualifications in ancient languages. As an admission test, he wanted his candidates to hold a 1-hour disputation on one of the classical authors, thus demonstrating their knowledge and their Latin (as all lectures were held in Latin). The number of seminar members was restricted to 12 and the length of the program to 2 years.

The discipline of classical philology was understood by Wolf as the study of antiquity and the historical and philosophical knowledge of the nations of the ancient world (Rüegg, 2004b, 424). For the neohumanist movement, the interest in ancient societies was not a purely scholarly one but part of the conviction "that ancient Greece represented an ideal condition of freedom and harmony: free and harmonious development of all human capacities in each individual and free and harmonious development of the polis or community" (Gossman, 1994, p. 4). Wolf's approach to seminar teaching has to be considered within this ideological framework and may be understood as part of the attempt to revive the spirit of Greek antiquity. The philosophical and pedagogical impact of neohumanism in Germany throughout the 19th century has been lasting and resulted, for instance, in the predominance of the classical gymnasium concentrating on the teaching of Latin and Greek.
Wolf’s high scholarly ethos, his excellence in teaching, and his collaborative approach to seminar organization established the fame of his seminar and led to a new quality of teaching that was to be the model of the future seminar form. He made his students not only write and dispute but also instructed them how to do research on the ancient languages, philosophies, and cultures. The theses presented by his students every semester had to be the result of research, rather than simple compilations of existing writings. The writers of the best theses were rewarded with the chance to give a public lecture at the university. It was this curricular shift from the general pedagogical instruction seen in the former seminars to the immersion in specialized disciplinary research of Wolf’s seminar that gave rise to the research seminar.

Wolf’s seminar came to an abrupt end when Napoleon defeated Prussia in 1806 and the University of Halle was temporarily closed. Prussia thus lost one of its four universities and had to replace it. The person who was appointed by the Prussian government to reorganize the university system and finally founded the new University of Berlin was a close friend and admirer of Wolf-Wilhelm von Humboldt (see Irmscher, 1989, on their relationship).

Humboldt, following like Wolf the neohumanistic ideology of his time, believed in the character-building nature of research. To him, university study was meant to build personalities not simply act as an agent to provide students with knowledge or skills. In the short, 16-month period in which Humboldt held the position of secretary of education in the Prussian Department of the Interior, he introduced a number of important changes that allowed the modern research university to develop. He managed, for instance, to secure access to research facilities (such as laboratories, botanic gardens, mechanical workshops, and observatories) for the university members by joining the university with the Berlin Academy of Science, which already had these at its disposal. What Humboldt is most credited for, however, is the formulation of the basic principle of university organization: the union of research and teaching. As simple as this formula may appear, it remains a basic policy for university development to this day.

Humboldt shared his views with another important protagonist of the Berlin University, Friedrich von Schleiermacher, a philosopher and theologian who influenced educational politics in Berlin much longer than Humboldt himself did. Before Humboldt resigned, he managed to appoint Schleiermacher as the Head of the influential Royal Educational Commission that coordinated the higher education in Prussia. Later, Schleiermacher became second president of the University of Berlin.
As the dean of the theological faculty, Schleiermacher opened the first seminar at the University of Berlin in 1812. To him, the use of seminars was the ideal way to institute Humboldt's formula of connecting research with teaching (Schleiermacher, 1808/1956). The principles Schleiermacher established for seminar work set the agenda for the foundation of all of the subsequent seminars in Prussia (Rueegg, 1997). In Schleiermacher's concept, the seminar was no longer dominated by a single director, as in Tübingen and Halle, but was headed by the dean of the faculty and had several divisions, each of which was headed by a different professor. Theology was split into two divisions, the historical and the philological, both of which were further subdivided. The number of seminar members was raised to 32. These changes indicate that the seminars started to shape the institutions by defining and establishing their interior structures.

Despite appearances, seminars were not only founded by the universities themselves. Many seminars evolved out of private societies that, around 1800, existed alongside the universities and, in some cases, attracted more scholars than the universities did (Ziehe, 2001). Several historical societies (Breslau in 1824, Königsberg in 1832, Bonn in 1844) and several philological societies (Greifswald in 1820 also Jena and Leipzig) were turned into university seminars and received funding from the government (Erben, 1913). The success of the seminars may, to some extent, be seen as the result of the spirit of these private societies.

