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Academic Careers in Poland and their Context: Intergenerational Comparison

From the perspective of ten years of economic and political transformation in the 1990s

The second half of the twentieth century brought an enormous rise in the education level in almost all countries. The number of university and college students increased greatly. Education became a mass phenomenon. Many new universities emerged, the number of their employees, engaged in research and teaching, increased.

The dominance of the rule of rationality as the basis for action of the contemporary societies, basing promotion in many fields upon the meritocratic criterion, the increasing demand for experts in almost all areas, made the members of many societies, particularly those of the middle class, believe that higher education offers them the opportunity of promotion. Mass education has its consequences as well. The character of the offer of universities is changing; the culture of elites is losing importance. Even informal observation shows that the social structure of students (who, in many countries, come from the middle class now), as well as the structure of research and education staff, is changing (Scott, 1995). The issue of relation between the academic world and its social, political and economic context arouses increasing interest. The academic world is losing some of its autonomy, even if it is guaranteed by its status. Politicians and businessmen are looking for experts and advisors here. They engage in complex relations with universities, where they earned their diplomas, as well as with other persons, who completed their education at the same university, and later become the members of political, economic and cultural elites. Being “products” of specific universities, due to positions occupied in the structures of power and significant interest groups, they influence the reality, opting for certain solutions in politics and economy, which are often consistent with the theoretical concepts dominant at the universities, where they used to study. They also allocate the resources for research and they have some say with regard to the education policy, and they support it selective (for instance, Dickman 1993, Nisbet 1980).

Therefore, it matters, who studies, who stays at universities and research institutes afterwards, who seeks employment outside these and where an individual earned his or her diploma. At the same time, we have to realize that the decision of choosing a certain direction in education, and, which follows, the type of strictly academic career (which can be, nonetheless, based upon various reasons), combined with roles performed outside (as experts, politicians, businessmen, managers etc.) or treated as a stage in the career outside the academic world, are conditioned by many different factors during different stages of education and after.

In this article, we will focus on some chosen aspects of the issues mentioned above. We will discuss the context of functioning of universities in Poland now, and compare the careers in different generations, with regard to gender and fields of study.

The basic hypothesis that will be examined here refers to the relation between the situation of science and education offered by universities in Poland in the nineties and the course of academic careers. The decrease of funds for education and research, as well as worsening of standards of living of persons employed by these institutions results in a slowdown of academic careers, measured by time intervals between earning consequent university degrees.

Another hypothesis refers to the changes in structure of the discussed profession. The worsening situation of its representatives with regard to two aspects – chances to conduct scientific research and achieving satisfying material remuneration for work at research institutions and at universities – results in a change of structure of the employees. Due to these reasons, as well as in effect of the increase of the percentage of women among the students, observed earlier, the number of women working as university lecturers is increasing, although slowly. A question arises (1), whether we have to do with a well-known pattern, according to which when a material situation of a given professional group worsens in comparison with other groups, men withdraw from engaging in this type of work, and those, who are already the part of this group, shift to another type or try to work out an adaptation strategy, which will allow them to counteract the lowering of the standard of living quite effectively, or (2) whether it is a tendency of equalization of opportunities of men and women in a profession, traditionally perceived as designed for men. However, we cannot really say, to what extent each of these factors led to a change in proportion among the employed persons, since it is very difficult to balance their roles.

Situation of institutions of higher education in the 1990s

The change of economic system caused the increased need for people prepared to work in modernising economy. The same changes resulted in a high level of

unemployment. A large number of men and even higher number of women lost their jobs in the early 1990s. The new economic situation (after the fall of the communist system) resulted in the increase of the number of students admitted to state universities as well as to open new non-state schools of secondary and university level, thanks to which the increase of the number of students became three times larger in the nineties (Universities and their finances in 1999: XVIII). The pattern of attendance of schools differentiated by gender persisted despite of the changes (Bialecki, 1997).

Women constitute a higher percentage among students than before. However, they select cheaper types of studies. In the 1990s also percentage of women among students of the extramural, external and evening studies increased, being especially high in non-state institutions of higher education. In 1997/98 women constituted 52 per cent percent of students of day studies, 55 per cent of students of evening studies, 61 per cent of students of weekend studies and 72 per cent of extramural studies (Statistical Yearbook 1998, 1998:235). The figures show that women continue to get education in the new conditions regulated by free market mechanisms but they select shorter forms (non-state educational institutions often offer only 3-year studies) and in many cases cheaper forms of education because available in smaller towns.

Despite of that the transformation of an economic system from command to free market in Poland caused marginalization of science. The decision-makers in post-communist period treat the science sector as if it could survive the difficult times on its own; science became a silent loser. The percentage of outlays on science in the national income distributed has declined for several years to reach 0.47 per cent in 1998. In the late 80s it consisted of over 1 per cent. The salary of the university professor in 1994 was worth half his/her salary of 1989 (Jalowiecki, Hryniewicz & Mync, 1994).

In 1994, Chojnicki and Czyz wrote: „The drastically low financial outlays for science in Poland, which over the last three years varied between 1.3 per cent and 1.1 per cent of national income distributed, reduce science to a mere survival level and bring about a sort of depreciation of scientific staff and their outflow abroad. This makes progress impossible in those basic studies of an experimental nature, which depend on expensive apparatuses, as well as in technological research. Such a situation leads to Poland's increased technological dependence and purchase of still more licences, while weakening the position and role of its science in making practical activities more efficient”. (Chojnicki & Czyz, 1994).

The research results, published in April 2001, show that the salaries in education are the lowest. The average gross monthly salary in this sector was equal to PLN 2004 (USD 500), while in state administration it is PLN 4383 (about USD 1100), and in banking and finances – PLN 14 419 (about USD 3500). The author of the article wrote explicitly: “the bank is on the top, the school is on the bottom” (Staruchowicz, 2001). Differences between sectors are thus huge, showing that the diversity of incomes in the national economy is increasing and that education has become a traditional loser in this field during the last decade. The argument that data for the whole sector includes both the highly educated staff and primary and secondary school teachers, and therefore the diversity of incomes in this group is large, is not defensible. It is shown by the data on incomes for individual positions, published in March and April 2001 (in newspapers *Rzeczpospolita*, *Gazeta Wyborcza*, and weekly *Polityka*), which demonstrate a great flattening of incomes in this sector, as well as in higher education and research institutions. This leads to a simple conclusion that academic career as a source of income is attractive neither at the beginning, nor from the perspective of future income, after a period of sacrifice.

