

Employment, Work, Career:

The Changing Situation of the Academic Profession in Germany

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1 Introduction

Several aspects of employment relations within the academic profession in Germany have come under great pressure to change as a result of political decisions during the last decade. The presented paper aims to describe the perceptible impact of that process for the different groups of academics working in the field of higher education: Have features of work contracts changed and what do they typically look like now? What are the working conditions of members of the academic profession, is there systematic alteration to be seen as a consequence of the idea of reshaping the field of higher education? Does that affect the career system for academic professionals, and if yes: how?

For that purpose, some of the data of the current CAP report will be examined and compared to the findings of the study on the conditions of academic work conducted in 1992 (*cf.* Enders & Teichler, 1995a). Trying to contextualize the work within academe with regard to a broader social perspective, the composition of the academic staff is of relevance. Thus, the paper first will focus on some of the demographic specifics of the CAP survey such as age and gender. The working conditions and the contentedness with the work often are closely linked with the earnings to be drawn from it. Also, the income gives hints concerning the social status associated with a professional position. Another item that helps to point out the structural changes within the academic personnel concerns the highest qualification achieved.

Other features of major importance (especially for academic personnel in middle ranks) are the extent of employment – part time vs. full time – and the possible temporal limitation of positions. Some legal changes have occurred regarding the possibility of employing non-professorial scientists on fixed-term contracts – it will be interesting to investigate whether the new legal situation has influenced the job situation of these middle ranks already. Furthermore, job mobility between different institutions is an important indicator for the

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present state of the academic work system in Germany, which strongly relies on the exchange of scientists at professorial level.

Some more consideration is given to characteristics of the working condition such as the distribution of time spent on typical tasks like teaching and research. The observed rise in numbers of publications per scientists may not only serve as an indicator for research activity, but also can be read as consequence of the increasing influence of evaluation panels for research within the academic community. The last point to be briefly discussed is the degree to which academic professionals are involved in the decision making of the institution they work at.

2 Background: The academic system in Germany

The following contains a short reminder of the typical structures of the system of higher education in Germany and the political and legal framework affecting it (*cf.* also Kreckel, 2008, 42pp.). At large, the field of higher education in Germany shows a binary division with traditional universities at the one end, the “universities for applied sciences” (*Fachhochschulen*) at the other. Several other specialized types of higher education institutions (like universities of arts or music, technical or pedagogical colleges) are placed in between these two basic categories in respect of their legal and institutional status. Thus, there are 105 universities and 74 other institutions with comparable institutional status on the one side, 166 universities of applied sciences and 29 colleges of administration on the other. Still, about two thirds of the nearly two million students are enrolled at a university or comparable institution. The university is the primary place not only for studies but also for scientific research in Germany. In addition, there are a number of non-university research institutions, namely 78 Max-Planck-Institutes, 84 institutes of the Leibniz-Gemeinschaft, 15 of the Helmholtz-Gemeinschaft, and 58 of the Fraunhofer Gesellschaft dealing with a variety of different scientific fields. For reasons of time, the very specific working conditions at these non-university institutions will not be discussed during the course of this account, although the CAP survey 2007 included them (for some preliminary results *cf.* Teichler, 2008). At this point, it may suffice to say that it is typical for these institutions to employ rather a larger share of non-professorial scientists in comparison to universities and *Fachhochschulen*, as teaching plays a minor role. Furthermore, the working conditions at these institutes were judged rather favorably.

Comparing the specifics of the career systems of universities and of universities of applied sciences, some major differences can be detected. First, the largest group of academic

professionals in *Fachhochschulen* is employed as professors, but typically in positions of the lower rank (cf. Statistisches Bundesamt, 2008).¹ A larger commitment to teaching is expected there (usually 18 hours per week during the reading time of the semester compared to 8-9 hours at universities), which is balanced by the absence of commitment to basic research. It is expected that professors at universities of applied sciences will have gathered practical working experience outside academia as a necessary prerequisite. Also, not all the scientific disciplines are judged as “applied science”, so disciplines like engineering and economics predominate at *Fachhochschulen*.

On the other side, at universities the largest group of the academic professionals within traditional universities belongs to the non-professorial middle ranks, most of them at junior level.² For these junior academics, the central task is to gain a scientific qualification that would eventually enable them to move on to a professorship (i.e. the promotion to a doctorate and subsequently the *Habilitation*, comparable to the “second book” in the Anglo-American system). For that reason, the standard employment situation of junior professionals is of a transitory nature, confining the engagement within the university to a limited number of years. There are a number of permanent positions, especially within the non-professorial senior ranks of academic professionals (such as *Akademischer Rat*, or lecturer), but traditionally these are to be treated rather as exceptions to the rule. Mobility between institutions is not only encouraged, but enforced by regulations like the German *Hausberufungsverbot* that excludes the possibility of moving up to a professorship from a middle rank position or even from an associate to a full professorship within the same institution. The situation of academic professionals in the middle ranks is characterized by a high degree of uncertainty due to the usual non-permanent contracts and the mandatory mobility.

