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Ola Agevall and Gunnar Olofsson

The Emergence of the Professional Field of Higher Education in Sweden

Abstract: The changing structure of the Swedish university system has shaped its corps of university teachers. The analytical device used to demonstrate this connection is the changing social functions of Swedish universities which serve as the lens through which we understand this change. We argue for five successive and historically added layers of functions: the training of church officials, state functionaries, experts of the industrial society, the welfare professions, and, finally, the mass of employees of the “knowledge society.” Each new function is superimposed on the existing ones, adding to the complexity of tasks, areas of knowledge, and teacher categories in the universities. The position of the university as the arbiter of the highest form of knowledge, the internal differentiation of the field of higher education, and the growth and stratification of its teaching corps are three main building blocks for this history of the Swedish system of higher education.

Keywords: universities, field of higher education, layers of function, institutional form, institutional expansion/contraction, corps of university teachers

The modern field of higher education—and, within it, the corps of university teachers—takes on a dual significance in the context of the broader professional landscape. On the one hand, it constitutes a professional field in its own right, alongside other functionally specified fields. On the other hand, the university is the institution, or set of institutions, through which other professions are produced. It is with this latter aspect in mind that Perkin (1969) characterized the university teacher as the *key profession*. With a conscious idealization, we can say that the professions replenish their ranks through academic training, where their students are fitted with a cognitive base, which in turn is translated into occupationally relevant skills and knowledge. Over time, the association with higher education has emerged as a *sine qua non* of professionalism, thereby making universities increasingly important for the consecration of aspiring, would-be professions.

We have here three interrelated aims: (a) to analyze the formation and properties of the increasingly complex and stratified field of higher education in Sweden, with special reference to the corps of university teachers; (b) to account for the historical process through which Swedish universities, through their corps

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of university teachers, came to acquire the role of key training grounds for an ever-increasing number of professions; and (c) to develop an analytical optic that allows us to highlight relationships between institutional change—including the influx of professional training to the university—and field and corps characteristics.

In relation to the last point, some preliminary remarks on fields and their varieties are necessary to locate the inquiry within a broader setting and justify our choice of starting point. Since the publication of Abbott's (1988) work on the system of professions, research on professional groups has—in principle, if not in actual research practice—been geared toward understanding how professions compete for jurisdiction within the bounds of a division of expert labour. The notion of field also invites the idea of a plurality of professions. For analytical purposes, however, we can construe an opposite ideal type of professional field as unequivocally defined by *one* social function, cantered in *one* institution exhausted by *a single* corps endowed with a crisply circumscribed common stock of knowledge. This is a limiting case not only in the sense that it is empirically rare but also in the theoretical sense that it constitutes the absolute zero of a professional field, a state with neither inter-institutional tension nor inter-corps competition. Normally, we should not expect to find such one-to-one correspondence across a professional field.

Although we arrive at this ideal type through analytical juxtaposition from the normal, modern state of affairs, it is not entirely counterfactual. As we trace the Swedish field of higher education back to its roots, we end up close to the ideal type. Nor is this unique to higher education. The nexus between university and professoriate is structurally similar to the one-to-one link between church and clergy or between army and the officer corps. It is well known from the history of professions that most professions (and professional fields) have a different beginning, such as when a specific occupational group shapes an emerging professional field. The case of Swedish higher education thus offers a pure model of a different mode of field formation. In these cases, analysis of the key institution must be the starting point for understanding the professional groups linked to that institution.

In the case at hand, the continuity of the university institution—and of one of the categories that populates it, the professoriate—suggests a starting point in the formation of Swedish universities from late medieval times onward. From this point of departure, we can track how the university evolved from being the sole locus of higher education to being the differentiated top tier of a diversified field of higher education, highlighting the process through which ever larger chunks of professional training were incorporated into higher education. We are also in a position to track the successive changes in the morphology of the corps. The latter, we argue, conditions the task of assessing when and to what extent it makes sense to speak of a profession of university teachers.

Specifying the function of universities requires some elaboration. *Scientific research, nowadays often held up as a defining characteristic of university life, was a late addition to the required duties of a university teacher.* The concept of “function”, as used here, designates organizationally channelled task-types rather than free-floating functional system requirements. We argue below that there is a progression over time in the complexity of functions attached to the university. This, in conjunction with our choice of starting point, means that our exposition is

structured in a way that emphasizes the universities, their teachers, and their teaching, rather than tracing the independent trajectories of other tasks and institutions. Analytically, however, such additions are integral to our argument. To preserve the notion of a functionally specified academic field, while at the same time avoiding the projection of current academic ideals onto the historical past, it is necessary to formulate it more abstractly. That function is here defined in relational terms: At any given point in time, universities claim recognition as the highest educational authority in their areas of knowledge. This formulation is sufficiently encompassing to include analysis of how new areas are pulled into higher education, the effects of such inclusion upon field characteristics (in terms of the structure of competition and division of labour), and related changes in the morphology of the corps.

We argue that a structured field of higher education, centred on the university institution and the professoriate, took its modern form around 1860. The immediate prehistory is the growth of specific forms of higher education through specialized institutes, primarily from 1810 onward. To understand the trajectory of higher education in Sweden, we use a simple analytical model with the following elements to summarize the Swedish history of higher education: (a) the key social function of higher education in a given epoch, (b) the specific form of the institutions of higher education, and (c) its typical personnel corps. We presume the following order of determination: function → institution → personnel corps.

The social functions of the Swedish university and higher education are seen as five successive and historically added layers. They consist of training church officials, state functionaries, experts of the industrial society, the welfare professions, and, finally, the mass of employees of the “knowledge society”. The superimposition of new functions added to the tasks, areas of knowledge, and teacher categories of the universities, shaping both the social and cognitive character of universities and the composition of the corps.

The age of the universities (1477–1810)

The first Swedish university was established in Uppsala in 1477, a latecomer in the general European wave of universities founded during medieval times. Created through papal bull and modelled upon previous creations of the Roman Catholic Church, the university in Uppsala took on the same organizational features that we find among the university establishments nudging their way north during the Middle Ages.