External and internal brain drain from academia

The recent economic situation of science combined with earlier political one (repression of political opposition) caused large emigration of scientists from Poland and, within the country, to other sectors. After 1989, we could also observe mass migration of academic staff to other sectors in Poland. Permanent emigrations of Polish scientists abroad in the years 1992-93, as compared to the period 1989-91 did not decrease. In the early 1990s the average annual number of emigrants totalled 191, while in the second period it already amounted to 218. Persons migrating abroad are most often representatives of such fields as: mathematics, informatics, biology, physics and chemistry. One of the most important reasons for migration is the possibility of finding better conditions for scientific work.

However, the internal brain drain (in terms of the Polish labour market) causes more losses in scientific and university staff. While in the 1980s the internal brain drain involved 286 persons annually, in the early 1990s as much as 1088 persons mainly from economics and management, mathematics and informatics, social sciences and law, and biology.

Scientists (mostly up to 35 years old around 1990) moving to other occupations at home find employment mainly in private domestic or foreign firms, and some of the former research staff start a business of their own. 40 per cent of employers (1052 firms answered questionnaire) preferred men to women as potential employees; for other employers gender did not make difference (Hryniewicz,

Jalowiecki, 1994). In 1993, 69 per cent of men and 57 per cent of women employed in higher education institutions (Wnuk-Lipinska, 1996) have had additional income (beside a university salary) working e.g. in different companies and teaching extra courses in private higher education institutions. Faculty members of humanities, social sciences, law, and economics have had especially often additional jobs as lecturers. A large number (58%) of faculty members revealed that they wanted to change job at least temporarily.

The same trend has been observed in the following years. For instance, among the postgraduate students, 26.9% worked in year 1999, while in some fields, such as economy, pharmacy, the working ones were the majority. In case of law and medicine – they made up more than half. In other fields – less (Universities and colleges and their finances in 1999 (2000:57). These differences can be partially explained by varying demand for employees with specific education, but we should also realize that in some fields (for instance, related to the military service), postgraduate studies are undertaken mostly by the employees of a given sector.

The leaving scientists cannot be easily replaced by new graduates because they do not see their life career in academia and, even if some of them want to work there, they do not have proper experience and professional accomplishments. Therefore, it is reasonable to talk about a ‘generation gap’, observed in higher education and research institutions. Today, it is hard to tell how many people, who earn their doctor’s degree (although their number has been increasing in the second half of the nineties) will decide to stay at universities and continue their academic career, and to what extent they treat their university degree as an additional advantage on the more and more competitive labour market. The observations so far show that the number of persons, who earned a professor’s title, or a habilitated doctor’s or doctor’s degree has increased in the second half of the nineties, but this increase is relatively low, taking into consideration the increase of the number of students (Statistical Yearbook of the Republic of Poland 2000:243).

Women’s access to academia before the fall of communist system in 1989

For the long time it has been a strong belief that universities are the place reserved for men, that they have exclusive right to study and work. And despite that women achieved right to enter universities about 100 years ago, they still constitute minority among scientists, especially of higher level. The struggle of women to get access to universities was a common phenomenon in many European countries as well in North America in XIX and XX centuries.

Before the 1890s, Polish women who wanted to enter a university went abroad to Switzerland, France, Belgium, or the United States, in many cases, sponsored by Polish women's organisations. Twenty-five years later, Galician universities (Southern Poland, at the time part of Austro-Hungarian Empire) admitted numbers of female students, drawn from all other parts of Poland. They won the right to enter universities largely with the support of a major part of the Polish intellectual elite (Hulewicz, 1936:4). Some Polish women who graduated from universities at the turn of the twentieth century became exceptional scientists. Among them were Maria Skłodowska-Curie who received a Nobel Prize first in 1905 on her own and in 1911 with her husband, Jozefa Joteyko, who lectured in experimental psychology in Brussels and also in the Sorbonne in Paris; and Zofia Daszyńska-Golińska who worked at the Humboldt Academy in Berlin. The list is much longer. Many of them participated in the creation and reconstruction of Polish institutions of higher learning when Poland became independent in 1918 (Siemienska, 1986). Some of them were also active in various women's organisations.

After Poland achieved independence in 1918, women gained the right to vote and formal political and social equality with men. Nevertheless, women did not have the same educational or professional opportunities as men. Women represented 27.2 percent of all students in 1928-1929, and 28.3 percent in 1937-1938 (Small Statistical Yearbook, 1939:263). A particularly large proportion of women studied pharmacy and dentistry. Women also dominated among those studying philosophy but were not enrolled in technical studies or in theology.

After World War II, the number of women being educated rapidly increased which has been congruent with the ideology of the newly established communist system emphasising equality as a way - among others - to enlarge a reserve of a labour force (Siemienska, 1989). In the 1980s, the number of women exceeded the number of men enrolled in university-level studies. The increased participation of women in some faculties has led to the further feminisation of professions that were already female dominated. Men have relatively lower interest in university level studies and long-term studies because, contrary to the pre-war period, these forms of education do not guarantee well-paying jobs. Certain workers' professions or even setting up one's own small enterprise gave a chance of earning larger incomes. For women who wanted to avoid vocational careers and were unwilling to perform "dirty" and hard physical work, the white-collar work they can get with a secondary school or university-level education was attractive. Education has traditionally conferred high social status, even though in the post-war period it has not been associated with increased incomes (Ślomoński and Wesolowski, 1973). The economic crisis of the early 1980s came as a shock to Poland. The ability to earn a living became more pressing,

and the social appeal that education has traditionally held has been eclipsed for some time (Jasinska and Siemienska, 1983).

The number of women academics employed in higher education institutions has not increased as rapidly and was far from having reached the same proportion as that of women students after World War II. Is this small proportion only proof of discrimination and the differences in the numbers, a measure of the size of discrimination? The problem is more complicated.

