

Gender Aspects in the Russian S&T - Statistical Trends

Presentation

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in New EU Countries and Eastern Europe*

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Historic facts

- ✘ **Until the end of 1850s Russian women had no access to the Russian universities. In 1859, the University of St.P allowed women to attend lectures as free hearers.**
- ✘ **In 1863, the right was abolished: the major argument was that “women bring revolutionary ideas in the universities and inspire men with the ideas”.**
- ✘ **The other argument (less popular, but still exploited) which had been discussed in the society for decades of XIX century: “research is a man’s privilege and a woman must not be admitted to the scientific profession”.**
- ◆ **In 1868 the 1st HE institution for women was opened (Alarchin Women’s Courses later transformed into Bestuzhev Women’s Courses in 1878).**

Russian women in the foreign universities (1870s-1900s)

◆ In 1871, 17 Russian women studied in the Swiss universities (Bern and Zurich)

In 1872, 104 (57% of the total number of Russian students)

In 1873, 103 (34% of the total number of Russian students)

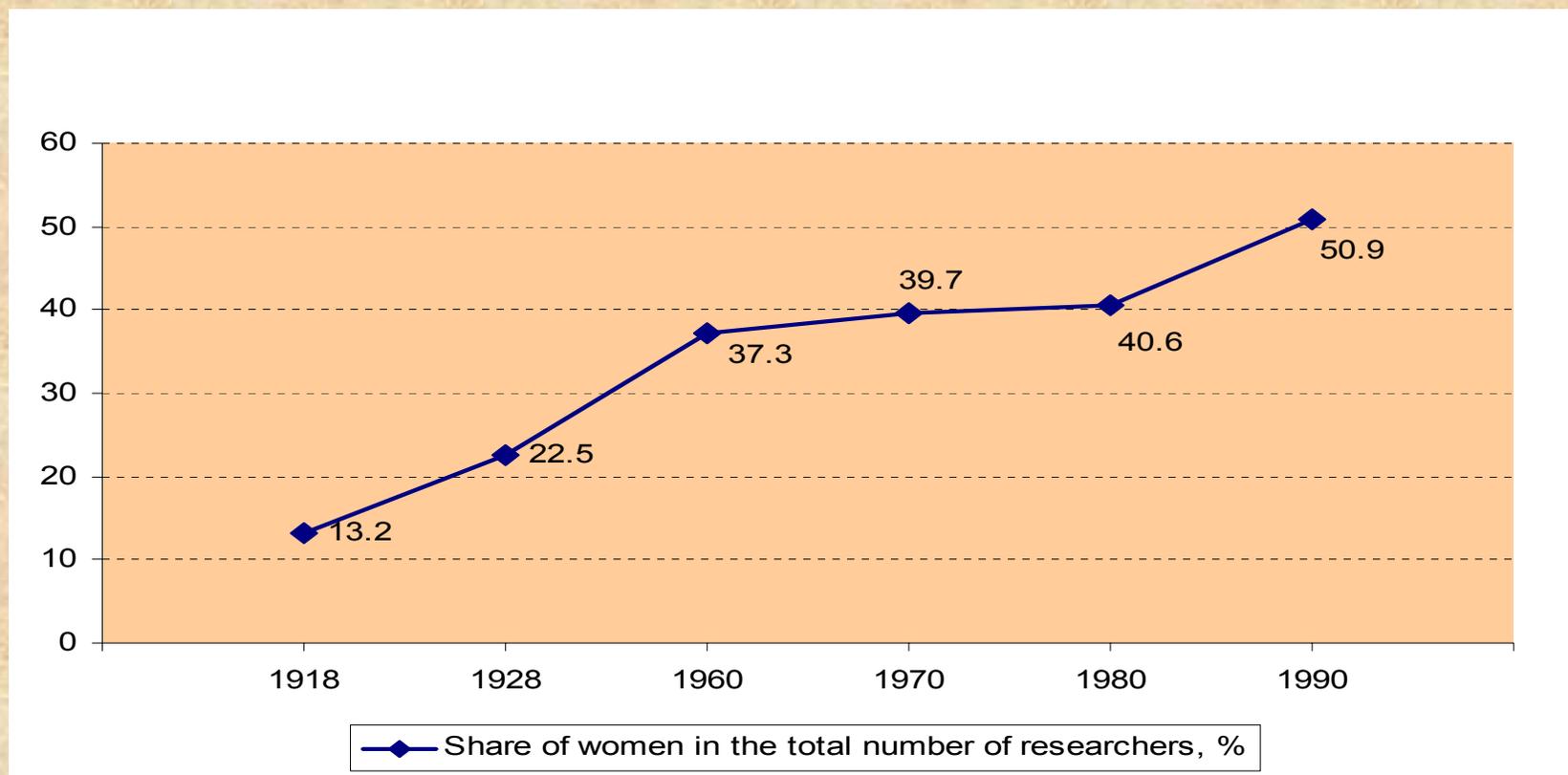
◆ In 1906/07, 591 women (81% of the total number of Russian students) studied in the Swiss universities, of which