Educating the clergy (1477–1620)

Using the model outlined above, we can summarize this first phase in terms of social function, institutional form, and teacher corps. Training church officials (the clergy)—first within the Roman Catholic Church and then, after the Reformation, within the Lutheran State Church—was the key function of the university. This function was dominant from the creation of Uppsala University in 1477 until the beginning of the 17th century. There was one university, in Uppsala, with three

higher faculties and one lower. Theology was the key subject. There were a very limited number of professors (6 at the beginning and fewer than 20 at the end), closely linked to the church.

Servicing the Swedish Empire (1620s–1810)

With the expansion of the Swedish Empire and the administrative reorganization of the Absolutist Swedish state and its structure of governance in the first half of the 17th century, a new function was explicitly added, the training of functionaries for the expanding state.

The Swedish Empire founded or took control of universities in its border regions—in Dorpat (1632), Åbo (1640), and Lund (1668)—and took over the old university in Greifswald (founded in 1456) after the Treaty of Westphalia (1648). Sweden's ascendance to a European military power in the midst of religious war shaped the academic field in several respects. Lutheranism provided an ideological amalgamation between church and state. The training of a loyal clergy was a key role for the new universities. Lund University was created to bolster Swedish power in southern Sweden. Although the former Danish priests had been as Lutheran as the Swedish, loyalty to the new state was of paramount importance.

This example illustrates a general mechanism of university change. Swedish universities continued to serve important church functions; during the 17th century, they *also* became subordinate to state functions. The new function was not only added to the old one but also changed the relative role played by the formerly dominant function.

The superimposition of a new layer of function added to not only tasks and areas of knowledge but also the teacher categories of the universities. The standard number of professors at Swedish universities in this phase was around 20. The added function also changed the relative importance of the different tasks and functions. The role and relative size of the theological faculty shrank. The added function, and the key role allotted to it, thus reshaped both the institution and, by consequence, the composition of the teaching corps.

Toward a field of higher education (1810–1950s)

The demise of the Swedish Empire, culminating in the loss of Finland to Russia in the Swedish-Russian War of 1808–1809, inaugurated a new epoch in the area of higher education in Sweden. This change was signalled by the creation of a medical institute in Stockholm (Karolinska Institutet) in 1810. The dramatic loss of lives (especially outside the battlefields) caused by Sweden's military defeat in the war was perceived as the result of a deficit in the number of trained medical doctors and in medical knowledge (Hårdstedt, 2002). Karolinska Institutet was built exclusively as a medical school (as opposed to a four-faculty full university), marking the beginning of the “age of the institutes”

The age of the institutes

Karolinska Institutet set a pattern for the institutional expansion of higher education during the period from 1810 to 1954. Although no full universities were founded in Sweden in this era, there was a considerable increase in the number of specialized vocational schools. What emerged in this period was a variety of technical institutes, schools of economics, pharmaceutical institutes, institutes of odontology, institutes of veterinary medicine, schools of medicine, nursing schools, and institutes of forestry, social work, agriculture, and gymnastics. During this period, Stockholms Högskola (1877) and Göteborgs Högskola (1891) were also founded as private university colleges with state support (Bedoire & Thullberg, 1978; Lindberg & Nilsson, 1996)..

In terms of our model, the expansion as well as the new forms of higher education that became important in the 19th century can be seen as filling a new function for the Swedish state and society: the creation of new forms of experts and expertise, technical in a wide sense and based on different sciences, for the emerging modern and increasingly industrial society.

The institutes, organizationally separate from the two remaining universities (Uppsala and Lund), added new institutional forms as well as new fields of knowledge to the landscape of higher education in Sweden. They all focused on one specific area, each defined by one field of knowledge that was intimately linked to specific forms of practice.

As a consequence of the growth of the institutes, the corps of teachers in this new, highly differentiated landscape of Swedish higher education became much more varied in their fields of knowledge and level of formal knowledge and expertise.

The educational landscape had yet to coalesce into a field of higher education, wherein different varieties of education compete and are positioned at various distances from the university. This did not happen until the end of the 19th century.

A crystallized field of higher education

In the 19th century, the first formation of a more diverse field of higher education emerged under multiple pressures:

1. *A more complex state function vis-à-vis knowledge and higher education was established.* To the training of church and state functionaries was added a new function, the training of experts, which resonated with the institutes and transformed the task structure of the university teacher.
2. *The plurality of institutions emerged, partly on the same level, partly on different levels.* Institutional expansion, that is, the creation of a number of institutes, was followed by institutional contraction in which all the aforementioned institutes were either transformed into specialized university colleges (the equivalent of *Fachhochschulen*, etc.) or incorporated into existing universities. This process began in earnest in the second half of the 19th century. Other types of vocational training dating from the same era, such as nurses and primary teachers, had to wait before they were incorporated into what had then become the system of higher education.

3. *Research became an expected duty of the professoriate.* Formal codification occurred with the university statutes of 1852. The expectation was the combined product of emulation of Humboldtian principles, university responses to the aggressive claims of institutes, the more complex state function vis-à-vis knowledge and higher education, and alliances with research-minded segments within the academic world (see e.g., Liedman, 1993).
4. *The relationship between university and gymnasium was specified.* While the relationship between school forms had become hierarchically ordered in the 17th century, admission to university was conditioned upon tests held at the recipient university. This changed in 1864, with the introduction of a student exam at the gymnasia, creating a clear division between secondary and tertiary education. This also paved the way for rankings among different varieties of further education. From now on, education programs could be judged on the basis of whether they presupposed a student exam.
5. *The professoriate initiated the formation of a rudimentarily organized corps, a fledgling profession.* After the deregulation of the guilds in 1846 and the abolition of academic jurisdiction in 1852, the university professoriate shed its character of guild-style corporation and gradually assumed the form of a modern, organized corps (Blomqvist, 1992). The boundaries of that corps became increasingly open, mirroring the blurred boundaries between the universities and the rapidly transforming vocational training institutes.

All these processes indicate a breakpoint circa 1860, give or take ten years. A field of higher education had emerged, with a very different structure from the old university system and from the non-integrated coexistence of universities and institutes in the first half of the 19th century. This new configuration of universities, other schools, and institutes constitutes the formative moment in the Swedish field of higher education.