Possibly, the smaller number of women assistants than male ones is the result, not so much of discrimination but of the uneven distribution of women in the various faculties, and the fact that the numbers of assistants hired vary in proportion to the numbers of students in given faculties. A question that should also be asked, even though no answer is yet available, is to what extent women really wish to become academics. Another question to ponder is the extent to which this decision is made for women graduates by the academic authorities. The fact remains that if smaller numbers of women than of men "start out" as assistants, there will be fewer women available, in the future, to fill ranking positions in science.

For years, women were rather seldom students in postgraduate and doctoral studies despite a stable increase in their number. For example, the percentage of women enrolled in postgraduate studies was 24.6 percent in 1970, and 43.8 percent in 1985. In 1970, women accounted for 35.5 percent of doctoral students, and in 1985, 28.9 percent (Statistical Yearbook 1986:473).

In the period 1970-1990, fewer women have earned advanced degrees (excluding the M. A. or the M. D.) than men had ¹. Among those awarded the Ph. D., the proportion of women varied between 27 percent and 32 percent. The proportion of women among those awarded the degree of habilitated doctor (the most

¹ In Poland, the following university degrees can be earned: MA or MD after 5 to 6 years of studies (depending on the field), next, the PhD which can be obtained after completion of a special doctoral programme or completed by a person working in an educational or other institution. Following the PhD, there is a next degree, the habilitated doctorate, which is usually completed by mature scholars working in educational or research institutions. In each case, a dissertation meeting criteria for the respective degree has to be presented by the candidate. The highest title is that of professor awarded on the basis of scientific achievements. The first degrees mentioned serve as the basis for being appointed to different positions in universities and in other scientific institutions. Graduates having MAs or MD become assistants, PhDs - assistant professors, habilitated doctorate holders - extraordinary professor, title of professor, and ordinary (full) professors. In the 1990s, there are shorter (3 years) forms of university education in some fields, which give BA after which students can continue education during two years to earned MA or MD.

advanced degree in Poland) has remained stable, standing at 21 percent throughout the entire period. Women constituted 35 per cent of the total number of assistants in 1970, 39 per cent in 1980, and 47 per cent in 2000. The 1980s witnessed an increase in the relative numbers of women earning the title of extraordinary professor, a figure approximating that of the proportion of women earning the degree of habilitated doctor. The percentage of women who have obtained the title of full professor was slightly smaller in the period (Siemienska, 1992) (table 1).

TABLE 1. Women Academic Teaching Staff Members in Higher Education Institutions as Percentages of Total Numbers

	Total	Professors	Associate Professors	Assistant Professors	Assistants	Lecturers	Librarians	Others
1970-1971	30.7	8.6	13.2	32.8	35.0	26.6	69.1	52.3
1980-1981	35.1	11.2	17.6	33.1	39.3	38.6	78.8	65.5
1985-1986	35.1	12.9	19.4	33.3	38.5	43.8	79.3	58.8
1988-1989	36.3	13.2	19.7	33.4	41.9	46.1	79.9	58.5
1989-1990	40.1	13.8	20.0	34.3	46.2	45.7	79.8	
1990-1991	37.0	15.1	19.3	34.6	43.1	49.4	77.9	59.1
1996-1997*	37.7	17.3	16.6	34.2	44.5	53.7	88.4	65.0
1999-2000	38.4	18.4	20.1	35.1	46.9	54.8**		

Source: Author's calculations based on *Education 1990-1991*, Warsaw: GUS - Central Statistical Office, 1991, p. 172; * *Higher Schools in the School Year 1996/97*. Warsaw: GUS, 1997, p.84-85, *Statistical Yearbook of the Republic of Poland 2000*, Warsaw: GUS – Central Statistical Office, 2000, p.243, and author's calculations. **The percentage of women includes following groups: lecturers, librarians and others.

The Presence of Women in the Academic World in the 1990s

The actual role of women in Polish science (in university teaching and research) has to be considered in the political, economic and cultural contexts of the 1990s.

The number of women among students is still systematically increasing (in 1990, they made up 50.2% of all students, and in 1999/2000 – 56.8%). As previously, relatively more often they select extramural, external or evening studies; in 1999/2000, they made up 53.4% of all full-time students (*Statistical Yearbook of the Republic of Poland 2000:239*). Their percentage among stu-

dents of non-state universities is decreasing (it was equal to 66% in 1994/95, and in 1999/2000 – 62.5% (Universities and their finances in 1999: XVI). It shows that still an important factor, influencing the choice of type of university and education system, more in case of women than men, are costs of educations. Women choose cheaper solutions. Therefore, the worsening material situation of a large part of the society influences mostly the education of women. Although their number is increasing, they are attaining education of worse quality, which will undoubtedly lead to decrease of opportunities for women on the labour market, and it will exclude them from some types of career, such as academic career, where the potential staff are those, who have the best academic background.

The structure of women employed in academic institutions changed significantly in the nineties. Relatively more women work as academics, non-teaching staff and a lower rank academic staff than in the eighties (tables 1). In the 1990s, especially in the first part of the decade (Report about situation in science and engineering in Poland 1999:37) fewer people were interested in completing degree of habilitated doctor needed if someone plans to work in higher teaching or research institutions. In case of careers outside academia, M.A. or M.D. is enough to get better paid job. The number of women among those completing degrees of doctor and doctor habilitated in the mid-90s was relatively higher and it is still increasing. In 1990 – 21.3% persons, who completed the habilitated doctor degree, in 1995 – 27.2%, in 1997 – 25.4%, in 1998 – 30.1%. They made up, accordingly, 30.8%, 33.1%, 37.8% and 37.1% of all persons, who earned the doctor's degree in these years (Statistical Yearbook 2000:264). Also the percentage of women, who achieved the title of professor, has increased; in 1995/6 they made up 14%, and in 1999/2000 – 15.5% of all professors (Statistical Yearbook 2000:243). The increasing number of women among people earning university degrees is probably a result of influence of several factors. It can be caused by cultural changes, in accordance with which academic career is a more and more socially accepted model of a life career also in case of women. The percentage of women among the students, which has been increasing in many years, ensures an adequate number of candidates, interested in earning university degrees. It can also mean that men can get a relatively good job without this kind of “capital” (using Bourdieu's terminology), and in case of women, it increases their competitiveness on the labour market, confirming once again the observation made many times, that women, in order to get a better job, have to have a bigger ‘educational capital’ than that of men (table 2).