- 79% studied in the departments of medical sciences
- 17% - physics and mathematics
- 2% - departments of law
- 2% - departments of history and philology

(See: N. Agamova, A. Alakhverdian. Russian women in Science and Higher Education: historic and scientific aspects. - <http://vivovoco.rsl.ru/VV/JOURNAL/VIET/AGAMOVA.HTM>, accessed 21.06.2007)

"Feminization of science" during the Soviet period (1917-1991)

Percentage of women in the total number of researchers in 1918-1990



Source: N. Agamova, A. Alakhverdian. Russian women in Science and Higher Education: historic and scientific aspects. - <http://vivovoco.rsl.ru/VV/JOURNAL/VIET/AGAMOVA.HTM>, accessed 21.06.2007
Development of Science in Russia. Moscow, CSRS, 1993

“Waves” of women's inflow in R&D*

- ◆ 1920s: under impact of 1) the legal equalization of men's and women's rights; 2) accessibility of HE for girls and women from the working class**
- ◆ 1960s: the USSR S&T policy aimed at the extensive growth of scientific human resources**
- ✗ the end 1980s- beginning 1990s: the outflow of men in the business sector**

* See: E. Mirskaya and E. Martynova. Women in Science// Herald of the Russian Academy of Sciences. 1993, vol.63, No. 8, pp.693-700.

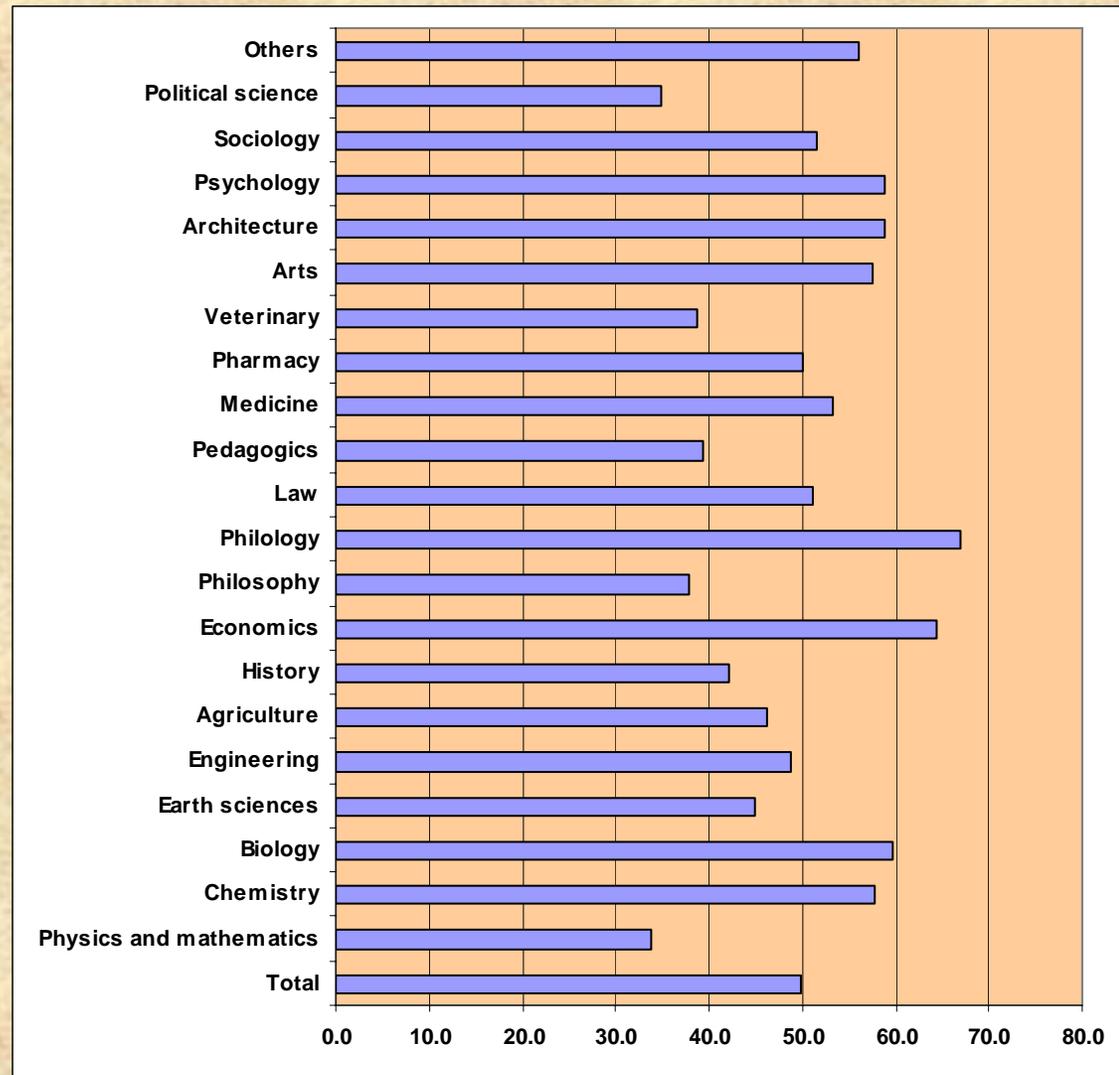
Representation of women in the Russian S&T in the end of the Soviet period: 1991