Formation and stratification of the field (1860–1950s)

After the 1860s, the position of the universities crystallized as the highest educational authority in a differentiated, interlinked field of higher education. Their legitimacy derived from the consecrating role they acquired in the 19th century when institutes began to nudge their way toward university status. Karolinska Institutet stands out among the 19th-century institutes in terms of its early adoption of modern science, yet its piecemeal process of incorporation is representative of the set. Formed in 1810, KI was equipped with professors. It was granted the right to issue academic degrees in 1861, in this respect becoming equated with the universities. It took another 13 years before the examination of medical doctors could actually be held at KI. In 1893, KI was finally subsumed under the same University Chancellor as the old universities, and its professoriate became eligible to vote in Chancellor Elections. Until the 1950s, only KI was considered on par with the universities.

The key aspect here is that the rights and authority granted to the universities were conferred only piecemeal to institutes. Similar patterns are repeated throughout the 19th century. The institute of forestry, for instance, was formed in 1828 and became a specialized university college in 1915 (Allard, 1978). The technological institute in Stockholm dates back to 1826, became a *Fachhochschule* in 1877, and was granted the right to issue doctoral degrees in 1927.

Because research became an increasingly salient task at universities during this period, this trait was gradually included in the multidimensional metric of universityness. When the 1950s drew to a close, the university colleges in Gothenburg and Stockholm had become full universities (in 1954 and 1960, respectively), and the vocational training institutes had been pulled closer to the old universities. At this point, most of the latter had long since become *Fachhochschulen* and were becoming increasingly close to the universities, leading to a further consolidation of the field of higher education.

Equally important, their presence had shaped the universities: The university colleges in Stockholm and Gothenburg and some of the *Fachhochschulen* were modern and research oriented to an extent that, on this criterion, they were perceived to be ahead of the old universities. Comparisons thus went both ways. University colleges and *Fachhochschulen* aspired to the rights and authorities conferred to universities, and research-minded teachers at the universities could opt for positions at the colleges or propose that the teaching load of the professoriate be cut down to college levels (cf. Statens offentliga utredningar [SOU] 1946:81, 1946, p.10).

Welfare professions and the system of higher education

At no point during the 19th century was the education of school teachers regarded as part of higher education. This also applies to the later occupational groups that in Scandinavia are usually classified as “welfare professions”, or in the international literature and terminology, the semi-professions (Etzioni, 1969); this includes teachers, nurses, and social workers. Teachers’ colleges began operating in Sweden in the 1840s. Schools for nurses (tightly linked to hospitals) came later, and special schools for social workers were established in the early 20th century.

The vocational education programs leading to the new semi-professions were positioned at a clear distance from the universities. Their students were not expected to have a *studentexamen* (Abitur, baccalauréat, etc.). These new schools were, however, indirectly marked by the university because part of their teaching staff was educated at the universities.

Vocational training programs for the semi-professions or welfare professions remained something other than university education, that is, less theoretical and academic and more practical in orientation. They occupied the outermost orbit around the old universities. For analytical reasons, they should be included, if only as its outer periphery, in the field of higher education, giving it a further complexity during the course of the 20th century. The occupational groups they educated were central to expanding and increasingly important policy areas of a welfare state that began to grow in earnest. This added a new fourth function to the already

diversified field of higher education, the training of personnel for the welfare state apparatus.

It would take several decades before vocational training for these occupations was fully included in the university system. Beginning in the 1960s, the education of social workers was gradually transferred to the university. School teachers and nurses had to wait for their inclusion until the comprehensive reform of 1977, which created a formally unified system of higher education.

The rise of the mass university system in the 1960s

The need to educate the expanding numbers of teachers for the gymnasias and the growing numbers of employees in the administrative apparatuses of the public sector led to a rapid expansion in the numbers of students and teachers at traditional universities. To handle the growing demand, and need, for higher education, new universities were established. The university colleges in Gothenburg and Stockholm were formally given university status during the period from 1956 to 1960. They were joined by Umeå University in 1964; Linköping University College, which was founded in 1970, became a university in 1975; and Luleå received a technical university status in 1971.

By this time, all the institutions from the age of the institutes were incorporated into the Swedish university system. A substantial part of the net increase in the numbers of students and teachers was the product of the transformation of the institutes and their absorption into the field of higher education.

In addition to the expansion and reconfiguration of the Swedish system of higher education was the gradual incorporation of the training of the welfare professions. Following the university reform of 1977, a host of new university colleges were founded, four of which have since become universities.

From 1977 onward, a new crop of university colleges gradually entered the field. Typically, they began as teachers' colleges in regional centres across Sweden. In 2011, the regional university college segment was quite large; it included 16 higher education units and 132,863 students, who comprised 41.2 % of the total number of students in higher education. Only 48.8 % of students in 2011 were enrolled in universities and *Fachhochschulen* that had been established pre-1977; all others were enrolled in higher education units that had been established post-1977.

Formal unification of the field

Toward universal education

From their inception, Swedish universities were modelled after the Continental European pattern (throughout Sweden's Catholic and Lutheran phases). The expansion of vocational schools outside the system of universities in the 19th century and the internal transformation of the old universities closely mirrored the Humboldtian model by gradually emphasizing research as a key task for univer

sities and their teachers, a pattern that existed in other countries in Europe (as well as the United States).

Following World War II, the Swedish system of higher education more closely followed the English/American model, that is, a three-year basic exam for students in humanities, natural sciences, and social sciences and a longer education program for the old professions (law, medicine, and civil engineering, as well as specializations in forestry, veterinary science, etc.). The increase in the number of universities in Sweden during this period is also in line with the overall development in Europe: There were 201 universities registered in Europe in 1945; 50 years later, that number had quadrupled (Rüegg, 2011, p. 3). The rise of the mass university system occurred not only in the United States but also in all the European countries, albeit in different forms and timing.

Prima facie, the Swedish case can be treated as an exemplar of more general international developments in higher education. However, Sweden stands out in several important ways if the focus is on developments after the comprehensive university reform in 1977. In one stroke, virtually all post-secondary education was formally included in the category of higher education, and the student population increased by 50 % in one year (Högskoleverket, 2006). This reform marks the formal unification of the field of higher education.