TABLE 2. Awarded doctorates and habilitated doctorates in the 1990s by scientific field

Field	Habilitated doctorates						Doctorates					
	1990		1996		1999		1990		1996		1999	
	Total	No. of women	Total	No. of women	Total	No. of women	Total	No. of women	Total	No. of women	Total	No. of women
Chemistry	35	5	40	5	39	12	80	17	81	27	162	82
Economics	94	26	50	18	52	24	156	42	141	63	246	95
Pharmacy	10	4	7	4	14	7	26	19	32	21	42	31
Physics	54	4	46	5	55	5	83	10	88	13	112	21
Geography	1	-	18	10	26	5	-	-	50	18	95	47
Humanities	187	54	168	58	200	79	536	192	427	176	749	347
Forestry	1	1	10	2	7	1	5	-	15	4	27	4
Mathematics	28	4	24	1	28	1	57	12	45	14	77	30
Medicine	129	40	99	29	146	46	455	205	646	290	1044	516
Political Sci.	1	1	-	-	*	*	1	-	-	-	*	*
Law	38	11	16	4	24	11	43	16	32	13	68	19
Biology	62	21	53	22	46	18	164	79	126	84	225	148
Agriculture	92	29	81	33	95	35	173	55	150	59	279	135
Technic.Sci.	201	7	128	19	142	19	420	59	416	73	611	124
Theology	8	-	12	-	22	1	25	-	60	4	92	9
Veterinary	11	1	19	3	6	3	19	2	24	3	41	19
Physical ed.	9	-	8	2	5	3	36	9	33	11	65	28
Military Sci.	12	-	4	-	8	-	45	-	33	-	65	-

Sources: Education 1990-1991. Warsaw: GUS, 1991, p.173; * Higher Schools in the School Year 1996/97. Warsaw: GUS, 1997, p.76; Higher Schools and Their Finances in 1999. Warsaw: GUS, 2000, p.61 and author's calculations. *Political Science has not been shown separately in 1999 in statistical sources.

The data demonstrate that the careers of women academics operate according to different rules than those of men. Because for years fewer women than men obtain the doctorate and the habilitated doctorate, fewer women than men can participate in the entire "cycle of the academic career". Moreover, the course of academic career is shaped differently due to different social roles, played by women and men outside their professional careers.

Academic Careers in the Nineties (based upon the example of the one of the biggest university in Poland)

Analysed here are academic careers of two groups of academics. The selection of people belonging to the first group was made on the basis of going through the full cycle of academic career – thus the group includes all those awarded the title of professor and a position of a full professor at the university during the research, that is, in 1999. Examination of careers of these academics was supposed to answer the question, what were the dynamics of their academic careers, taking into consideration the age while earning consequent university degrees, the speed (measured by the time intervals between consequent degrees), their field of research and gender. It was important to take into consideration the field of study, since observations show that the dynamics of academic “maturation” differs for different fields. For instance, the degrees in fields such as mathematics and theory of physics are earned more quickly than in humanities, in which accumulation of materials as a basis for research is important. Moreover, since it has been indicated many times that careers of men and women differ, the subject of analysis was to state, whether and to what extent they are similar, and whether the discipline (dominated by men or women) plays any role here.

The other group consists of all academics born between 1955 and 1970, that is, persons, who in the period of transformation of 1990 were 20 to 35 years old (presently, 30-45 years old). Thus these are the people, who were still to choose their life career, being students at that time, or worked as academics of a few years of academic career (though no longer than 10 years), young, belonging to the age group especially attractive on the labour market, where the newly established and quickly developed companies were interested in candidates free of habits of the previous system and having relatively good qualifications.

In total, careers of 319 professors were examined (including 69 women and 250 men), employed at the selected university in 1999, and 1076 people born in years 1955-1970 (including 502 women and 574 men), employed at the same university in January 2001. It should be added that none of these persons belonged to both groups, since there are no professors among persons born between 1955 and 1970.

The difference of eighteen months in the time of conducting of research (due to organizational reasons) does not seem to influence the data obtained, since no significant changes were observed during this time with regard to the external and internal conditions of functioning of universities, including the chosen university.

Selection of this university – which is the largest in the country in terms of the number of students and professors, occupying the first place in the ranking with regard to the quality of education (Wprost 1999, Rzeczpospolita, April 2001), was not accidental. In this way, possible differences between criteria applied by

different institutions can be eliminated. Also, the fact that the university disposes of a wide range of faculties, which are dominated by women to a different extent, makes it possible to verify whether and to what extent this feature influences the differences in the number and pace of academic careers of women and men, assuming that the same formal requirements are applied throughout the whole institution.

The Rate of Progress in Academic Careers of Actual Full Professors

The study did not include positions in the university administration, which would indicate to what extent women attain decision-making posts, although we know that at this university, similarly as in other universities in Poland and abroad, women do not hold them frequently (Eggins, 1997; Brooks, 1997).

The careers of women and men being full professors at the selected university reveals a clearly different dynamics (Siemienska, 2000). Almost all of them commenced university studies after World War II, some during the war. The eldest woman was born in 1919, the youngest one in 1949. Similarly, the eldest man was born in 1919, and the youngest one in 1954. Almost all of the women (61 out of 69) attained the position of full professors in the 1990s. The percentage of men nominated in the 1990s was slightly lower.

The hypothesis that in faculties in which the percentages of women among the students are and have been high for a long time, the percentages of women among full professors is higher, was confirmed. There were, however, certain exceptions. The percentage of women full professors was highest in the Faculty of Psychology (44.4 per cent). Women constituted about a third of the full professors in feminised faculties, such as Neophilology, Pedagogy, Polish Philology, and Applied Social Sciences and Resocialization, and in such less feminised faculties as Biology and Philosophy and Sociology. However, the percentage of women full professors is definitely lower in faculties that have only recently acquired large numbers of women students than among those in which large numbers of women students have been present for many years. There are also other faculties in which, despite the high percentage of women present for quite some time among students, their numbers among full professors are much lower (the Faculty of Law and Administration) or are totally absent (the Faculty of Journalism and Political Science). This scenario demonstrates that the mechanisms of advancement also depend on other factors. The presence and scope of open or of hidden discrimination may be one of these.