Some of the changes brought about during the last few years affect that traditional system by giving a large amount of power in particular to the university professors of the highest rank, the *Lehrstuhlinhaber* (chair holders, comparable to full professors) that accumulate manpower and research funds. First, the system of remuneration for professors (usually employed as civil servants) has been changed, increasing the opportunity for individual negotiation. At the same time, the traditional positions of *Assistent*, *Oberassistent* and *Dozent* – all in contract positions as civil servants for fixed terms – were abolished and replaced by the general title of *Wissenschaftlicher Mitarbeiter* as salaried employees. The key role of the *Habilitation* was to

¹ According to the last accessible data of the *Statistisches Bundesamt* for 2007, there are about 14,000 professors at *Fachhochschulen* and 6,000 academic professionals in different middle rank positions.

² According to the data of the *Statistisches Bundesamt* for 2007, there are about 23,000 professors at universities, 110,000 scientific collaborators (*Wissenschaftliche Mitarbeiter*), 5,000 scientists in traditional positions of docent or assistant, and another 5,000 persons in positions comparable to lecturers (*Lehrkräfte fuer besondere Aufgaben*).

be weakened by the introduction of a new qualification pathway for junior staff, the *Juniorprofessur*. (Still only 0.4% of all professors belong to that category, so the success of that reform may well be called into question.) Also the rules for non-permanent contracts were made stricter by a new law (*Wissenschaftszeitvertragsgesetz*) restricting the time of fixed term employment to twelve years at the longest. The purpose of these last two measures was to speed up the phase of qualification and to bring in younger personnel to professorial level. The idea was to enforce the departure of middle rank academic professionals from the academic career system where they had not achieved a professorship after twelve years.

On the other side, the introduction of new personnel categories like lecturers are discussed, as the teaching load necessary for that large amount of students can hardly be fulfilled by professors and *Wissenschaftliche Mitarbeiter* at universities: the first being rather few in number, the latter having their main objective in academic training and not in teaching. Different types of institutions – like *Fachhochschulen*, but also universities of arts that can draw upon professional or artistic practitioners – tend to solve this problem by using vocational staff (*Lehrbeauftragte*), but the possibility of delegating core tasks like teaching to personnel in additional occupations is ruled out by law for universities. This problem is further fuelled by the current introduction of the Bachelor / Master system in Germany that includes more obligatory courses and requires professors to devote large amounts of time to the development of new courses and course systems.

3 The German CAP-Survey

The study is based on a representative survey of the academic profession at German institutions of higher education and public research institutes, which was undertaken from January to July 2007 within the framework of the international comparative study “The Changing Academic Profession”.

The questionnaire was sent to more than 5,700 addresses at a select number of institutions viewed to represent the overall system appropriately. The study aimed to address only regularly employed, academically trained persons active in departments in charge of teaching and/or research.

Altogether, 2,139 persons responded, 1,697 of which were valid answers. The response rate is about 30%. Among the respondents,

- 324 were professors (senior ranks) at universities,
- 695 other academic staff at universities,
- 215 academics (90% of them professors) at *Fachhochschulen*,

- 463 academic staff at public research institutes.

One has to bear in mind that the sampling procedure deliberately called for an over-representation of professors and seniors compared to other academic staff. This procedure was chosen in order to secure a sufficient absolute number per staff category, gender and field of study. In the final analysis of the data, this over-proportionate representation can be counter-balanced by a respective weighing of the various sub-groups. This does not play any role, however, in the subsequent data analysis of this article, because only percentages and means are presented for the above named sub-groups.

4 Results

4.1 Demographic characteristics

a) Age

As may be seen from the aforesaid, the last decade has brought some major changes to the German system of higher education, so it will be interesting to see whether the working conditions for academic staff at universities have been affected by these developments. First a short look at the demographic composition of the surveyed group that in the following will be subdivided into university professors, middle rank academic professionals at universities, and academics at *Fachhochschulen*.

At the time of our inquiry, the mean age of the *university professors* was 53 years, one year younger than in the 1992 Carnegie study, as shown in Table 1. The academic professionals working at *Fachhochschulen* had an average age of 52 years, which means a slight increase to the 1992 study. In that respect, an assimilation of university and *Fachhochschulen* may be seen. The academic professionals of middle rank showed a major shift in age structure since 1992: The mean age was 40 years now, an increase of five years compared to 1992. Obviously, the mean age corresponds to the hierarchical position within the career ladder – staff without doctorate was 32 years in average, junior scientists with doctorate 42 years. (The non-professorial senior scientists were older still: 45 years in average.) Thus, the clearly formulated objective of the reform concerning fixed term contracts – bringing scientists to responsible professional positions at rather younger age – has not yet been reached by any means.