The Regulation of Seminar Writings

Each Prussian seminar had to be approved by the ministry of education and received its own set of regulations. Every director had to report to the ministry annually, and seminars were evaluated regularly by professors from other universities. Funding could be withdrawn if the report was not favorable, as was the case, for instance, in the Königsberg Seminar of Mathematics and Physics (Olesko, 1991).

Seminar regulations were issued by decree of the Ministry of Education in Berlin. Regulations were proposed by the universities and then revised by the ministry. Many formulations were repeatedly used in different regulations although every seminar had its own, specific rules, too. Writing, however, was a central issue in all seminar regulations after 1812 and contained detailed prescriptions as to when, how, and what kind of compositions the seminarians had to write.

A collection of decrees from the Prussian Ministry of Education, edited by Koch (1840), contains regulations for 20 seminars (and seminar-like institutions) between 1812 and 1839 at the Prussian universities Bonn,
Table 1

Seminars Founded in Prussia Between 1812 and 1839
Because of Koch (1840)

<table>
<thead>
<tr>
<th>Year of Foundation</th>
<th>Discipline</th>
<th>University</th>
<th>Peculiarities</th>
</tr>
</thead>
<tbody>
<tr>
<td>1812</td>
<td>Philology</td>
<td>Berlin</td>
<td></td>
</tr>
<tr>
<td>1812</td>
<td>Evangelical Theology</td>
<td>Breslau</td>
<td></td>
</tr>
<tr>
<td>1812</td>
<td>Philology</td>
<td>Breslau</td>
<td></td>
</tr>
<tr>
<td>1813</td>
<td>Polish</td>
<td>Königsberg</td>
<td>This seminar taught Polish to theology students.</td>
</tr>
<tr>
<td>1819</td>
<td>Evangelical Theology</td>
<td>Bonn</td>
<td></td>
</tr>
<tr>
<td>1819</td>
<td>Philology</td>
<td>Bonn</td>
<td></td>
</tr>
<tr>
<td>1822</td>
<td>Philology</td>
<td>Königsberg</td>
<td></td>
</tr>
<tr>
<td>1822</td>
<td>Catholic Theology</td>
<td>Breslau</td>
<td></td>
</tr>
<tr>
<td>1822</td>
<td>Philology</td>
<td>Greifswald</td>
<td>The seminar was allowed to keep the name “Philological Society” but was organized and treated like all other seminars.</td>
</tr>
<tr>
<td>1825</td>
<td>All Sciences</td>
<td>Bonn</td>
<td></td>
</tr>
<tr>
<td>1826</td>
<td>Evangelical Theology</td>
<td>Halle/Wittenberg</td>
<td></td>
</tr>
<tr>
<td>1827</td>
<td>Lithuanian</td>
<td>Königsberg</td>
<td>This seminar taught Lithuanian to theology students.</td>
</tr>
<tr>
<td>1828</td>
<td>Theology</td>
<td>Berlin</td>
<td>This seminar had probably been founded in 1812 but did not receive its regulations until 1828.</td>
</tr>
<tr>
<td>1829</td>
<td>Philology</td>
<td>Halle/Wittenberg</td>
<td></td>
</tr>
<tr>
<td>1830</td>
<td>Theology</td>
<td>Greifswald</td>
<td></td>
</tr>
<tr>
<td>1832</td>
<td>History</td>
<td>Königsberg</td>
<td></td>
</tr>
<tr>
<td>1832</td>
<td>Philology</td>
<td>Königsberg</td>
<td></td>
</tr>
<tr>
<td>1834</td>
<td>Mathematics, Physics</td>
<td>Königsberg</td>
<td></td>
</tr>
<tr>
<td>1834</td>
<td>All Sciences</td>
<td>Königsberg</td>
<td></td>
</tr>
<tr>
<td>1835</td>
<td>Theology - Pedagogy</td>
<td>Halle/Wittenberg</td>
<td>This seminar was devoted to teachers' training but was run by the theological faculty.</td>
</tr>
<tr>
<td>1837</td>
<td>Theology</td>
<td>Königsberg</td>
<td></td>
</tr>
<tr>
<td>1839</td>
<td>Mathematics and all Sciences</td>
<td>Halle/Wittenberg</td>
<td></td>
</tr>
</tbody>
</table>