By ushering in this reform, Sweden deviated from its European neighbours in two major respects. First, the unified system for all forms of post-secondary education was to be governed through a unified command, both in terms of administrative coordination under the same government agency and oversight by the same minister in the government. Second, the 1977 reform bears directly on the professional landscape. Whereas the learned and classical professions were already integral to the university system, a host of vocational education programs, in effect semi-professions and pre-professions, were all of a sudden transferred to the same institutional framework.

Function, institutional form, and corps composition

Using the terms of our model, we can summarize the two latter phases of the evolution of the Swedish system of higher education. First, a new key function was added to educate the welfare professions. New education establishments outside the university system were formed. This created new complexity within the landscape of higher education, with co-existing components, rather different in character and form from both the older universities and the 19th century institutes. The teachers in the new schools for the welfare professions had links to the university system—they were often trained there—but they were not expected to conduct research as a regular part of their tasks (cf. below regarding the 1977 crop of university colleges).

The last phase, beginning with the sweeping institutional reform of 1977, set the stage for a new period of expansion in higher education. In addition to the four earlier functions filled by universities and the system of higher education came a new key function: a generalized education of the mass of employees in the “knowledge society” for both the public and private sectors. A formally unified system of higher education, governed by a common government agency, was

created. We propose that it is now relevant to conceptualize a field of higher education; all its units are ruled by the same economic procedures and incentives. Because the different units are academically and functionally highly differentiated, the result is a highly stratified system of higher education. This field not only is governed by the planning procedures of the state but also is shaped by competition among the units within the system for students and funding for teaching as well as research, thereby giving it the characteristic traits of a field. Reflecting this new and complex institutional form of the Swedish field of higher education, the teacher corps is highly varied in its composition, possessing clearly delineated categories with highly differentiated task structures. Teachers vary in the kind of knowledge they possess—teaching different kinds of students in very different establishments that range from research-intensive, prestigious departments in medicine to the routines of teacher education at regional university colleges.

The changing composition of the key profession

The argument so far presents a synoptic view of the trajectory of the system of higher education in Sweden. From the establishment in 1477 of a single university in Uppsala with a total teacher corps of six professors, the country now has a large and complex system of higher education, with a large and highly differentiated corps of teachers and researchers comprising a couple of distinct categories with a total of 37,900 members in 2011.¹

Next we analyze the transformation of the teacher corps from its beginning as a minuscule corporation in Uppsala to a large number of teachers unified in a trade union (of the professional type) of its own, consisting of different professional categories.

The age of the professoriate (1477–1940)

The university was initially equated with its professoriate, in a one-to-one correspondence between institution and corps. The professors were in charge of university teaching at all levels, being the only category with full-time employment at the university. They made up the faculty, and elected the vice-chancellor from among themselves. We use the label “professorial university” for this configuration.

From the 1620s onward, a new type of professor, the so-called adjunct professor, emerged. The presence of adjunct professors was instrumental in maintaining a pool of candidates for the professorial chairs and in serving as substitutes. A very different type of position, which involved the teaching of skills such as fencing, dance, and French, also emerged during this era. This type of teaching position was an offshoot of the superimposition of a new layer of function, that of training functionaries for the state. Whereas church officials would have little use

¹ The number of members mentioned here is not the number of actual persons employed but the computed full-time equivalents of all employees in all the units in the field of higher education, excluding the administrative and technical staff.

for those skills, they were relevant to the nobility, the class that, until 1809, was alone allowed to serve in the highest ranks of state administration.

The composition of the corps went through further changes as new types of positions were introduced in the 18th century. First, a bottom rung was added to the compressed career ladder of the university, so-called docent appointments. The typical fate of an Uppsala academician was to start out in the position of docent for a few years, then toil in the position of adjunct professor, and, finally, in the best-case scenario, be promoted to professorial chair when such a position became available (Lindroth, 1997b, p. 21). Second, new positions were introduced that were tailored for particular sciences, such as *astronomicus observator*, the *prosector* in anatomy, *botanices demonstrator*, and the *laborator* in chemistry. These new specialties reflect a budding scientific division of labour.

In quantitative terms, the corps of university teachers grew at a very slow pace at each university. After the reinforcements conferred to Uppsala University in the 1620s, it would take another 250 years before the professoriate in Uppsala had tripled in number. The expansion that did occur was instead contingent upon the creation and takeover of university units in the border areas of the Swedish realm, and, thus, on the function of training loyal state functionaries.

If we restrict our view to the old universities, neither student nor professor numbers went through drastic changes until the end of the 19th century (cf. Svensson, 1978). At this point, student numbers began to increase, eventually raising issues about adequate staffing at the universities.

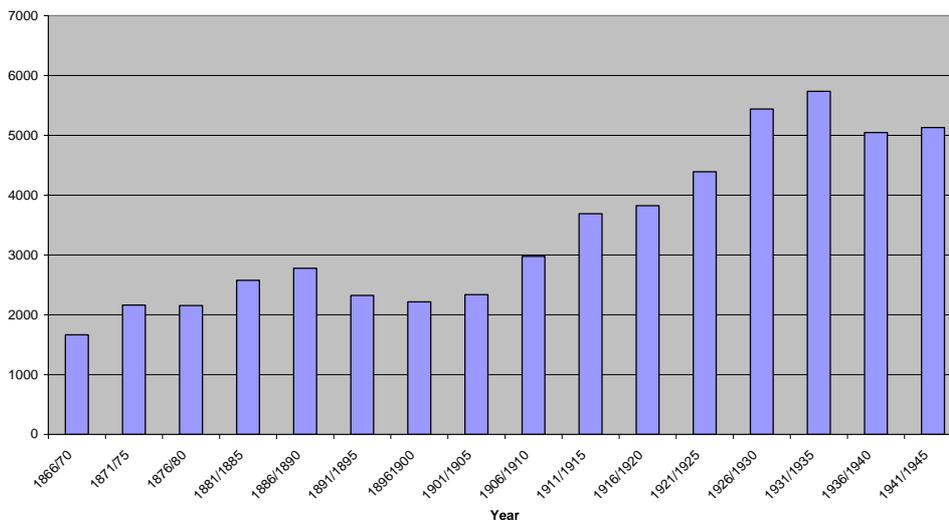


Chart 1. Students in Uppsala and Lund, 1866-1945.