Table 1. Age distribution at German Institutions of Higher Education (arithmetic mean, in years)

	Professors at universities	Academic staff at middle rank at universities	Academic staff at <i>Fachhochschulen</i>
CAP survey (2007)	53	40	52
Carnegie Study (1992)	54	35	50

b) Gender

Concerning the aspect of gender, the survey once again shows the poor representation of women in German higher education institutions, which has been an object for criticism for so long. In addition, that disparity increases with rising hierarchal position: women in leadership position are the exception in German academe as in many other parts of society. Gender stereotypes are further perpetuated in the male predominance in technical disciplines, a rather stronger share of women in the humanities.

Table 2 shows that the share of women amongst the surveyed university professors is still at a low level (19%), but has tripled since 1992. Women are very much the exception amongst professors of the highest rank (15%) and represented a little stronger amongst those of the lower rank (26%). The findings at *Fachhochschulen* are very similar in that respect, but this nonetheless corresponds to a doubling of the proportion of women amongst academic professionals at that type of institution since the 1992 survey.

Table 2. Proportion of Female Academics at German Institutions of Higher Education (%)

	Professors at universities	Academic staff at middle rank at universities	Academic staff at <i>Fachhochschulen</i>
CAP survey (2007)	19	36	19
Carnegie Study (1992)	6	22	9

Of the members of the middle rank academic positions at universities, 36% are women – a clear increase since 1992. Again the share of women is lowered with higher hierarchical position reached (junior staff without PhD: 41% female; with PhD: 33%).

More than 80% of the academic professionals surveyed by us are married or live in a permanent relationship (slightly more than 1992), professors to a stronger degree, middle ranks to a slightly lesser extent. But female professors at universities or *Fachhochschulen* are much more likely to be single (i.e. not married and with no children) than their male colleagues. The finding concerning the absence of kids in a common household can also be made amongst women from the middle ranks in universities. Judging from our data, it is easier to combine family and academic profession for male persons with higher income and a partner without professional engagement. In this respect, the CAP data mirror German society in general.

4.2 *Employment Situation*

a) *Income*³

The income of academic professionals and its composition vary strongly according to the type of position held and the discipline concerned. For example in disciplines like medicine, there can be very substantial sources of income separate to the amount earned by the activity in higher education (for the listing of the overall gross income of academic professionals cf. Teichler, 2008, pp.140). For members of the academic middle rank in universities, the difference between staff in full time to those in part-time positions plays a further, important role. In the course of this paper, only the actual income drawn from the employment at the higher education institution will be examined.

As to be expected, university professors are at the top of the income scale (as they hold the highest qualification and the highest share of hierarchical top positions). As shown in Table 3, this group draws a mean annual average gross income of about €72,000 from their professional engagement at their higher education institution. (The corresponding mean value for academic professionals at *Fachhochschulen* is at about €57,400 p.a.) Professors of the top rank at universities (holders of chairs) achieve a higher gross income than those of lower rank (€79,000 vs. €61,000), which is due to the higher income group at the one hand, the better possibilities to negotiate additional salary at the other hand. The differences in income between male and female interviewees are striking, which can be partly explained by the spread between certain disciplines. To give but a short example: male university professors of the top rank earn a mean income of €82,000 p.a. from their engagement at the higher education institution, female chair holders of the same top rank €65,000 p.a.

It also does not come as a surprise that the incomes of members of the middle rank at universities should turn out lower, which can be ascribed to the lower salary groups as well as to the higher shares of part time employment. The annual gross income for that personnel category amounts to an average of €39,000, adjusting for part-time positions, the full-time equivalent would be €42,000. The structural differentiation of these middle rank positions is worth while looking at: junior staff members without a doctorate earn considerably less than staff with a doctorate, especially as part-time contracts are particularly widespread amongst this category and as age differences are often mirrored in the remuneration (the gross income of the said group is at €30,000 p.a., the full time equivalent would be at €37,000).

³ There will be made no reference to the 1992 data regarding income, as effects of inflation and general rise of incomes make direct comparison very difficult.

Table 3. Annual average Gross Income at German Institutions of Higher Education 2007 (€1,000)

Higher Education Institutions	Actual	Full-time equivalent
<i>Academic staff at middle rank at universities, all</i>	39	42
Without PhD	30	37
With PhD	40	48
<i>Professors at universities, all</i>	72	
Lower rank	61	
Higher rank	79	
<i>At Fachhochschulen</i>	57	

b) Extent and duration of employment

Usually, professors in Germany are employed as civil servants on permanent and full-time contracts (see Table 4). In contrast, the situation of academic professionals in middle ranks (and especially in junior positions) often is felt as problematic and precarious – although it still may seem rather favorable compared to many other countries (*cf.* Bracht & Teichler, 2006, p.145). Bearing in mind the changes of the legal framework for the employment of fixed-term employment described above, the new findings concerning the employment relations of that group may be surprising in some respects. The majority – about two thirds – of the members of academic middle ranks at universities has a *non-permanent* contract and no prospect of a permanent one afterwards. Still, this corresponds to an increase of the share of those that are in permanent contracts (30% in 2007 as compared to 21% in 1992). This percentage depends very much on qualification – only 3% of junior staff without a doctorate is in a permanent position, but 39% of junior staff with a doctorate.