Berlin, Breslau, Greifswald, Halle (which had been reopened and merged with the University of Wittenberg), and Königsberg (see Table 1). If not stated otherwise, all following quotations are taken from this source. All translations are my own.
In most regulations, the aim of a seminar was explained by a phrase stating that the seminar should "direct the students in their own scholarly work and research" (Theological Seminar Berlin from 1828; Koch, 1840, p. 555) or that the students "should be educated and trained through as broad a range of exercises as possible and through literary support of every kind to the core of science so that these studies can be maintained, reproduced and extended by them in the future" (Philological Seminar Berlin 1812; Koch, 1840, p. 560). These somewhat flowery formulations indicate a certain degree of insecurity in pinning down the exact pedagogical impact of seminars, but they leave no doubt that they were meant to recruit future researchers. Some seminars still combined scholarly education with teachers' training, although the dominant type became the research-oriented seminar. The regulations of the Seminar of Mathematics and All Sciences at Halle/Wittenberg (1839) stated that "the aim of the Seminar...is to guide self-study and lecturing...with particular reference to the education of those teachers at grammar and higher schools who are able not only to reproduce but also to produce contributions to science" (Koch, 1840, p. 839).

Seminar regulations usually contained prescriptions for exercises, oral presentations or disputations, and writing. Of these, writing seemed to be the most highly valued activity for introducing students to scholarly work. Julius Zacher, for instance, who founded a Seminar of German Philology in Halle in 1875 (documented in Lemmer, 1958) stated, "Especially desirable and important is the writing of a scholarly paper, as this imparts a lively grasp of (the meaning of) science and trains one to undertake one's own independent scholarly or scientific research" (p. 363). To ensure that writing really does lead to research, some regulations demanded high quality papers. This can be seen in the regulations of the Historical Seminar Königsberg of 1832, which demanded that the papers "contain some results of independent research and investigations of historical, geographical or statistical sources, even if unfinished, and not only comprise hastily amassed...notes or rushed compilations of meagre literary aids" (Koch, 1840, p. 857).

All regulations describe admission procedures. Students might have to submit former writings or undergo an examination, or they might have to bring a statement from another professor testifying to their abilities. Nearly all seminar regulations contained sanctions for members who did not submit papers on time. The regulations of the Philological Seminar of Berlin of 1812, for instance, threatened to exclude members if they did not submit a paper for the second time.

The same regulations also required that each of the eight seminar participants had to submit a paper every 8 weeks so that one could be discussed
every week. The papers had to be read in advance by all participants. The Theological-Pedagogical Seminar in Halle of 1835 demanded that every student submit a paper every semester, which would then be discussed at the end of the semester in a special meeting. Some regulations required that the topics for papers had to be published by the director in the previous semester so that the students could work on them during the vacations.

Many regulations contained prescriptions for how papers should be discussed. The regulations of the Philological Seminar of the University of Königsberg of 1822 as well as the regulations of the Historical Seminar of the same university of 1832 wanted the oral exercises to consist "of disputing the submitted compositions which will be read carefully by two opponents and then be judged by them on form and content" (Koch, 1840, p. 857). The term judged indicates that an evaluative assessment was more important than the debate with the author. In the earlier, 18th-century seminars, Clark (1989) points out, the structure of the discussion imitated the "circular disputation" (p. 133) of the medieval universities, where each member in turn functioned as respondent and opponent. In contrast to the former practice, however, there is no doubt that the most important part of the seminar disputation was the paper, not the debate.

