Leif Lindberg, Ulla Riis & Charlotte Silander (2005) Akademins olika världar [The Different Worlds of Academia]. Högskoleverket Rapport 2005:53 R

The report starts with a brief presentation of the Swedish official national strategies for gender equality issued since the early 1970s. Swedish national statistics on higher education (HE), especially regarding teachers and researchers, have been used for the analyses.

A situation in which the proportion of women, as well as that of men, in a defined population makes up at least 40 percent we designated to be *gender balanced*. This harmonises with a 40/60 definition in Swedish gender equality politics, called the 'gender equality interval'. Focus in this work is on changes over a period of 15 years in the gender balance within HE, with a take-off in the conjecture that the development towards gender equality is too slow-paced.

We describe changes in the proportion of female academics in HE from 1987, 1993 and 2002. Viewed vertically, a successive raise in the proportion of women can be seen, even though a balance is not reached until 2002 and only for PhD graduates and persons just being admitted to doctoral studies. These vertically aggregated data show that the proportion of women PhD graduates in 2002 add up to 44 percent; see Table 1. Viewed horizontally, these 44 percent are composed of a number of asymmetrical conditions; out of twelve disciplinary areas, seven fall aside of the gender equality interval; in veterinary medicine and pharmacy women, form the majority of the PhDs. In science, law, engineering sciences (technology) and mathematics, men form the greater part of the PhDs, and some 40 percent of all graduates are found in these four areas. Table 2 demonstrates this.

Table 1. Proportion of women in higher education over successive steps in an academic career. 1987, 1993 and 2002.

	1987	1993	2002
Professors	5 %	7 %	14 %
Senior lecturers	17 %	21 %	31 %
Postdoctoral fellows	23 %	24 %	38 %
PhDs	24 %	30 %	44 %
Newly admitted doctoral students	32 %	37 %	48 %
Undergraduates	64 %	63 %	63 %
Undergraduate freshmen	57 %	56 %	61 %

Source: Statistiska centralbyrån 2005 www.scb.se, UF 23 SM 0101, UF 23 SM 041.

Table 2. Number of doctorates in 2002 in relation to disciplinary area and gender.

Disciplinary area	Men	Women	Total	Women %
Veterinary medicine	9	18	27	67
Pharmacy	7	12	19	63
Odontology	7	9	16	56
Medicine	323	379	702	54
Humanities & theology	130	117	247	47
Forestry & agriculture	28	21	49	43
Social sciences	197	180	377	48
Science	253	153	406	38
Jurisprudence	8	5	13	38
Engineering sciences	362	128	490	26
Mathematics	43	5	48	10
Other	9	37	46	80
Total	1 376	1 064	2 440	44

Source: Högskoleverket NU-databasen.

The next step in the analysis was to distribute the statistics over (1) the successive steps in an academic career (2) five disciplinary areas and (3) gender. Table 3 shows the situation in 2002.

Each "X" stands for 100 individuals and each "x" for 50 individuals; red ones symbolise women and black ones men.

Table 3. Number of women and men in disciplinary areas in 2002 or 2001/02. Large **X**s represent 100 individuals and small **x**s 50 individuals. Red **X**s symbolise women and black **X**s men.

	Humanities	Social sciences	Medicine	Science	Engineering sciences
Professors (02)	XXXXx	XXXXX	XXXXX	xxxxx	XXXXX
		X	XXx	XX	XX
Senior lecturers	XXXXX	XXXXX	XxxXX	XxXXX	xXXXX
(02)	XXXXX	XXXXX	X	XXX	XXXXX
	X	XXXXX			Хx
		Хx			
Research fellows (02)	XX	Хx	Хx	xxXX	ххX
PhDs (01/02)	XxX	XxXX	XXXxx	XXXXx	XXXXx
• • •			XXX		
Undergraduates	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX
(01/02)	XXXXX	XXXXX	XXxxX	XXXXX	XXXXX
	XXXXX	XXXXX	XXX	XXXXX	XXXXX
	XXXXX	XXXXX		XXXXX	XXXXX
	XXXXX	XXXXX		XX	XXXXX
	XX	XXXXX			XXXXX
		XXXXX			XXXXX
		XXXXX			XXXXX
		XXXXX			XXXXX
		XXXXX			XXXXX
		XXXXX			XXXXX
		XXXXX			XXXXX
		XXXXX			XXXXX
		XXXXX			XXXXX
		XXXXX			

Table 3 demonstrates that the Swedish university system as an entity comprises several 'worlds', each of them functioning under different conditions. This is especially clear regarding the relation between the number of professors and the number of undergraduates. The disciplinary area of medicine, for example, is characterised by relatively few undergraduates, a relatively large number of graduated doctors (half of them women), and the largest number of professors. In

contrast, social sciences show a large number of undergraduates, few PhDs and not very many professors.

It is also possible to start in the statistics on undergraduates and gender. Within the disciplinary areas, care education and teacher education, the proportion of women surmounts that of men by far (in the year 2002, the proportion of women students in care education was 88 percent and in teacher education it was 80 percent). In these areas, the transfer from undergraduate studies to doctoral studies was considerably lower than for other areas, and the 'access' to the professoriate was limited indeed, as were the opportunities in general for a career as a teacher/researcher in academia.

We draw attention to the fact that the—rather common—focus on vertical processes in studies of gender balance will underscore a slowness of change. A focus on horizontal processes, on the other hand, will highlight discipline areas where change actually does take place, as well as areas where nothing happens. Differences in economical and other material conditions will be discernible in studies of horizontal processes, not least how they form different academic career opportunities for women and for men. The conditions for such a career by means of access to doctoral education and chances for earning an academic post and achieving promotion differ—and differ very much—between disciplinary areas. We conclude that it is fair to speak of the different worlds of academia.

Finally, we discuss the development of our research program, and we outline a frame of reference for continuing investigations. Some studies on gender equality in HE, we have noted, have repeatedly explained the low proportion of women in HE by pointing to discrimination or self-selection. Others maintain that the academia actually deviates from the rest of society, in that a meritocratic system has been upheld (in Sweden) for about 150 years, despite a (statistically) heavy male dominance and a paternalistic culture. These varying standpoints form the basis for our categorisation of attempts to explain the underrepresentation of women in HE, especially in the higher levels. Our categorisation yields four cases of explanations:

- 1) explanations taking hold of self-selection within academia,
- 2) explanations taking hold of self-selection outside academia,
- 3) explanations taking hold of discrimination within academia, and
- 4) explanations taking hold of discrimination outside academia.

We saw that the vast majority of explanations would fall under categories (1) and especially (3), and to some degree under (2). Studies launching explanations regarding (4), discrimination taking place outside academia, were practically non-existent.