But one might also assume that the matter might be linked to the appeal of academic careers, which has at least two dimensions. The first one is that of climbing up the inter-university ladder and being successful in the framework of one's institution and, more broadly, in the academic world. The second is that of attaining a position in the university in order to raise one's chances to pursue simultaneously (or subsequently) a non-academic career. Attaining a high position in the academic structure in the case of some professions is a good starting point for other, non-academic positions (e.g., in law, in diplomacy, as governmental experts in economic matters,, etc.). In the latter case, the appeal of academic careers is definitely greater. They become a valued resource, particularly in the case of men, who choose this path as a bridge to careers in other areas of public life that are mainly, if informally, reserved for them. Frequently — and often fictitiously — they combine a job at the university with a job in politics, the economy, etc.

TABLE 3a: The length of time between earning consequent university degrees by academic staff of the one of the biggest university in Poland (mean number of years) Women

Faculties	M.A./M.Sc. - doctor			Doctor - habilitated doctor			Habilitated doctor – Ex- traordinary professor			Extraordinary professor – full professor		
	2001 (I)	1999 (II)	Differ- ence between the groups (I)-(II)	2001 (I)	1999 (II)	Differ- ence between the groups (I)-(II)	2001 (I)	1999 (II)	Differ- ence between the groups (I)-(II)	2001 (I)	1999 (II)	Differ- ence between the groups (I)-(II)
Biology	8.1	5.3	2.8	12.5	8.3	4.2	1.0	9.3	-8.3		7.2	
Chemistry	8.5	9.0	-0.5	7.5	11.0	-3.5		15.0			9.0	
Journalism and Political Science	9.5			17.0								
Philosophy and Sociology	7.6	9.3	-1.7	16.0	10.5	5.5		11.7			7.0	
Physics	7.0	7.0	0	11.0	5.0	6.0	2.0	14.5	-12.5		8.0	
Geography and Regional Studies	8.9	9.0	-0.1		14.3			11.0			4.5	
Geology	9.0	9.0	0		9.0			11.8			16.0	
History	8.5	6.2	2.3	13.0	11.0	2.0		10.5			7.8	
Applied Linguistics and East. Slavic Philology	9.6			8.0	8.0	0		12.0			4.0	
Mathematics, Informatics and Mechanics	5.9											
Economy	7.5	4.0	3.5	9.0	11.0	-2.0	2.0	0	2.0			

Neophilology	8.7	8.9	-0.2	11.0	9.0	2.0		11.6			4.7	
Pedagogy	11.5	11.5	0		9.3			8.7			6.0	
Polish Philology	9.8	8.3	1.5	11.0	9.9	1.1		12.0			5.8	
Law and Administration	8.1	7.0	1.1		7.0			12.7			9.5	
Psychology	8.8	6.7	2.1	10.0	10.8	-0.8		12.3			3.5	
Applied Social Sciences and Resocialisation	10.6	6.3	4.3		12.8			14.3			4.7	
Management	5.5	4.0	1.5	7.0	7.0	0	3.0	12.0	-9.0		7.0	
Interdisciplinary Centre of Mathemat. Modeling	10.0	7.0	3.0		10.0			15.0			5.0	
Research Centre on Antique Tradition in Poland and Europe	6.0											
Centre of American Studies	5.0											
Laboratory of Heavy Ions												

Time of carrying out the studies of the analysed categories of academic staff: 2001* - the study of the academic staff born in years 1955 – 1970; 1999** - full professors

TABLE 3b: The length of time between earning consequent university degrees by academic staff of one of the biggest universities in Poland (mean number of years) Men

Faculties	M.A./M.Sc. - doctor			Doctor - habilitated doctor			Habilitated doctor – Extraordinary professor			Extraordinary professor – full professor		
	2001 (I)	1999 (II)	Difference between the groups (I)-(II)	2001 (I)	1999 (II)	Difference between the groups (I)-(II)	2001 (I)	1999 (II)	Difference between the groups (I)-(II)	2001 (I)	1999 (II)	Difference between the groups (I)-(II)
Biology	7.7	5.1	2.6	9.0	7.3	1.7	2.0	9.4	-7.4		9.7	
Chemistry	6.5	6.6	-0.1	8.0	6.5	1.5	7.0	9.1	-2.1		8.1	
Journalism and Political Science	7.5	7.9	-0.4	9.3	7.9	1.4	3.0	9.2	-6.2		9.4	
Philosophy and Sociology	7.7	6.2	1.5	13.5	6.3	7.2		7.8			9.6	
Physics	6.4	5.7	0.7	9.0	6.4	2.6	3.6	9.4	-5.8		7.9	
Geography and Regional Studies	8.7	9.4	-0.7		7.4			8.4			6.8	
Geology	10.2	7.6	2.6		7.1			11.3			9.4	
History	8.6	6.7	1.9	10.1	9.1	1.0	4.6	9.2	-4.6		8.5	
Applied Linguistics and East. Slavic Philology	7.0	7.3	-0.3		7.3			9.5			6.4	
Mathematics, Informatics and Mechanics	6.8	3.9	2.9	8.5	6.4	2.1	3.5	10.7	-7.2	2.0	5.4	-3.4
Economy	6.9	6.7	0.2	10.0	7.5	2.5	1.0	8.7	-7.7		8.1	

Neophilology	9.1	7.4	1.7	8.5	7.1	1.4	5.0	9.6	-4.6		7.8	
Pedagogy	9.7	7.0	2.7		6.3			11.0			7.2	
Polish Philology	8.7	7.7	1.0	11.0	10.3	-0.3	2.0	9.4	-7.4		10.6	
Law and Administration	7.7	6.3	1.4	10.0	7.9	2.1	4.0	10.0	-6.0	0	10.4	-10.4
Psychology	6.9	6.6	0.3	7.0	6.6	0.4	2.0	9.0				
Applied Social Sciences and Resocialisation	9.8	7.5	2.3		9.5			10.4			7.8	
Management	8.9	6.9	2.0	7.0	6.3	0.7	2.0	8.2	-6.2		6.9	
Interdisciplinary Centre of Mathemat. Modeling	6.7	6.0	0.7	9.0	5.0	4.0		9.0			9.0	
Research Centre on Antique Tradition in Poland and Europe		6.0			9.0			8.0			15.0	
Centre of American Studies	8.2	6.0	2.2		15.0			6.0			8.0	
Laboratory of Heavy Ions					7.0			9.0			12.0	