The average number of years of employment within academe of these academic middle ranks also has risen from a mean of 7 years in 1992 to 10 years now. Contrary to the intentions of the strict temporal limitations introduced for academic professionals in middle ranks, they have not only become older on average, but also stayed longer within the academic labor market (even if they have very low prospects for continuing their employment).

The share of part-time contracts within the academic middle ranks has stayed at a relatively constant level of about a quarter of all contracts. Three quarters of those part-time contracts extend up to a half of the standard full time load, another 20% run for an extent of employment of 75% or more of standard full-time hours.

Table 4. Permanent Employment at German Institutions of Higher Education 2007 (%)

Higher Education Institutions	Permanent Employment
<i>Academic staff at middle rank at universities, all</i>	30
Without PhD	3
With PhD	39
<i>Professors at universities</i>	
Lower rank	95
Higher rank	98
<i>At Fachhochschulen</i>	94

4.3 Elements of Career System

a) Highest level of qualification

It may be perceived that there is a tendency for German academics to gather the highest academic qualification possible, even if not employed at the hierarchical top positions of the career system. The rise of the average qualification level holds for all groups examined here. Table 5 shows that more than 80% of the university professors have a *Habilitation* (as compared to 73% in 1992). The relative rise of the share of *Habilitation* qualification is even higher in *Fachhochschulen*, where that qualification is actually not a necessary requirement for a professorial position. Still, 14% of the academic professionals there have a *Habilitation* now, whilst in 1992 the share was only at 5%. For the persons in academic middle ranks at universities, who for the most part are still within the phase of qualification, the image is somewhat different according to personnel category. Nonetheless, the overall tendency toward a rising qualification level is quite clear: in 1992 a share of 43% of the middle ranks had already attained a doctorate, it is now 67%. 22% even hold a *Habilitation*, three times as many as in 1992. The presumption can be made that quite a few younger academic professionals with *Habilitation* are “in the queue” for a professorship in academic middle ranks or even junior positions. In the discipline of medicine for example, 29% of “junior staff” hold the degree of *Habilitation*.

Table 5. Level of highest qualification by type of institution, 2007 and 1992 (%)

Higher Education Institutions	CAP survey (2007)	Carnegie Study (1992)
<i>Academic staff at middle rank at universities</i>		
With <i>Habilitation</i>	67	43
With PhD	22	7
<i>Professors at universities</i>		
With <i>Habilitation</i>	81	73
With PhD	98	98
<i>At Fachhochschulen</i>		
With <i>Habilitation</i>	14	5
With PhD	81	60

b) Institutional Mobility

As pointed out, institutional mobility is a vital factor for the academic career system in Germany. For that reason, the average employment duration at an institution may be rather shorter than in other countries where academics can be promoted without moving institutions. Although the new system of professorial employment and remuneration seems to have led to a decrease of external orientation of persons who had achieved a professorate within the – more favorable – old system before 2005 (*cf.* Grözinger, 2008), the CAP data support the thesis of an overall increase of mobility on professorial level since 1992, as shown in Table 6.

In 2007, the surveyed university professors had been at their current institution since 9 years in the mean – this is 8 years less than in 1992. The reduction in the number of years spent at the current institution is a little less for academic professionals at *Fachhochschulen* (10 years in 2007 instead of 12 years in 1992). For middle ranks at universities, the average number of years spent at the current institution has not changed since 1992 (6 years). However, the pressure for institutional mobility seems to have reached also the middle ranks, as the average number of institutions they had been working at after their first degree is two – in 1992, two thirds of the members of academic middle ranks had answered that they had worked at one institution only. Within all personnel categories, women showed shorter employment times at their current institution, which may be a consequence of the slight increase in female academic professionals during the last years.

Table 6. Institutional Mobility at German Institutions of Higher Education 2007, How many years since your current appointment at your current institution? (arithmetic mean in years)

Higher Education Institutions	CAP survey (2007)	Carnegie Study (1992)
Academic staff at middle rank at universities	6	6
Professors at universities	9	17
At <i>Fachhochschulen</i>	10	12

4.4 Elements of Working Situation

a) Workload allocation

Looking at the workload allocation with regard to the different tasks fulfilled by academics in higher education institutions, it is necessary to distinguish between teaching periods and non-teaching periods (when there is more time for research). Of the three personnel categories examined, university professors stated the highest average working time per week: the mean is at 56 hours during teaching periods and 48 hours outside teaching periods (see Table 7). Professors of the top rank report a slightly higher workload than their colleagues of lower ranks, which concerns almost all fields of activities, but especially the administrative tasks. Members of the academic middle ranks report a smaller amount of weekly work time (41 hours during teaching periods, 39 during outside teaching periods), which is partly explained by the fact of the share of part-time working contracts. At *Fachhochschulen*, the work load is not as heavy as that of university professors (44 hours per week during teaching periods, 34 outside teaching periods). Because of the high teaching workload of *Fachhochschulen* professors, they spend less time on other academic duties.