The corps composition of the universities had at this point become less rather than more differentiated, as adjunct professorships were abolished in the 1870s.

The growing number of students was not balanced by a growing number of professorial chairs or by an increase in the mandatory teaching load of the professoriate. The number of professors did increase during this period; however, most of them were extra professors. As shown in Chart 2, what kept the student/teacher ratio flat was the influx of “other” teachers.

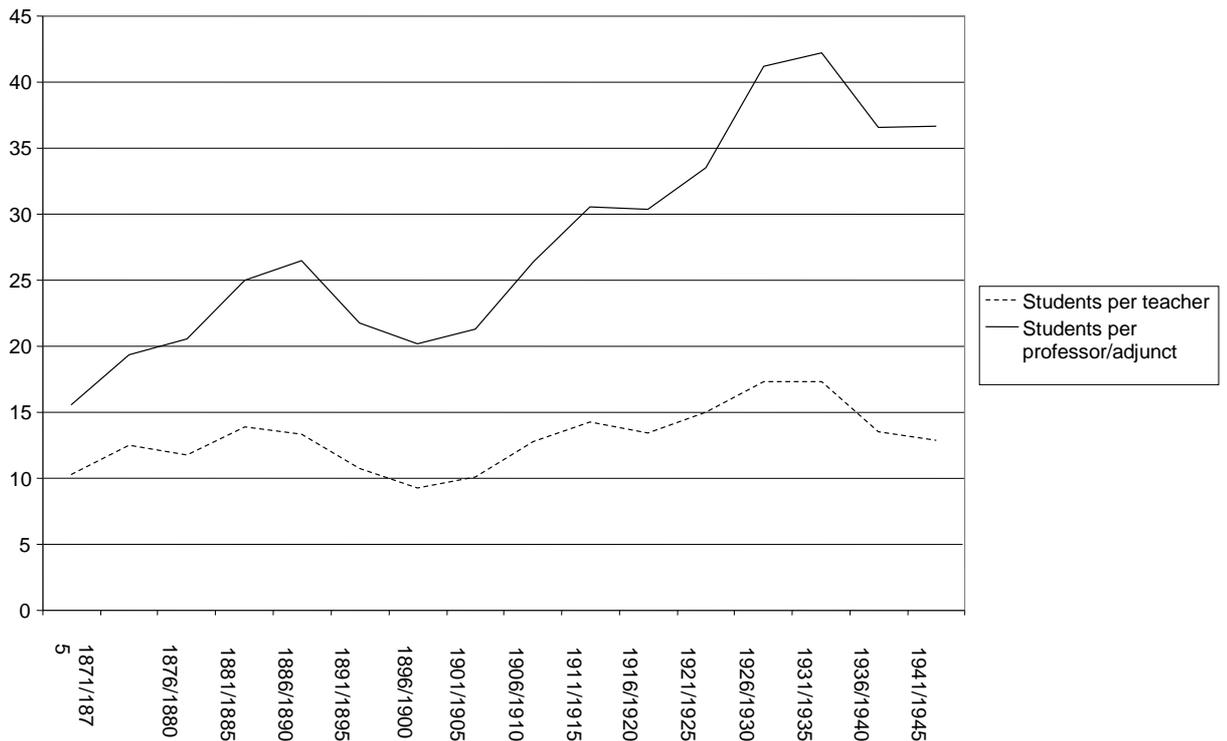


Chart 2. Student/teacher ratio at the Swedish universities, 1866-1945.

Compared with post World War II developments, the number of students appear modest. However, at the time, the growth rate and the student/teacher ratio strained the university organization. During the interwar period, concerns were raised regarding the number of unemployed graduates, such as those expressed in Parliament in 1933 and by a Royal Commission in the 1930s, as well as a concern for the costs of employing more professors (SOU 1935:52, 1935).

Gradually, the need for a larger number of academically qualified personnel was acknowledged. One reason was the implementation of the first steps of the Swedish welfare state. Another was the outbreak of World War II, which created a need for qualified administrators to fill positions in the rapidly increasing wartime bureaucracy and for a larger supply of qualified personnel to meet the demands of Swedish industry. Together, these sets of circumstances led to the post-World War II expansion and reforms in higher education.

The road to a differentiated corps of university teachers

Although the professoriate was the main, almost exclusive category to populate the universities prior to the Second World War, it now makes up a minority top segment of the corps. This fundamental change goes back to the beginning of the 1960s.

Sweden entered a phase of institutional consolidation in the 1940s and 1950s. During WWII, the state founded a number of research councils, underscoring the complex functions of higher education in Sweden, where research had been elevated to a key concern by then. They are also indicative of the increasing proximity between universities and the transformed 19th century institutes: The first two research councils, established in 1942, catered to technical research and to research on building technique and the built environment. In the next few years, councils were founded for other sectors: medicine, agriculture and forestry, natural science, and social science.

The corps experienced a process of consolidation that was carried out under the guise of unionization. The union of amanuenses, established in 1944 (the Swedish Association of Assistant University Teachers [SUHAF]), recruited members from universities and university colleges alike. The Swedish Confederation of Professional Associations (SACO), a union confederation for all academic unions, was formed in 1947. Given the unpredictable career paths of many academics, SACO opted for a principle of organization based on common degrees and educational background (Björnsson, 2007, p. 49).

Institutional consolidation is also reflected in the organization of university statistics. Until the end of the 1940s, the yearbook of Statistics Sweden assembled data on a set consisting of the universities (Uppsala, Lund, and Karolinska Institutet) and “equivalent university colleges” (Stockholm and Gothenburg) in adjacent tables. From the beginning of the 1950s, additional higher education units from the age of the institutes, now Fachhochschulen, were included in the same table as the first set.² Each of these groups harboured a professoriate, as well as other university-type categories of employment; however, they also had other “special” teacher categories that were historically shaped by specific educational tasks—thus adding to the diversity of the corps to the same extent as these units were transferred into an administratively defined domain of higher education.