Time of carrying out the studies of the analysed categories of academic staff: 2001* - the study of the academic staff born in years 1955 – 1970; 1999** - full professors

The differences in terms of the time needed to complete a degree are already apparent in the case of doctorate. On average, women required more time than men, and later the time required increased substantially, although to an uneven extent in the cases of the different faculties. On the basis of the available data, it is difficult to conclude that there are any varying patterns in the cases of feminised and non-feminised faculties. What is worth noting is that the time required to move from extraordinary professorship (the lower position) to full professorship (the higher position) (see table 3) for women and for men becomes reversed. It is now shorter for women than for men in almost all of the faculties. One hypothesis in regard to this situation may be that women find themselves in a different stage in their lives, as they meet academic challenge, one which is linked to fewer household duties, for the children will, by now, be adults. Already being used to having to exert a great deal of effort, so as not to be left behind in the race for degrees, and having fewer encumbrances at this stage of their lives, they may more easily focus their efforts on scientific research. This hypothesis is frequently repeated in regard to the shifting of women's activity from certain areas to other areas within their life cycles, a change that takes place to a limited extent, if at all - in the case of men.

Another hypothesis that can be suggested here, one that could be labeled as optimistic-pessimistic, is the change in the context in which the academic world functioned in Poland in the 1990s. The drop in funding for science, which means less money for research and relatively lower remuneration (compared to the national average) than, for instance, in the 1970s or early 1980s, and the simultaneous appearance of attractive possibilities in other areas of employment, e.g. business, in which remuneration is much higher, has caused men, in particular, to begin to either resign from positions at universities, or to begin treating them as a kind of resource that facilitate the seeking of additional job elsewhere, which, when found, becomes the primary occupation. Therefore, women began to fill the vacuum appearing at the "heights" of academic careers relatively more rapidly and frequently.

It is quite possible that the observed phenomenon of the acceleration of the careers of women at the 'finish', when they have reached the highest posts in the academic hierarchy, is the result of the operation of both of the above mentioned factors. The patterns currently observed at the studied university are convergent with those found in the entire academic population. The interviews conducted with women full professors confirm the above cited hypotheses.

Some women professors are aware of the barriers that women encounter in the academic career, one traditionally considered as men's career. Some of them even speak of an evolution of their thinking in this area, pointing to additional dilemmas with which some of them have had to contend. Not all the dilemmas

are new ones. Polish feminists were already speaking of some of them at the beginning of the 20th Century (Siemienska, 1986). Recently, one of them, Maria Janion, Professor of Polish Philology at the University of Warsaw, wrote the following on the pages of a newspaper (*Gazeta Wyborcza*, 3-4 July 1999, p.25):

For many years I accepted the clear-cut division into important and unimportant issues: in the face of constraint, aspirations for independence are important, and the struggle for women's rights is unimportant. At the end of the 1980s, I expressed this view during a feminist discussion in West Berlin...(...) Several years later ... it has turned out that in free Poland a woman is not a human being, but a 'family being', who instead of [being in }politics, should look after the home...I personally never had any illusions regarding 'equal rights'. I believe that attaining my present position cost me a lot more than it would [have]cost a man. ... Among others, this happens because the so-called universal subject is in the long run constructed according to male models. Men find it easier to adapt to the standards in force in the academic humanities (Janion, 1999).

The Rate of Progress in Careers of Academic Staff Born in Years 1955-1970

While the careers of the present professors developed in changing political and economic conditions, the careers of the generation discussed here are shaped in relatively homogeneous conditions, which are completely different from those experienced by the older generation. The regulations of employment, which differ from the previous ones, have remained relatively unchanged during the last ten years.

In accordance with the adopted rules of financing higher education by the state, the universities prefer to develop postgraduate studies first and later employ those, who have completed them. And thus, this way of educating doctors at universities, which used to be one of many, became the basic way in the nineties, although, which we will show later, reality often differs from these assumptions. Many young and middle-aged academics have not earned the doctor's degree. Moreover, the academics often earn this degree at an older age than they used to, although the postgraduate studies are not related to excessively absorbing duties (such as teaching).

In order to grasp the specificity of course of career in the economic transformation period, the group discussed here was divided into two smaller groups: (1) those, who during the transformation were between 25 and 35 years of age, and thus they were already graduates and/or they reached the age, when most of to-

day's professors earned the doctor's degree, (2) younger people, who were nearing their graduation at that time or still being students.

Table 4. University degrees and titles of academic staff at the one of the biggest universities in Poland in 2001 (persons born in years 1955-1970)

Men born in years:	Persons:					
	total N (100%)	without doctor's degree	with doctor's degree only*	habilitated doctors**	occupying po- sitions of ex- traordinary professors****	having the title of pro- fessor***
1955- 1964	370	54 (14.6%)	218 (58.9%)	88 (23.8%)	40 (10.8%)	10 (2.7%)
1965- 1970	204	68 (33.3%)	35 (66.2%)	1 (0.5%)		
Total	574	122 (21.2%)	353 (61.6%)	89 (15.5%)	40 (6.9%)	10 (1.7%)
Women born in years:						
1955- 1964	335	138 (41.2%)	179 (51.6%)	17 (5.1%)	6 (1.8%)	1 (0.3%)
1965- 1970	167	89 (53.3%)	78 (46.7%)			
Total	502	227 (45.2%)	257 (51.2%)	17 (3.4%)	6 (1.2%)	1 (0.2%)
Overall	1076	349 (32.4%)	610 (56.8%)	106 (9.8%)	46 (4.3%)	11 (1.0%)

*This group includes people, who have not earned a degree higher than doctor's degree; ** The group includes persons, who have not earned a degree higher than habilitated doctor's degree; *** The group includes persons, who have earned the title of professor (they also have earned the doctor's and habilitated doctor's degree; **** Some persons, who are extraordinary professors, have earned the degree of habilitated doctor, and some have also earned the professor's title.