Table 7. Workload allocation of the Academic Profession in Germany 2007, (in hours)

Weekly working hours spent on	Academic staff at middle rank at universities		Professors at universities		Academic staff at <i>Fachhochschulen</i>	
	When classes are in session	When classes are <i>not</i> in session	When classes are in session	When classes are <i>not</i> in session	When classes are in session	When classes are <i>not</i> in session
Teaching	11.3	5.1	19.3	7.5	25.1	9.7
Research	17.5	22.4	17.3	24.0	8.1	13.2
Service	7.2	7.0	6.0	5.6	2.9	4.0
Other academic activities	2.4	2.3	4.7	5.0	2.2	2.7
Administration	2.6	2.6	8.8	5.7	5.4	4.4
Total	41.0	39.4	56.1	47.8	43.7	34.0

Comparing the findings of 2007 to those of 1992, the most striking change concerns the decrease of the share of time spent on teaching tasks by university professors and their colleagues at *Fachhochschulen*. Only the members of academic middle ranks at universities experienced higher shares of teaching tasks, which coincides with the introduction of some personnel categories employed mainly for teaching (*Lehrkraft fuer besondere Aufgaben*, lecturer).

As Table 8 and 9 show university professors had spent 43% of their time during teaching periods on teaching and only 29% on research in 1992. Meanwhile, this gap is almost closed (34% for teaching, 31% for research). The share of administrative tasks has stayed at a constant 16% during the time when classes are in session. An increase was measured for scientific services (11% instead of 8% in 1992) and other scientific activities (8% as compared to 5%). These results correspond to the values found for the rest of the year when classes are not in session: administration tasks stayed at the same level, scientific services and other scientific activities have become larger in extent. Other than during the time when classes are in session, the findings for the relation of time spent on teaching and on research respectively have not changed very much during the non-teaching time of the semester. 16% of the weekly time budget is assessed for teaching by now (1992: 20%), 50% for research (1992: 53%). Teaching and research remained the core tasks of university professors, but the combined share of these two fields has declined from about three quarters of the weekly time budget to less than two thirds. The reason for that is not to be found in additional administrative tasks (as often claimed), but in a widened engagement in scientific services and other fields.

That observation is confirmed by analogies within the academic middle ranks of universities: Scientific services make up 18% of the weekly time budget (within as outside the time when classes are in session), other scientific activities 6-7% respectively. The corresponding values for 1992 were 14-15% for scientific services and 2-3% for other activities. Teaching tasks

also take a slightly higher amount of time (28% during teaching periods compared to 26 in 1992, 13% outside of teaching periods instead of 12% in 1992). These increases are balanced by reduced shares for administration and research: administration tasks have decreased from 8-9% in 1992 to 6% by now; research still accounts for the largest single portion, but were cut back from 49% during and 61% outside reading time of the semester in 1992 to 43% and 57% respectively in 2007.

At *Fachhochschulen*, the greatest observed change concerns the percentages of the weekly time allocation spent on teaching and research. The relative share of teaching experienced a double-digit decline, whilst larger portions of time are now spent on research. Teaching time still constitutes 57% of the weekly work load during teaching periods, but it was 69% in 1992. On the other side, research grew from 12% to 19% during teaching periods. For the rest of the time, research has even been established as the largest single portion of the time budget: 39% of the weekly work load goes to research (instead of 33% in 1992); the numbers for teaching time fell from 44% in 1992 to 29% by now.

The shares for scientific services have remained rather stable at *Fachhochschulen* (7% during and 12% outside reading time instead of 6 and 11% respectively in 1992). As for administration, no change has occurred during the reading time (12% of the time budget in 1992 as in 2007); an increase can be noticed during the times when classes are not in session (13% instead of 9%). Other scientific activities still take a rather small, but growing, portion within the time allocation of academic professionals at *Fachhochschulen*: In 1992 it was 2% of the weekly time allocation during the teaching period and 4% outside that time that was spent on such activities, now it is 5% and 8% respectively.