A differentiation of the corps composition was also underway within the old universities. The 1945 Royal Commission on universities recommended the creation of a new university teaching position, one with a much heavier teaching load than the professoriate. This new position came into being in 1958 and was baptized *lektor* (roughly the equivalent of the position of associate professor). With this innovation, the entrance requirement for regular employment was substantially

² In 1951, these additions comprised two institutes of technology, two schools of economics, two dental colleges, and one school each in veterinary medicine, forestry, and agriculture. Later on, the Central Institute of Gymnastics was added. The tables referred to here, it should be noted, are those that list university employees. The corresponding tables for *students* at universities and university colleges report on a larger set of higher education units, which also expands more.

lowered; that is, possessing a PhD was sufficient for employment as lektor. These associate professors, with their heavier teaching load and lower salaries (then yielding approximately four times more undergraduate teaching hours per billion Crowns compared to professors), facilitated the accommodation of the burgeoning university student population from the 1960s onward.

A related innovation was the introduction in 1960 of a rule stating that the budget for teaching at a university, down to the department level, would be regulated automatically by the number of students. This automatic budget system was a key instrument for the rapid expansion in the numbers of students and teaching positions (especially those teaching positions of a temporary nature) that occurred in the 1960s.

The position of associate professor was not the bottom rung in this emerging university career ladder. Temporary positions (amanuenses and assistants) remained and were particularly important when sudden shifts of student interest in a discipline made it difficult to accommodate the onslaught. In 1965, another regular teacher category, the adjunct teacher, which did not presuppose a PhD and had a heavier teaching load than the position of associate professor, was introduced, yielding eight to nine times more undergraduate teaching hours per billion Crowns compared to professors. With this last addition, the main corps composition has remained essentially unchanged since then.

Not least due to the growth in their number, we suggest that, in the decades following the 1960s, the professorial university was succeeded by the associate professor university. The expanding student enrolment led, from the 1960s onward, to a very rapid expansion of the number of associate professor positions as well as of the number of positions in the temporary categories. However, it was not numbers alone that facilitated the change. New forms of governance put much more de facto power in the hands of the associate professors, thus allowing them to assume positions of authority, such as the heads of departments and directors of study, and to carry out the duties and responsibilities that these positions entailed, which most professors were happy to avoid. The new local decision-making bodies, which came out of the university reforms in the 1960s, led to university-specific forms of corporatist governance at the departmental as well as higher levels, with important roles for student associations and academic trade unions. Owing to the very heavy teaching loads for associate professors in Sweden, any kind of relief, such as the creation of administrative positions, was attractive.

The formal transfer of institutes-cum-Fachhochschulen to the university system set a precedent for the inclusion of vocational education in formally unified higher education; the main categories of the associate professor university (professor, associate professor, adjunct teacher) provided a mould into which the staff of new transfers could be poured. This set the stage for the 1977 university reform, which allowed education units that were previously in the outermost orbit around the universities to be integrated formally into the university system.

The effects of the 1977 university reform

The 1977 reform bears directly on the professional landscape. Whereas the learned and classical professions were already integral to the university system, a host of vocational education programs, in effect semi-professions and pre-professions, were suddenly transferred to that same institutional framework. These included primary to secondary school teachers, leisure-time pedagogues, nurses, biomedical scientists, occupational therapists, and preschool teachers.

As a consequence, increasing proportions of teachers and students in the university system have become involved in professional and vocational education. Although Sweden may stand out in terms of the method of incorporation, this is part of an international trend. As Brint has shown with reference to the United States, for example, traditional university disciplines have receded in the last 35 years, not only in relative terms but also in absolute student numbers:

One of the most important changes in American higher education over the last 30 years has been the gradual shrinking of the old arts and sciences core of undergraduate education and the expansion of occupational and professional programs. Occupational fields have accounted for approximately 60 % of bachelors' degrees in recent years, up from 45 % in the 1960s, and hundreds of institutions now award 80 % or more of their degrees in these fields. (Brint, Riddle, Turk-Bicakci, & Levy, 2005, p. 151)

This implies a substantial rearrangement of corps composition and task structure over time for the academic profession. However, the incorporated vocational programs are equally transformed by their forced adaptation to their new institutional surroundings. With their inclusion in the university system, these vocational programs came under systemic pressure to become more academic. This entailed elevating the scientific competence of program teachers; aligning the program with existing or to-be disciplines that could accommodate bachelor's, master's, and PhD students; and negotiating a new relationship between the imperatives of science and working life. Hence, their instantaneous *de jure* incorporation was followed by a gradual *de facto* adaptation to the imperatives of the new institutional environment.

In addition to incorporating a set of large vocational education programs, the 1977 reform founded 15 regional university colleges. These were installed under the explicit proviso that they be given no direct state funding for research; the same restriction applied to nursing colleges and other vocational higher education units that were organizationally separate from the universities. A rift was thereby created between old and new, differentiating the field of higher education along a dimension that had become a central professional value since 1852: research. The unity of the academic profession in this sense required a renegotiation of the notion of science-based teaching, making it encompassing enough to include academic teaching that merely keeps abreast with and conveys research results. Rather than serving as a *sine qua non* of academic professionalism, research serves as a basis of stratification within the profession.

This differentiation between new and old higher education units recapitulates the differentiation among teacher categories dating back to the 1960s. The professoriate scored the highest on scientific accomplishment and salary and had the highest research/teaching ratio. Adjunct teachers were at the other end of the ladder; they lacked formal qualifications as researchers, were exclusively oriented toward teaching, and earned less.

Both varieties of stratification—among higher education units and among teacher categories—triggered countermovements. New university colleges and newly included vocational schools formed an interest group alliance with the aim to lobby for better conditions (cf. Wieslander, 1997). Similarly, adjunct teachers formed a section within the union. The original difference in teaching load between associate professors and adjunct teachers no longer exists; however, the debate regarding the relative worth of pedagogical and scientific merits continues.

Even though these two axes of differentiation do not coincide—adjunct teachers are among those employed at the old universities and, since the turn of the millennium, professors are among those employed at the university colleges—they are not independent. For obvious reasons, the vocational programs that were incorporated into the university system in 1977 were short on academic merits at the outset. This also applied to the university colleges that came out of the 1977 reform because many of them were formed on the basis of existing vocational schools. However, the same pattern applies to all the new colleges regardless of the basis upon which they were formed: They were dominated by adjunct teachers, with a smaller percentage of associate professors and no full professors. The universities and Fachhochschulen offer a striking contrast. Charts 3 through 6, based on data from Statistics Sweden, illustrate the distinct profiles of different types of higher education units within the formally unified field of higher education.