- ◆ At the beginning of 1991, the Russian S&T involved 555.6 thousand women researchers most of which were employed in engineering (58.4%).
In the other fields of science:
natural sciences – 14.7%
social sciences and the humanities – 9.3% (of which economics made up 67.8%)
medical sciences – 3.2%
agriculture – 2.1%
others – 12.3%.
- ✘ Only 10.5% of female researchers had a scientific degree (Candidate of Sciences or Doctor of Sciences). The same share for male researchers was 27.8%.

Representation of women in the Russian S&T in the end of the Soviet period: 1991 (continued)

Percentage of female researchers in the total number of researchers by field of science: 1991

(Data relate to the USSR research potential)



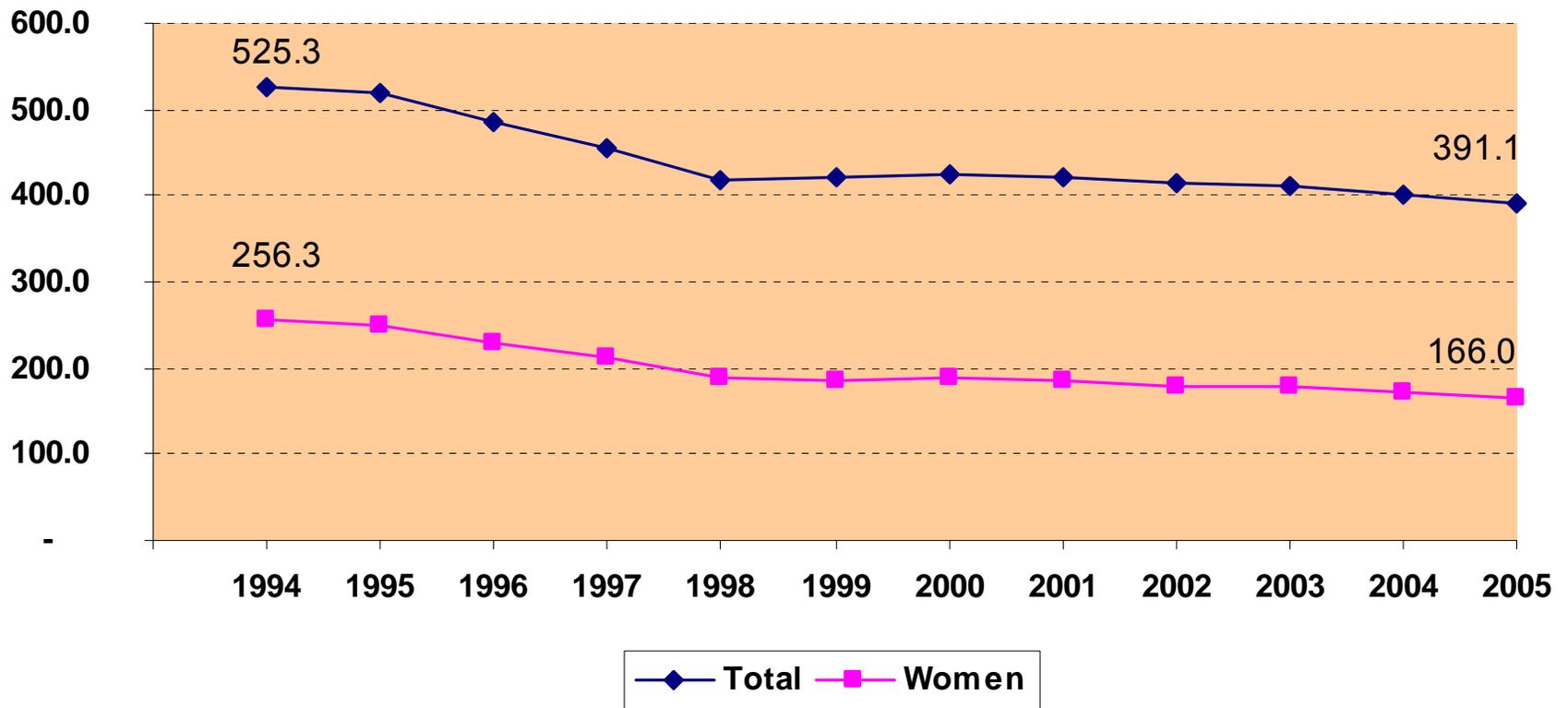
Source: Science in the USSR: Analysis and Statistics. Moscow, CSRS, 1992.