In many seminars, topics for the papers were provided by the seminar directors, as was the case in the Theological Seminar of the University of Greifswald of 1830, in which "the seminarians are assigned to tasks for the extended papers at the end of each semester, so that they can use the holiday period to work on them" (Koch, 1840, p. 724). Other seminar conceptions left the choice of a topic to the seminarians. Obviously, a change took place over time from less self-determination to greater liberty in choosing topics for compositions. Besides that, many seminars, especially those in science, distinguished between different kinds of compositions. The regulations of the Mathematical-Physical Seminar of the University of Königsberg of 1834 stated,

The assignments of the mathematical division are twofold: 1) Coherent presentations about specific parts of pure or applied mathematics will be set by (the different members in turn, whereby one or more books should form the basis of the elaboration….2) a) Smaller tasks in pure or applied mathematics will be set, which have to be solved by each member; b) some members will write longer papers on a special topic….The topics of these papers will be either chosen by the members or will be set by the directors on demand. The longer papers will circulate among the members, and will be given to one of them, preferably for assessment. (Koch, 1840, p. 858)

Here, no further connection with medieval disputation exists. Rather, a clear distinction is made between the more reproductive accounts of readings
and the more elaborate compositions on self-chosen topics. In addition to these kinds of assignments, the students could also write about their own experimental work in the field of applied mathematics or physics.

In the Seminar of Science of the same university (which in contrast to the Mathematical-Physical Seminar placed a strong emphasis on teachers' training) of 1834, the members had to participate in lectures and practical exercises in the disciplines of physics, chemistry, geology, mineralogy, botany, zoology, anatomy and descriptive anthropology, or comparative anatomy. These courses covered 5 days of the week; on the 6th day, students had to give presentations on assigned topics. The seminarians were also given the opportunity to hold extended lectures on the results of their own studies: "These (lectures) will not be assigned, but the permission to hold such extended lectures will, after the director of the discipline has accepted the topic as worthy, be given as an award" (Koch, 1840, p. 861). Here, the seminarians could choose their own topics, although presentations of their own research seemed to be more of an exception than a rule. The relationship of the presentations to their own experimental work was not defined. According to Olesko (1991), most compositions used to be rather general reflections on nature than accounts of experimental work.

A different relationship between the oral and written parts of the teaching was proposed by the regulations of the Seminar of All Sciences of the University of Bonn of 1825. In a way similar to the seminar of Königsberg mentioned earlier, students had to attend courses on all of the main disciplines of the sciences in question. During the 3-year program, they changed their status every year. In the 1st year, they only visited lectures and the seminars accompanying them. Their comprehension of the lectures was examined by older members of the seminar. In the 2nd year, they were called "first-class members" and were supposed to give presentations on topics in each of the disciplines to show "that they not only have acquired an overall view of the discipline but have also gone into detail" (Koch, 1840, p. 625). These presentations had to be delivered from memory; simply reading from notes was not allowed. The topics were provided by the teachers.

The second-class members had to do research in some of the disciplines, present a written account of it, and defend its results within the seminar group. The compositions they had to submit could consist of

1. a scholarly and literary proof or systematic compilations of theories or experiences from the field of science,
2. a description of one's own observations or experiments,
3. new conclusions, deduced from known observations or experiments,
4. an appropriate critique of a theory, or
5. a judgmental evaluation, refutation, or extension of work presented by other
    seminar members. (Koch, 1840, p. 626)

The members were free to choose their topics but needed approval from the
supervisor in charge. Only in exceptional cases would topics be assigned.

The science seminars signify a certain amount of tension between a more
philosophical and a more scientific approach to teaching and seminar
organization. The epistemological position of science at the German universities
in the first half of the 19th century was not yet settled. All sciences still belonged
to the philosophical faculty and were only slowly emancipating themselves from
natural philosophy, a rather speculative line of reasoning about nature. It was not
until the second half of the 19th century that science found its own
epistemological and methodological stance alongside philosophy (see
Bockstaele, 2004, for a more detailed description of this process) and finally, at
the beginning of the 20th century, found its organizational home within a faculty
of science. The foundation seminars promoted the organizational independence
of the disciplines of science and mathematics and played a considerable role in
the development of the identity and appropriate teaching methods of science, as
Olesko (1991) shows. There seemed to be a methodological transfer not only
from the philosophically oriented principles of seminar work to the sciences but
also vice versa, as can be seen in the foundation of the Institute for Experimental
Psychology by Wilhelm Wundt in Leipzig in 1883/1884, which applied
experimental and laboratory methods to the social sciences (vom Brocke, 1999).
The conceptions of the science seminars demonstrate that both of the earlier-
mentioned traditions of writing (thesis and dissertation writing and research
reports) seem not only to be tolerated but even to be combined into an integrated
framework of reasoning about science. Unfortunately, no seminar papers have
been preserved, so any statement about genre distinctions is necessarily
speculative.