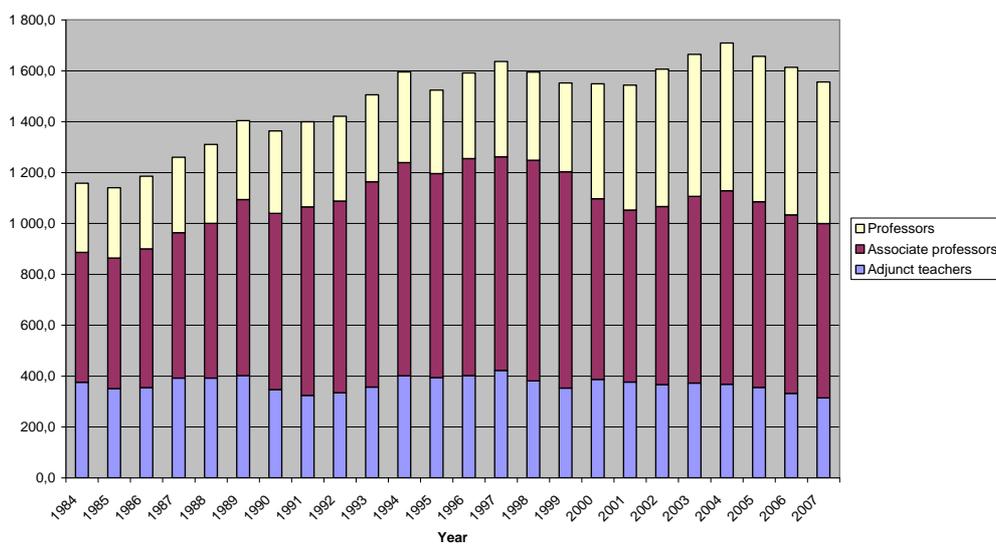


Chart 3. Lund University.

Agevall & Olofsson: Field of Higher Education

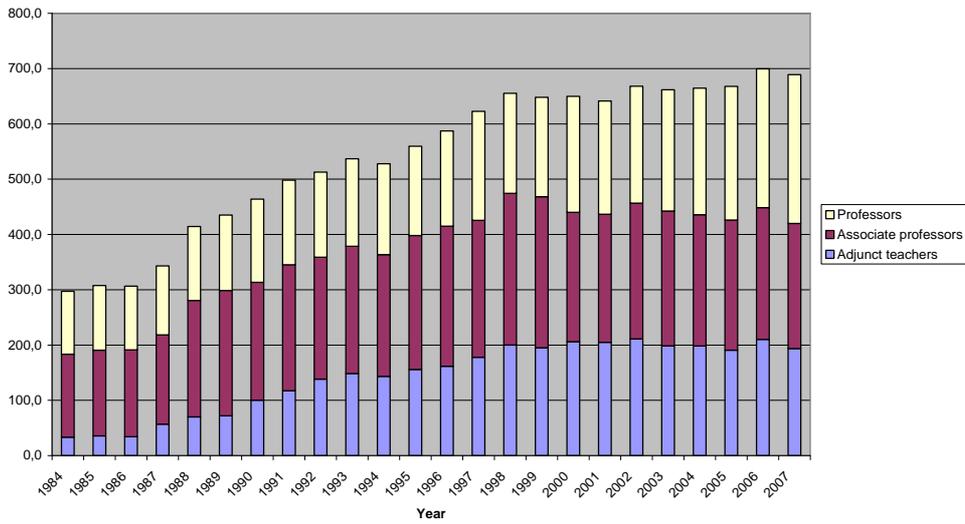


Chart 4. KTH Royal Institute of Technology.

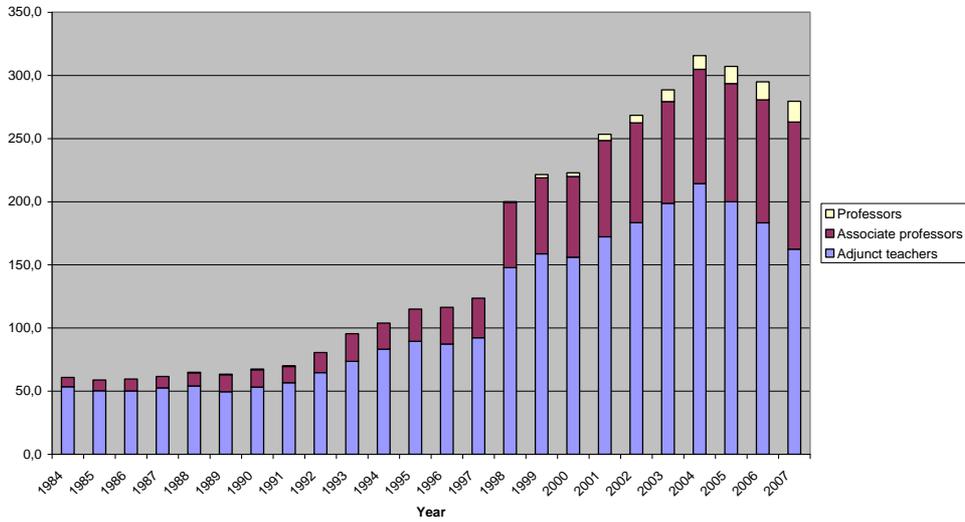


Chart 5. Kristianstad University College.