Table 8. Proportion of time spent on different activities when classes are in session, 2007 and 1992 (%)*

	Academic staff at middle rank at universities		Professors at universities		Academic staff at <i>Fachhochschulen</i>	
	2007	1992	2007	1992	2007	1992
Teaching	28	26	34	43	57	69
Research	43	49	31	29	19	12
Service	18	14	11	8	7	6
Other academic activities	6	2	8	5	5	2
Administration	6	9	16	16	12	12

* Occurring differences from total of 100% are due to rounding errors.

Table 9. Proportion of time spent on different activities when classes are *not* in session, 2007 and 1992 (%)*

	Academic staff at middle rank at universities		Professors at universities		Academic staff at <i>Fachhochschulen</i>	
	2007	1992	2007	1992	2007	1992
Teaching	13	12	16	20	29	44
Research	57	61	50	53	39	33
Service	18	15	12	9	12	11
Other academic activities	7	3	10	7	8	4
Administration	6	8	12	12	13	9

b) Preference for teaching or for research

As in the study of 1992, academics were asked whether they saw preferred teaching or research. University professors expressed a professional inclination towards research to an even larger extent than 15 years ago. As Table 10 shows, only 2% of them indicated a preference for teaching, 20% expressed a preference for both, “but more towards teaching” (for comparison: 1992 it was 5% and 30% respectively). A liking for both, “but more to research” was declared by 66% of these professors, 12% see a clear preference for research (again the 1992 numbers: 58% and 7% respectively). That growing propensity for research confirms the often-stated presumption that achievements in research are more attractive for professors at German universities, as they result in an increase in reputation and better career possibilities. Political initiatives, such as the “competition of excellence” introduced a few years ago by the state to awarding funds for research, will probably foster this tendency. (An analogous “competition of excellence” for teaching has not passed beyond the stage of discussion up to now.)

Academic professionals in middle ranks at universities expressed even more unequivocal preferences than the university professors: 9% see their priority in teaching only (compared to 6% in 1992), 27% in research only (a similar number to the 26% of 1992). A combined inclination, “but more towards teaching” was conveyed by 22% (exactly as in 1992), “more towards research” tended 46% (compared to 42% in 1992). That is to say, that the fundamental orientation towards research still persists, but the predilection was reduced slightly.

According to the different description of work tasks at *Fachhochschulen*, the setting of priorities between teaching and research diverges clearly from the tendencies expressed at universities. 42% of the academic professionals there see their preference in teaching, followed by 35% who insist on the importance of both, “but more towards teaching”. A smaller percentage of 21% have an inclination to both, “but more towards research”, and only 2% have a clear preference for research. For comparison the numbers of 1992: 29% voted for

teaching only, 49% for both, “but more towards teaching”; 22% for both, “but more towards research”, 0% for research only. Observing that clear predilections for teaching have increased considerably, the difference between types of academic work at universities and *Fachhochschulen* seems to have become even more notable.

Table 10. Do your interests lie primarily in teaching or research? 2007 and 1992 (%)*

	Academic staff at middle rank at universities		Professors at universities		Academic staff at <i>Fachhochschulen</i>	
	2007	1992	2007	1992	2007	1992
Primarily in teaching	9	6	2	5	42	29
In both, but leaning towards teaching	22	22	20	30	35	49
In both, but leaning towards research	42	46	66	58	21	22
Primarily in research	27	26	12	7	2	0

c) *Publications*

Publications of different types are the usual way of documenting research activities. According to the cultures of different academic disciplines, strong differences between type, number, and medium may be noticed. Furthermore it is typical that the institutional status and research experience influence the publication output, with university professors usually at the top of the scale. Asking for the mere numbers of publications of different types during the last three years, does not allow a judgment of the quality of the concerning papers, books etc. Sometimes, an increase in publications can be read as a consequence of the felt strain exerted by research evaluation and the resultant awarding of research funding. (That is to say that scientists might publish more single papers in order to get better quantitative research ratings and more funding that would enable them to continue their research, without actually improving the quality of research.) Nonetheless, publication frequency is an important indicator for research activities as for the research culture within scientific communities.

Comparing the current data to the study of 1992, there is a noticeably strong rise in numbers of almost all types of examined publications of scientists working at higher education institutions (see Table 11). This may be interpreted as a consequence of the research politics in Germany and seen in relation to widely discussed phenomena like university rankings, research ratings or the “competition of excellence” mentioned above. In this way, academics respond to new challenges that are brought upon them by politics, media, and society, which ask for visible justification for the peculiarities of academic activity.

As in 1992, articles published in a book or in a scientific journal are the most frequent types of publication. Meanwhile, the publication frequency has nearly doubled for all three categories of academic professionals surveyed. University professors had the highest output

of such publications (16 throughout the last three years, as compared to 9.2 in 1992), followed by academic professionals in middle ranks at universities (5.5, compared to 3.6 in 1992) and academic professionals at *Fachhochschulen* (4.1, compared to 2.3 in 1992).