Women in science: unsolved problems of equal opportunities in 1917-1991

- ✘ Contradiction between the declaration of the policy of equal opportunities and double standards in the society**
- ✘ Retained stereotypes of gender roles in the everyday culture which kept double employment of women at work and in families**
- ✘ Arrogant attitude to women's professional ability in most fields of sciences**
- ✘ Undeclared career restrictions through membership in the CP and ideological loyalty**
- ✘ Isolation from the international scientific community that negatively affected on self-awareness of women in science**
- ◆ The problems led to the situation in which to achieve an effective professional position a woman-researcher had to be twice better professionally than her male colleague. If her ambitions were not strong enough, she stayed at sidetrack.**

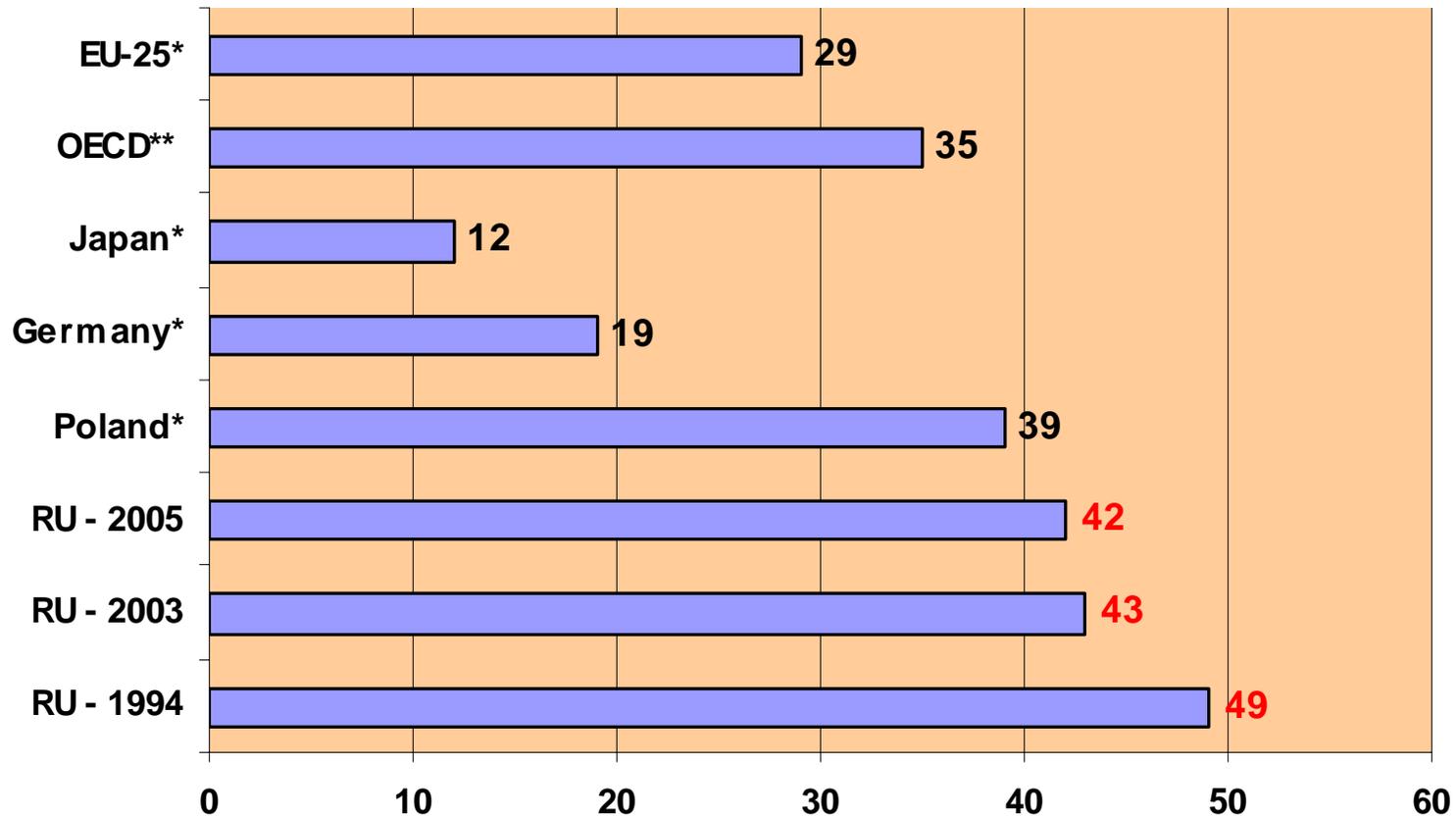
Women in Science in Russia: 1992 - up to the present