Many seminar regulations demanded specialization from the students in a
field of their own choice. It was expected that this would finally lead to a
dissertation that might be published. Some of the seminars provided funding for
the publication costs of the dissertations. In this way, seminar writing led to the
kind of theses or dissertations present in much of academia today. As Paulsen
(1921) puts it,

In earlier times, the professor wrote the dissertation and the doctoral student
merely responded to objections, demonstrating that he had learned his
subject and could support it with arguments; now the doctoral student writes it himself and shows that he is not only learning passively, but that he is actively engaged, as a collaborator, in his discipline. (p. 259)

### The Further Development of Seminar Writing

Until 1871, when Germany was united, seminars had had an exceptional status at the universities and were even seen as contradicting the basic principle of “liberty of academic studies” (Meumann, 2002, p. 72), as one government official said in 1861. In contrast to the strictly controlled schools in France, Humboldt and Schleiermacher had established a teaching culture in Prussia that imposed no restrictions on students as far as attendance of courses or control of their learning was concerned. As expressed in their programmatic writings, Schleiermacher (1808/1956) and Humboldt (1810/1956) wanted students to follow their own interests and to be completely free in their learning. Seminars, in contrast, asked for considerably stricter discipline in attending courses and submitting papers than the ordinary study programs did.

Still, the merits of seminars as an educational institution were never seriously questioned. After the foundation of the German Empire in 1871, university development became a matter of national prestige and seminars appeared to be the cornerstone of the university. More and more seminars were established. In June 1871, for instance, the Prussian Ministry of Education decided to fund seminars for law in Bonn, Breslau, and Königsberg, theology in Marburg, and history in Kiel (Meumann, 2002). In 1875, to give another example, four seminars (English, Romanic Languages, German, and History) were founded simultaneously at the University of Halle/Wittenberg (Lemmer, 1956).

The most consequent approach of using seminar teaching as a structural principle for the university organization was practiced at the foundation of the Reichsuniversität Strassburg in 1872 where all disciplines were provided with own buildings, seminar libraries, and generous funding for seminar work (vom Brocke 1999). Intended as a model for the university reform, the University of Strassburg proved to be the most important innovative factor in university development as it institutionalized the disciplines as autonomous institutes within the faculties and introduced seminar work as the standard teaching form for all subjects. As before, there were still no more than four faculties, but the philosophical faculty had been subdivided into many separate seminars and institutes with their own offices, teaching halls, libraries, and staff. In contrast to many other European countries, the
separation of the sciences from the philosophical faculty at German universities did not take place before World War I, and at the universities of Koeln, Kiel, and Marburg, the undivided philosophical faculty persisted until as late as the 1960s (Rüegg, 2004b).

Seminars fundamentally changed the nature of university teaching. The "encyclopaedic professor," noted Paulsen (1921), "has changed into a specialist researcher who restricts himself to a small area within his discipline (p. 261). The students, too, specialized to a much higher degree than in earlier times, when they were educated in one of the four faculties and not in a seminar. Seminars also changed the organizational structure of the universities. They were the organizational units that allowed the departments and institutes to develop by providing them with staff, budget, rooms, and libraries. This, in turn, enabled them to create their own, specialized study programs.

At the end of the 19th century, seminar pedagogy started to be exported to universities throughout the world. In the United States, notes Russell (2002) "German scholarship rapidly set a new standard for academic writing, not only in the sciences but also in the emerging humanities and social sciences, where rigorous 'scientific' philology and historical criticism on the German model gained academic respectability" (p. 79). The historian Ephraim Emerton, who began the first practice course (a regularly taught seminar) at Harvard in 1882, "enthusiastically proclaimed the student no longer a receiver of other men's thought: he becomes an investigator, a discoverer, a creator" (Russell, 2002, p. 83). Soon after the introduction of seminar teaching, Harvard and many other universities offered seminars in almost every field. Seminars provided the American universities not only with a powerful didactical approach but also with a distinct ideology of teaching that became part of their identity.