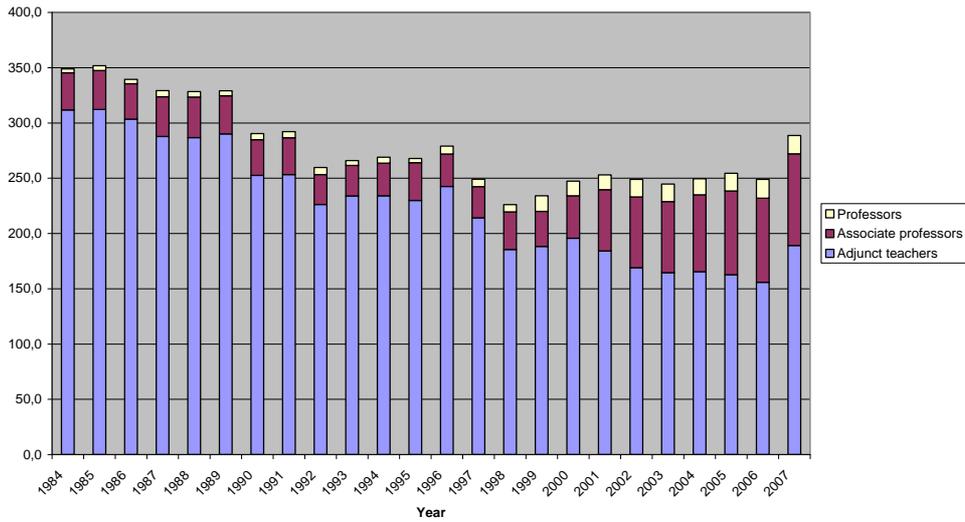


Chart 6. Teacher Education College, Stockholm.

These charts list corps composition—here delimited so as to only include the three main teacher categories and measured as full-time equivalents—for four types of higher education units: established university (Lund University), 19th century institute turned *Fachhochschulen* (Royal Institute of Technology), vocational education program incorporated into higher education in 1977 (Stockholm Teacher Education College), and a post-1977 university college (Kristianstad University College).

Modes of stratification: units, programs, teachers

In terms of corps composition, the field of higher education roughly breaks down into a two-tier structure, with established universities and *Fachhochschulen* in the upper tier and 1977 inclusions in the lower tier. Within the formally unified field, strong differentiation exists among teacher categories and among units.

Through all these processes, the university system has become increasingly central to the formation of other professions. The students preparing for careers in the classical professions, such as law and medicine, have always had their training supervised by professors. The recent transfer of training for the welfare professions to the university setting was accompanied by the growth of research-based disciplines that equipped their teachers with doctoral and licentiate degrees. Thus, the nature and significance of this centrality vary across professions, and one source of variation is clearly the trajectory through which professional training was transferred to the university.

For the 19th century institutes, their gradual move toward affinity with the universities coincided with a fundamental change in the universities, where scientific research was elevated to the rank of the central academic value. Their piecemeal inclusion in higher education took the form of merging vocational education with professionally useful research. Through this process, these institutes managed to gain recognition for producing research that was on a par with or surpassed that of the universities and, in many instances, to secure a special title for their doctorates. These accomplishments constituted an integral part of being recognized as members of the same set that included the universities.

The situation was quite different for the varieties of vocational training that were included in higher education in 1977. Catapulted into higher education by a reformatory fiat, these vocational education programs came under external pressure from the state to conform to new standards. They scrambled to find existing disciplines that could accommodate large numbers of teaching staff that had been recruited on other grounds. The two types of trajectories into higher education will, all things being equal, give different conditions for the fit between science and occupation and, hence, for the nature and significance of a licentiate and PhD segment in the profession.

The 1977 reform simultaneously expanded the university system and tightened state control over it, in terms of finances and academic content. It was also a big step toward universal education (Trow, 2010). This process has continued in new forms during the past 20 years. The Higher Education Act of 1992 abolished the program structure implemented by the 1977 reform. Changes in the state budgetary process and experiments with forms of governance, inspired by New Public

Management and its descendants, have further reshaped higher education. To this should be added a political goal to increase the university student share of an age group. The changes in the 1990s introduced a new layer of function for higher education, that of providing generalized training for the mass of employees in the “knowledge society.”

Diversity and differentiation among university teachers

Major differences exist among the universities and university colleges in their relative share of full professors, associate professors, and adjunct teachers. For professors, research is a regular part of their work, as is supervising PhD students. Associate professors are expected to conduct some research, but their work consists mainly of teaching undergraduates. Adjunct teachers are hired to teach students.

The charts above as well as more detailed statistics, indicate that Sweden’s field of higher education has a two-tier structure: *Fachhochschulen* and the traditional universities—up until and including the new additions of the 1970s (Linköping University and Luleå University of Technology)—occupy the upper tier, and the regional university colleges occupy the lower tier. The new universities, dating from the late 1990s, more closely resemble the university colleges in terms of their corps composition.

Furthermore, large variations exist in the proportion of full professors along disciplinary lines. Many more are employed in medicine, technology, and law than in the humanities, the social sciences, and especially teacher education. Within each discipline, large variations, of course, exist among departments, with some departments achieving greater success than others in attracting resources, thus enabling more research to be conducted and greater numbers of professors to be employed.

Conclusions

The framework for Swedish higher education is now a formally unified but stratified system. The profession itself is stratified and differentiated accordingly. The academic profession is constituted by the set of teachers formally employed within the university system. Thus, the inclusion of new *types* of higher education units has added to the heterogeneity of the profession. Such inclusion processes have been ongoing since the formation of a field of higher education in the 19th century, and professional and vocational education programs have played a substantial role. Their incorporation has changed the university system and altered the morphology of the corps to match its present-day structure of professors, associate professors, and adjunct teachers, unevenly distributed across that unified but stratified university system.

The scale of these changes, from the institutes to the 1977 inclusions, has, in relative terms, reduced previous layers of functions to insignificance. Universities still educate priests, and they remain recruitment areas for higher offices in the state, but these functions are being overshadowed by the tasks of training technical experts, performing research, and supplying the labour market with welfare professionals and the mass of employees for the knowledge society. Which of these latter tasks shall be accorded primacy is the object of political struggles, both within and outside the university system.

The systematic incorporation of many forms of vocational and professional education programs into the formally unified system of higher education raises important questions about the link between the academic profession and the professions they teach and train. Professors of social work and educational science, recent arrivals to the university system, may occupy marginal positions within the prestige hierarchy of the university. However, they are close to and at the apex of their own professional fields. This asymmetry necessitates a new understanding of Perkin's (1969) idea concerning university teachers as a key profession. They are differentiated not only according to their occupational position and their proximity to research but also by how they are situated between the university and "their" own professional field.

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