Researchers and female researchers in 1994 – 2005,
thousand persons



Source: CSDS RAS

Proportion of female researchers in Russia and some other countries (%)

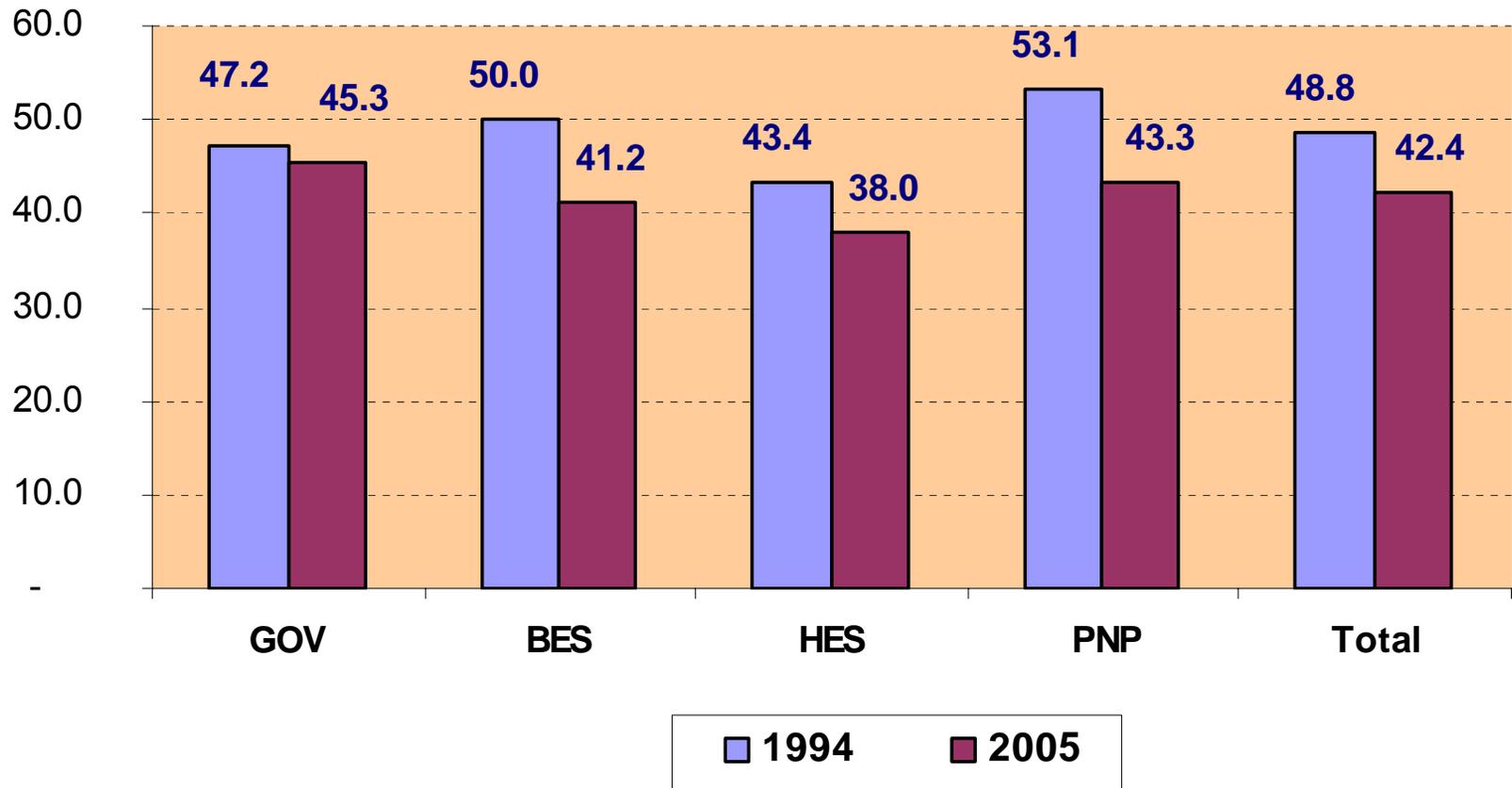


Source: CSDS RAS; She figures 2006

* Data refer to 2003

** OECD STI Outlook : I-2006

Proportion of female researchers in Russia by sector of performance (%)