Papers presented at conferences are the second most frequent publication type (as in 1992). Again, the university professors are most prolific (with 10.6 publications as compared to 5.2 in 1992), and again, the publication frequency has about doubled. For the next two types of publications – publishing research reports for funded projects and articles for newspapers and non-scientific journals – smaller mean values are displayed. The order of publication frequency of the three categories of academic professionals is constant, as is the clear rise in numbers of these publications. Also, the frequency of edited scientific books has risen, by about half the amount of 1992.

The one type of publication that does not show comparable increase in frequency since 1992 is the publishing of a book as author: the respective values for academic professionals at *Fachhochschulen* (0.4) and the middle ranks of universities (0.3) have stayed exactly the same, for university professors it even has diminished slightly (0.7 instead of 0.8 1992). Writing books, as may be concluded, is not a form of publication the output of which can be increased easily – quite to the contrary: perhaps time and energy necessary for a monographic volume is absorbed by the raised rates of other publications. It may also occur that monographs are of less importance to scientists, if research evaluations rely largely on articles in peer reviewed journals.

Table 11. How many of the following scholarly contributions have you completed in the past three years? 2007 and 1992 (arithmetic mean)

	Academic staff at middle rank at universities		Professors at universities		Academic staff at <i>Fachhochschulen</i>	
	2007	1992	2007	1992	2007	1992
Articles published in an academic book or Journal	5.5	3.6	16.0	9.2	4.1	2.3
Paper presented at a scholarly conference	5.3	3.0	10.6	5.2	2.6	1.1
Research report/monograph written for a funded project	1.6	0.9	3.4	1.8	1.5	1.1
Professional article written for a newspaper or magazine	1.2	0.8	3.2	1.1	1.8	0.9
Scholarly books you authored or co-authored	0.3	0.3	0.7	0.8	0.4	0.4
Scholarly books you edited or co-edited	0.2	0.1	1.3	0.9	0.3	0.2

d) Personal Influence at Institution

Regarding their personal influence on decisions made within the higher education institution they work at, the academic professionals draw a rather similar picture to the findings of the

1992 study. The question asked was: “How influential are you, personally, in helping to shape key academic policies?” The scale of answers ranged from 1 (Very Influential) to 4 (Not at all Influential), possible levels of exercising influence were the department or institute as the smallest unit, the faculty (or *Fachbereich*) as the intermediate one, and the institutional level of the university itself. For understandable reasons, the respondents perceived that their personal influence diminished from the smallest to the largest possible institutional unit. Also, it comes as no surprise to see that academic professionals of middle ranks at universities (that often do not have full autonomy in relation to their working conditions and the content of their work and have less institutional rights) display more pessimistic views of their personal influence at all possible levels than professors at universities or *Fachhochschulen* (see Table 12). (The mean value of that personnel category for the institutional level is 3.7 and thus very close to “not at all influential“, a finding that indeed indicates a perceived complete lack of exerted influence.)

In contrast, academic professionals at *Fachhochschulen* articulate a quite optimistic view with regard to their personal influence. Still, in comparison to university professors they give a less positive estimate of their influence on departmental level. The mean values reached for the institutional as well as the faculty level are very similar to those for the total of the university professors (in the first case slightly less influential, in the second slightly more). This means only a minor change to 1992, when the appraised influence at institutional level was greater at *Fachhochschulen*, too. The reason for that finding might be sought in the smaller institutional size of many *Fachhochschulen* that also implies smaller administrative units on each level and less steep hierarchies.

The question of hierarchical position comes in quite clearly when observing the differences in the answers of university professors of the highest rank as compared to those of the lower rank. For all levels, the professors of the lower rank gave a more pessimistic assessment of their personal influence than the holders of chairs at the top of the hierarchy.

Table 12. Personal Influence at Institution (arithmetic mean)

At the level of the...	Academic staff at universities			Academic staff at <i>Fachhochschulen</i>
	Professors at higher rank	Professors at lower rank	Academic staff at middle rank	
Department or similar unit	1.4	1.7	2.5	1.8
Faculty, school or similar unit	2.1	2.6	3.4	2.2
Institution	2.9	3.3	3.7	3.1

e) *Estimation of the development of working conditions*

The change to working conditions within higher education institutions as perceived by the academic professionals concerned should be a valuable indicator for their contentedness with their environment as well as for their appraisal of the present state of the higher education system. When asking for the assessment of the development of the working conditions in German academe since the beginning of their careers (giving grades from 1 for “much better” to 5 for “much worse”), the answers give a hint to a rather critical judgment. The resulting mean value for university professors of 3.9 (with only 9% of positive answers with the values 1 or 2) can only be understood as expression of a quite pessimistic appraisal of the development of the working conditions at German universities. In general (as with regard to the assessment of single factors that might influence the working conditions), it was especially professors of the lower rank and female professors that had a negative impression of the development of their working conditions. When asking university professors for the appraisal of the analogous development of working conditions at non-university research institutes, the image drawn was not quite as negative (mean value of 3.1 and 25% of positive answers).