At the onset of the 20th century, seminars at German universities slowly lost their exceptional status and became the standard in teaching. What had been tested in Strassburg now became the basis for the organization of all universities. Between 1882 and 1907, the number of institutes and seminars in Prussia rose from 320 (1882) to 476 (1907)(vom Brocke, 1999). As vom Brocke (1999) shows in a table of newly founded seminars, between 1872 and 1900, 2 seminars in history, 9 seminars in German philology, 20 seminars in Romanic und English philology, 18 seminars in political economics (Staatswissenschaft) were founded. From the first decade of the 20th century on, all students were admitted to seminars, not only a selected elite. A hierarchical organization of seminars became common, as seen in the distinction between the proseminar, seminar, main or upper seminar characterized by the increasing complexity of tasks students had to solve.
The number of participants was increased and scholarships for students were abandoned or even turned into a fee they had to pay.

The essence of seminar teaching in Germany remained fairly unchanged during the 20th century until, in the 1960s and 1970s, mass education led to an explosion in student numbers. Seminars suddenly had to accept dozens if not hundreds of students. At that time, seminar pedagogy started to erode under this burden. Seminar teaching became a ritualized procedure in which the form remained the same but the meaning for the students changed. What had been a closely tutored learning process in a collaborative atmosphere now became a struggle for survival in an uncaring and anonymous institution. Writing no longer served to immerse students in their discipline, but turned into a constraint that threatened to exclude them if they did not master the writing assignments. When, at the beginning of the 1990s, writing attracted attention for the first time in German institutions, and some institutions started to offer help to student writers (see Kruse, 2005; Kruse, Jakobs, & Ruhmann, 1999), the number of students who demonstrated serious writing problems was alarmingly high (Dittmann, Geneuss, Nennstiel, & Quast, 2003).

Concluding Remarks

Writing-to-learn pedagogy had been practiced at German universities long before this term was coined and writing in the disciplines had been elaborated in much more detail than has been assumed. During the 19th century, along with many other innovations, seminar pedagogy evolved as part of the modern research university. Seminars turned out to be the kind of education that fitted best into Humboldt’s ideology of connecting research with teaching, and then proved to be a motor of disciplinary specialization and differentiation.

From the very beginning, seminar teaching was meant to be practiced research, collaboratively carried out by teachers and students. The common features of all seminars were

- teaching in small, collaborative groups with a high level of commitment among the students,
- independent, self-directed learning,
- the study of original sources in the discipline by the students,
- a connection of the seminar work with the research practices of the discipline,
- no writing instructions on process or genre, and
- intensive feedback on content of papers but not on textual characteristics or writing processes.
The learning situation initiated students in the craft of research through independent study of sources, experimentation, and class discussions. To this day, the idea of university teaching as a form of self-recruitment of researchers belongs to the basic ideological make-up of the modern university, although conflicts with the demands of mass education and the need for a better fit between university education and the employment system are clearly visible.

When modern communication media such as the research journal were introduced, written discourse, as has been shown, changed not only in form but also in function. Although written discourse replaced the oral rituals of medieval dialectics and became the dominant mode of information exchange, it switched from something similar to a print-out of the knowledge acquired by an extraordinary scientist or scholar to a documentation of the collaboratively acquired knowledge of a community. The relationship between oral and written discourse was reversed. Although writings in antiquity and the middle ages were auxiliary means for either the delivery of a speech or debate (see for instance Kinneavy, 1971), they became the core element of knowledge communication as the role of oral exchange declined to that of supporting the publication of texts (as seen, for instance, in the conference presentations that precede publication).

The change in knowledge communication was accompanied by a change in the epistemological principles of knowledge production. Although in the middle ages, knowledge was produced collaboratively in debate among a face-to-face group, in the new kind of science it is composed on paper. Written discourse connects the research results of people from different parts of the world and consists of synthesizing newly acquired, local knowledge with world-wide existing knowledge. The seminar, as developed in 19th century Germany, proved to be something of an educational laboratory where this new kind of discourse could be learned and taught. Within these seminars, writing has been shown to be the kind of activity, which best meets the demands of educating independent, creative researchers, regardless of the discipline to which they belong.

References


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