Source: CSDS RAS

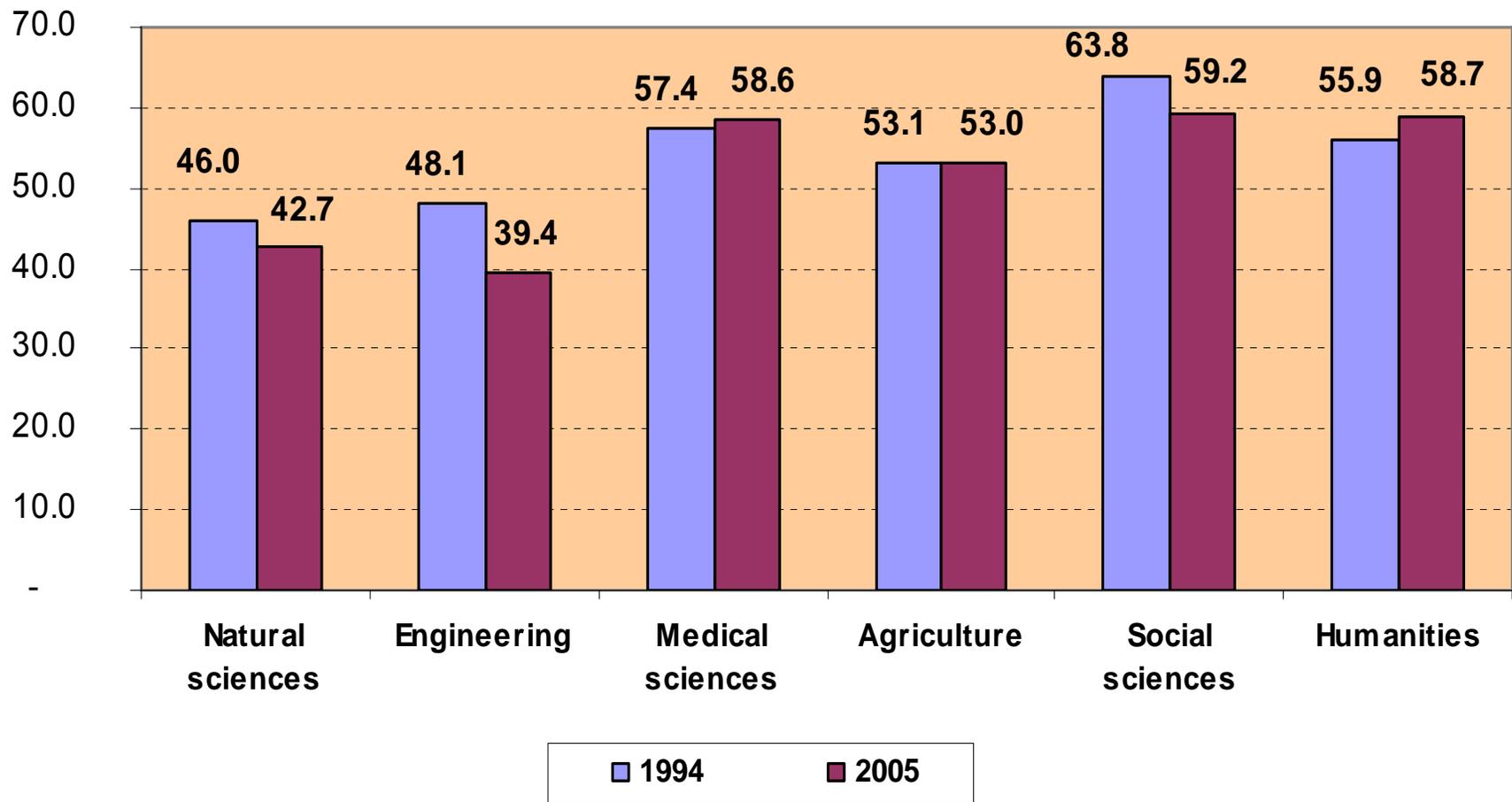
Reference data: EU-25: GOV = 35; HE = 35; BES = 18

Poland: GOV = 41; HE = 41; BES = 28

Germany: GOV = 25; HE = 25; BES = 12

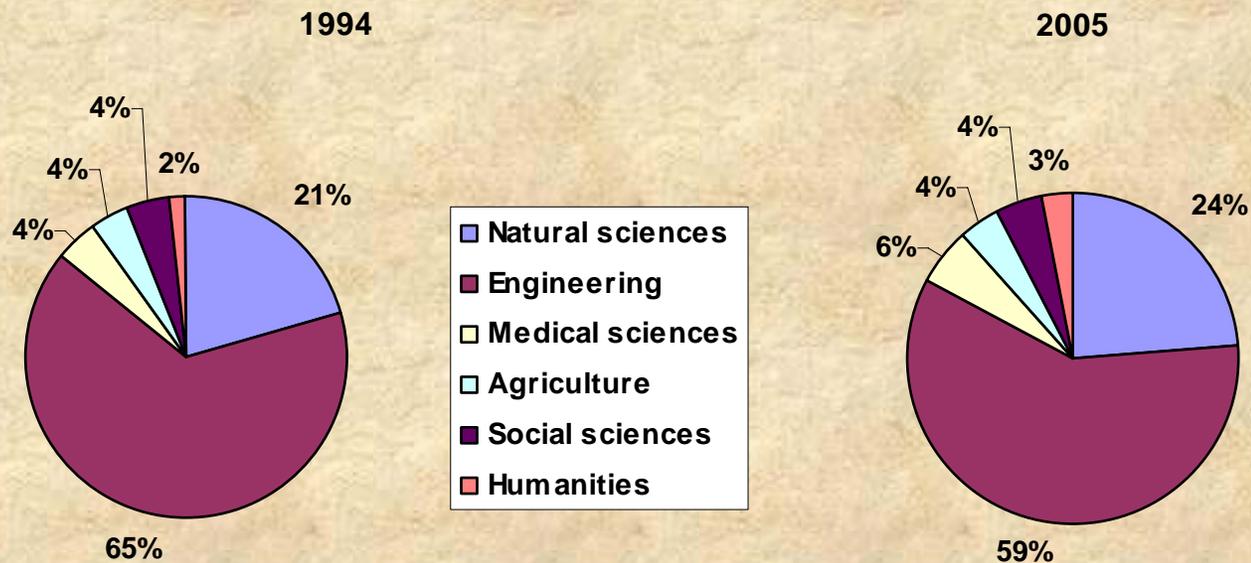
(Source: She Figures 2006)