The percentages are not summing up to 100 because some people are counted in two columns. For example people being habilitated doctors and having position of the extraordinary professor.

Analysis of the situation at the selected university shows that, although the rules of employment at universities have changed – doctors are preferred as potential employees – more than half of the persons have not earned the doctor's degree (56.8%). There are visible differences in the course of careers of men and

women. More than twice the number of women than men have had only the master's degree; especially many women born in years 1955-64, who are now 36-45 years old. 10 men and 1 woman among those born in years 1955-1964 have earned the titles of professors. It seems that the sudden worsening of material conditions of academic staff, particularly at the beginning of the nineties, influenced greatly the course of career of these women. Earning the degrees more slowly in the early stage of the professional career, related to the maternal and family roles – which was observed also in the group of women, who became professors – slowed down even more due to the necessity to take up additional work, as well as to perform work at home, which previously used to be performed by specialized institutions. Therefore I suppose that the widely observed disinstitutionalization of services influenced also the households of this group. In accordance with the traditionally observed division of functions, they are more often performed by women even among those, who are university graduates (Siemienska 2000a).

TABLE 5a. Age of earning the university degrees by the academic staff of the studied one of the biggest universities in Poland (means of age) Women

Faculties	M.A./M.Sc.			Doctor			Habilitated doctor			Extraordinary profes- sor			Full professor		
	2001 (I)	1999 (II)	Differ- ence between the groups (I)-(II)	2001 (I)	1999 (II)	Differ- ence between the groups (I)-(II)	2001 (I)	1999 (II)	Differ- ence between the groups (I)-(II)	2001 (I)	1999 (II)	Differ- ence between the groups (I)-(II)	2001 (I)	1999 (II)	Differ- ence between the groups (I)-(II)
Biology	24.8	21.8	3.0	32.8	27.3	5.5	43.5	35.7	7.8	44.5	45.0	-0.5		51.0	
Chemistry	24.1	23.0	1.1	32.3	32.0	0.3	41.0	43.0	-2.0		58.0			67.0	
Journalism and Political Science	26.2			33.2			44.0								
Philosophy and Sociol- ogy	24.4	22.3	2.1	31.4	31.7	-0.3	43.0	42.2	0.8		53.8			60.8	
Physics	24.1	22.5	1.6	31.2	29.5	1.7	41.0	34.5	6.5	43.0	49.0	-6.0		57.0	
Geography and Regional Studies	23.7	23.0	0.7	32.5	32.0	0.5		46.3			57.3			60.5	
Geology	24.9	24.7	0.2	33.6	32.8	0.8		41.8			53.5			61.0	
History	24.3	24.2	0.1	32.6	30.4	2.2	43.0	40.9	2.1		51.5			59.6	
Applied Linguistics and East. Slavic Philology	25.1			34.8	39.0	-4.2	42.0	47.0	-0.5		59.0			63.0	
Mathematics, Informatics and Mechanics	24.0			29.9											

Economy	24.4	30.0	-5.6	31.9	34.0	-2.1	41.0	45.0	-4.0	43.0	45.0	-2.0			
Neophilology	25.2	23.2	2.0	33.7	32.1	1.6	43.0	41.1	1.9		52.7			50.7	
Pedagogy	24.3	24.0	0.3	35.6	34.3	1.3		43.7			52.3			55.7	
Polish Philology	24.5	24.9	-0.4	34.0	33.1	0.9	42.5	43.0	-0.5		55.0			60.8	
Law and Administration	24.2	23.7	0.5	31.9	30.7	1.2		37.7			50.3			55.5	
Psychology	24.9	22.3	2.6	33.6	29.5	4.1	40.0	40.3	-0.3		52.5			56.0	
Applied Social Sciences and Resocialisation	24.6	22.5	2.1	35.3	28.8	6.5		41.5			55.8			61.7	
Management	24.3	25.0	-0.7	30.5	30.0	0.5	34.0	37.0	-3.0	37.0	49.0	-12.0		56.0	
Interdisciplinary Centre of Mathemat. Modeling	25.3	22.0	3.3	35.5	29.0	6.5		39.0			54.0			59.0	
Research Centre on An- tique Tradition in Poland and Europe	25.8			32.0											
Centre of American Studies	24.3			29.0											
Laboratory of Heavy Ions															

Time of carrying out the studies of the analysed categories of academic staff: 2001* - the study of the academic staff born in years 1955 – 1970; 1999** - full professors

and

Table 5b Age of earning the university degrees by the academic staff of the studied one of the biggest universities in Poland (means of age) Men

Faculties	M.A./M.Sc.			Doctor			Habilitated doctor			Extraordinary profes- sor			Full professor		
	2001 (I)	1999 (II)	Differ- ence between the groups (I)-(II)	2001 (I)	1999 (II)	Differ- ence between the groups (I)-(II)	2001 (I)	1999 (II)	Differ- ence between the groups (I)-(II)	2001 (I)	1999 (II)	Differ- ence between the groups (I)-(II)	2001 (I)	1999 (II)	Differ- ence between the groups (I)-(II)
Biology	25.0	23.1	1.9	32.5	28.6	3.9	40.0	36.1	3.9	42.0	44.9	-2.9		53.9	
Chemistry	24.2	22.4	1.8	30.7	29.0	1.7	38.0	36.5	1.5	45.0	45.7	-0.7		53.8	
Journalism and Political Science	24.5	23.6	0.9	31.2	31.7	-0.5	38.7	43.6	-4.9	39.5	47.7	-8.2		56.1	
Philosophy and Sociol- ogy	25.0	23.1	1.9	32.3	29.5	2.8	42.8	36.2	6.6		44.2			53.7	
Physics	24.2	22.3	1.9	30.5	27.7	2.8	38.7	34.1	4.6	40.4	42.6	-2.2		50.5	
Geography and Regional Studies	25.1	24.8	0.3	33.6	34.1	-0.5		41.5			49.9			56.4	
Geology	25.0	22.9	2.1	35.1	30.4	4.7		37.6			48.9			58.3	
History	24.7	23.5	1.2	32.9	30.2	2.7	40.3	38.8	1.5	42.8	48.0	-5.2		55.9	
Applied Linguistics and East. Slavic Philology	25.6	23.8	1.8	32.8	30.5	2.3		37.2			47.4			53.9	
Mathematics, Informatics and Mechanics	24.0	23.0	1.0	30.8	26.9	3.9	37.7	33.2	4.5	40.4	43.9	-3.5	44.0	49.3	-5.3