The appraisal of academics of middle ranks at universities is quite similar to the one of university professors (mean value 3.6, 11% positive answers for the development at universities; 3.1 for the assessment of the development at non-university research institutes). Apparently, the longer the scientists work at universities, the more negative the appraisal: the youngest academics (those without a doctorate and who have worked at universities for less than 6 years) show the comparatively least negative reaction when asked for their judgment on the development of working conditions at universities (mean value 3.2).

Asking members of *Fachhochschulen* for their impression of the development of the working conditions at universities since the beginning of their careers, the findings do not differ substantially from those of the other two groups. The mean value of 3.6 is equal to that of the members of middle-ranking university academics, although a slightly smaller share (14%) gave positive answers. Non-university research institutions were judged a little less favorable than by the other personnel categories (mean value 3.4, 17% of positive answers.)

5. *Conclusion*

The German system of higher education has experienced some changes since the last study of 1992, which also affect the career system and working conditions of academic professionals. As far as the composition of the academic staff is concerned, these changes tend to come

about rather slowly due to institutional inertia. Nonetheless, some findings are noteworthy: the share of women is on the increase, although female academics are still underrepresented, especially in top positions. The average age of middle-ranking academics at universities has risen, as has the share of permanent contracts amongst them – this stands in contradiction to the changes of the legal framework brought about a few years ago, but perhaps we will have to wait longer until these changes show effect.

The career system itself seems to be developing as well: the desired level of academic qualifications has been raised further, as has the mandatory mobility of scientists – both show their effect already at the intermediate career stage of university middle ranks. Thus, the pressure exerted on younger scientists in entry positions in order to find their place within that system of higher education is still increasing.

The systems of universities and *Fachhochschulen* with regard to the work tasks and the career paths continue to be very different – in parts, these differences are found even enlarged. So, the preference towards research has become greater at the top level of universities. The share of time spent on teaching has been lowered in two of the examined groups with the one exception being the middle ranks of universities, where new positions with teaching duties have been introduced.

Another finding illustrating the change to the working conditions and the system of higher education in general is the steep increase in publication frequency – here, the influence of politics as of the new structures of university management (together with the installment of systems of evaluation and rating) is mirrored. At German universities, apparently a very distinct hierarchy still prevails which can be detected from the different assessment of personal influence on decision making within the institutions by the various personnel categories.

All in all, the concerned academic professionals draw a rather pessimistic picture of the development of the working conditions at their institutions. This gives reason to presume that many of the changes regarding the system of higher education have been perceived quite closely, but the possible positive effects of such changes and reforms have not been realized by the persons affected by them.

Acknowledgements

The German CAP analysis would not have been possible without Florian Löwenstein, Research Associate of INCHER.

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To enter employment, you need a work permit ('Arbeitsgenehmigung' or 'Arbeitserlaubnis') or a residency permit that allows you to work (see our section on work permits). Germany has one of the most highly regulated labour markets in the world, with its Labour law designed to protect employees. Whether or not an employment contract exists, all employees have basic rights to: holidays. Medical professions in Germany include general practitioners and specialists as well as professions in biotechnology, public health, medical computer science, and nutrition. Doctors from abroad are looking for careers in Germany. Read more. Volunteering in Germany: a guide. Flexible, friendly, hard-working: These are some of the qualities you might need to find work as a volunteer in Germany. And the country offers many opportunities for people looking to help those in need or to learn more about a potential career. Read more. Study in Germany: Fashion. Abdullah Emre Ozdemir, 31 years old, hometown " Konya, Turkey, mechanical engineer, a senior specialist on acoustics. About employment. I graduated from Istanbul Technical University and worked at Ford Motor Company research centre. Later, the project was moved to the Merkenich technical centre in Cologne, and since then I have been working in Germany. Over the years, I worked for a well-known engineering consulting company FEV GmbH, graduated from a master's degree in MAN Truck and was an acoustic engineer at BMW for two years. In parallel, I was a consultant in my own company " Inspiris The academic profession in Germany is widely viewed " in comparative perspective - as being fairly heterogeneous. There seems to be quite a status gap between university professors and junior academics, and the junior careers are often viewed as being overshadowed by job insecurity, high selectivity and dependency. Moreover, the situation of the academic profession at other institutions of higher education, i.e the Fachhochschulen, seems to be fairly distinct from that at universities. Career options after postdoc Germany Career prospects for postdocs. Although there are positive signs of change, working conditions for postdocs in Germany remain difficult. Andreas Keller, director of the Higher Education and Research division of the German Education Union (Gewerkschaft Erziehung und Wissenschaft - GEW) explains exactly where the problems lie and what changes still need to be made. What are the career prospects for postdocs in Germany like? © CL. / photocase.de. academics: Would you advise someone to pursue an academic career today?