Proportion of female researchers in Russia by field of science (%)



Source: CSDS RAS

Distribution of female researchers in Russia by field of science (%)



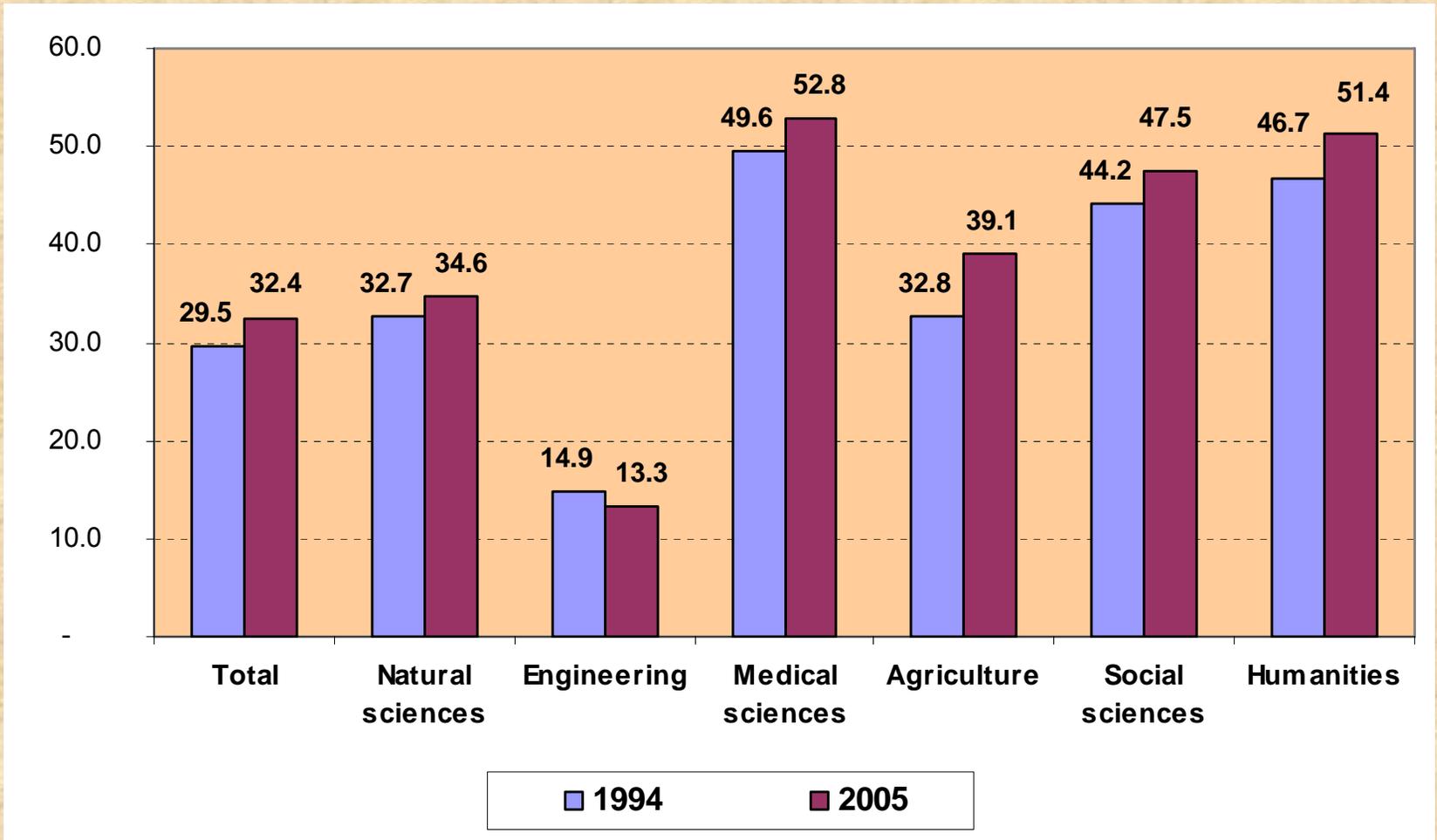
Source: CSDS RAS

Proportion of female researchers in Russia by field of science in 2003, % (continued)