Economy	24.5	23.0	1.0	30.8	26.9	3.9	37.7	33.2	4.5	40.4	43.9	-3.5	44.0	49.3	-5.3
Neophilology	25.8	24.5	1.3	34.0	32.2	1.8	38.3	31.6	6.7	39.5	49.1	-9.6		56.8	
Pedagogy	25.0	24.3	0.7	34.7	31.3	3.4		37.7			48.7			53.6	
Polish Philology	24.4	23.6	0.8	32.9	31.5	1.4	39.0	41.5	-2.5	41.0	51.0	-10.0		56.6	
Law and Administration	24.1	22.9	1.2	31.7	29.5	2.2	37.0	37.6	-0.6	41.0	47.3	-6.3	38.0	57.3	-19.3
Psychology	24.5	24.2	0.3	31.4	30.8	0.6	35.0	37.4	-2.4	37.0	46.4	-9.4		57.8	
Applied Social Sciences and Resocialisation	25.2	25.8	-0.6	34.5	32.7	1.8		42.6			53.3			60.4	
Management	24.8	26.7	-1.9	33.1	31.9	1.2	38.5	37.4	1.1	41.0	45.5	-4.5		53.4	
Interdisciplinary Centre of Mathemat. Modeling	24.5	24.0	0.5	31.0	30.0	1.0	40.0	35.0	5.0		44.0			54.0	
Research Centre on An- tique Tradition in Poland and Europe		22.0			28.0			37.0			45.0			61.5	
Centre of American Studies	26.7	26.0	0.7	34.8	32.0	2.8		47.0			53.0		41.0	61.0	-20.0
Laboratory of Heavy Ions					31.0			38.0			47.0				

Time of carrying out the studies of the analysed categories of academic staff: 2001* - the study of the academic staff born in years 1955 – 1970; 1999** - full professors

Intergeneration similarities and differences in academic careers

Comparison of the examined groups of people shows that:

- 1) Persons born in years 1955-1970 earned the doctor's degree later, which to some extent, although not greatly, can be influenced by the lengthening of the secondary school and university education period according to educational reforms implemented over time which caused that the master's degree was obtained slightly later). Especially among men, the average age of earning the doctor's degree increased. Let us remember that women became doctors relatively later also in the generation of today's professors.
- 2) The time distance between the consecutive degrees (measured by the average number of years) increased among the younger scientists – in comparison with the present professors – especially visibly in social sciences, biology, physics, economics, informatics, thus in those fields, which offer a relatively higher opportunity of getting an extra job (table 5a and 5b).
- 3) Women belonging to the category of the so-called younger scientists (it means below habilitated doctors) seem to pay a particularly high price for the changes in the conditions of functioning of this social –professional group. While the older ones get promoted, the younger ones, due to their situation, related to a different phase of the life cycle, face particularly many difficulties.
- 4) Comparing the examined groups, we should remember that the first one is a group of people, who went through all stages of the academic career, while in the second one, only part of those, who now have the doctor's or habilitated doctor's degrees will continue their career. Others will drop their careers for various reasons, just like some older ones have - the ones, belonging to the generation of the present professors. However, the younger ones (although many of them not young) make up the natural reserves of the future academic staff, who will assume management positions in science and education, and therefore their academic career deserves special attention.
- 5) We should also remember that failing to earn university degrees and earning them later automatically affects the effectiveness of research conducted by the academic staff. Data used in the present research are not sufficient to let us answer the questions related to the quality of the research, which seems to be decreasing due to a few reasons: lack of funds for scientific research, often acceptance of dissertations of lower quality (due to difficulties in conducting research, as well as existential difficulties), feeling of lack of competitiveness of the university in comparison with other offers on the labour market. Therefore, further, deepened analysis of this group is necessary. We also realize that many explanations, offered here, are hypothetical. Moreover, the presented data comes from a single university. Due to the fact that the analysed university usually occupies the first place in rankings, we can expect it to differ to some extent from other universities, and we can assume that probably in reality the mechanisms of re-

cruitment and promotion are slightly different here, and the city in which is located is a particularly absorptive and attractive labour market, where the offers of universities are confronted with offers of various companies and institutions.

Conclusion

Women being considered as less attractive employees by managers of different companies leave scientific institutions less often than men. Also -maybe some of them - because of the traditional concepts of gender roles want to have jobs (among others more flexible working hours) which allow them to reconcile expectations of family and demands of job. But there is also “another side of the coin”. Lack of competition to get the scientific jobs decrease demands and expectations of scientific institutions toward their employees in respect of their style of work and performance. Further, the unsatisfactory equipment due to financial difficulties of scientific institutions leaves the staff behind in a sense of its scientific achievements. The situation makes women in academia ‘winners among losers’. The frequently observed model is once again repeated here: when a given profession loses its appeal, mainly material, men withdraw from it, and young people choose it less frequently, looking for more profitable jobs, which often for this reason are associated with higher prestige.

NOTES:

The paper is partially based on Renata Siemienska (1999): *Academia as a Space for Women and a Place of Promotion of the Concept of Equality of Men and Women (Polish Case)*, report prepared for UNESCO CEPES – Bucarest, the paper of Renata Siemienska (1998) *Attitudes Toward Women’s Access to Higher Education and Their Presence in R&D in Central and Eastern Europe. Dimensions of Gender Inequality* delivered at UNESCO Regional Conference held in Ljubljana (Slovenia) in 1998 and Renata Siemienska (2000) *Women in Academia in Poland: Winners Among Losers. Higher Education in Europe :XXV/2. 163-172*

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