	Russia	EU - 25	Poland	Germany
Natural sciences	42.4	29.1	38.0	17.7
Engineering	41.3	21.3	19.2	11.5
Medical sciences	49.2	39.9	53.6	34.0
Agriculture	53.0	39.7	49.7	30.5
Social sciences	60.4	39.3	46.0	29.8
Humanities	58.2	38.3	45.0	29.8

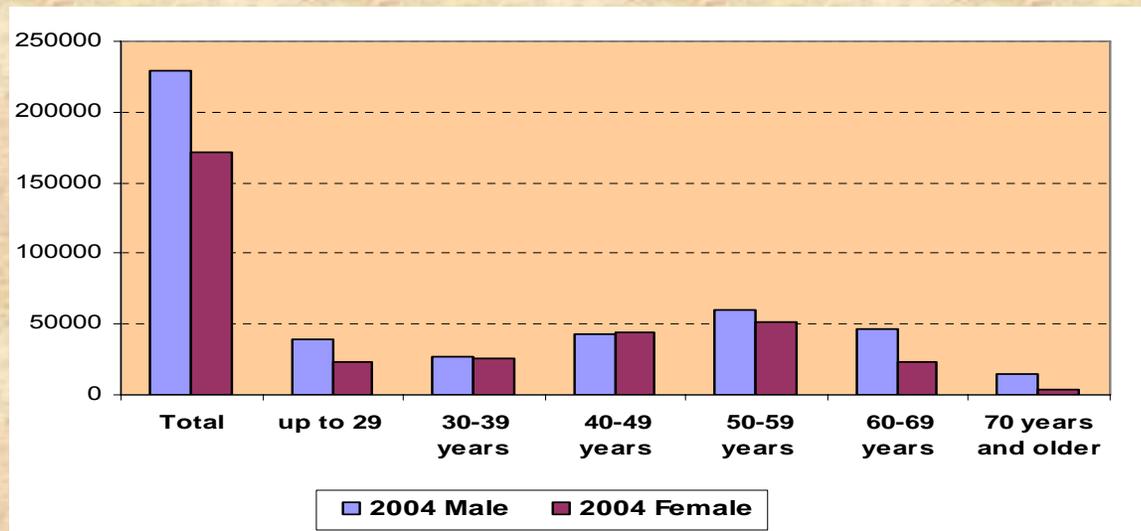
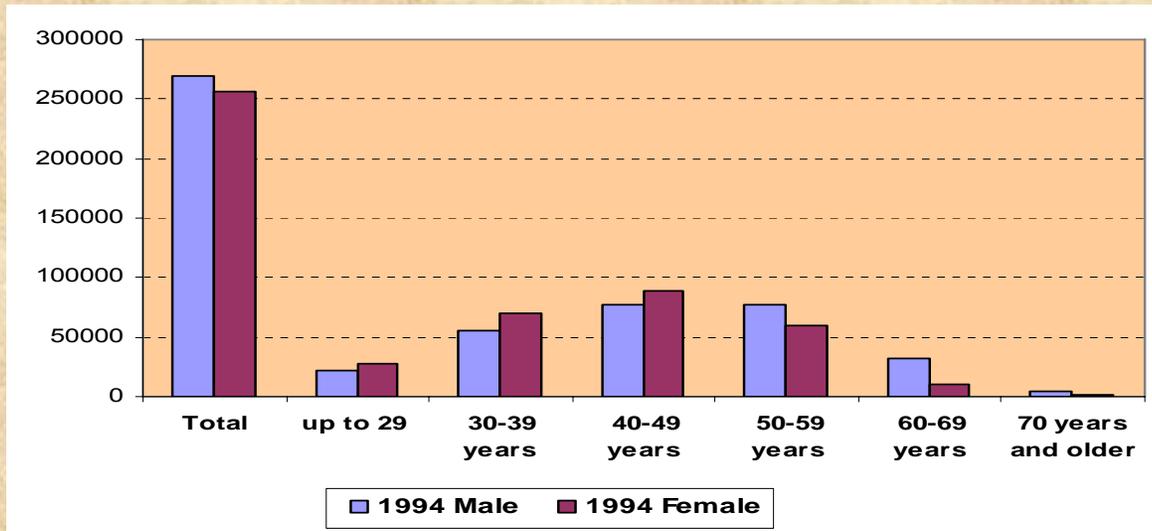
Source: CSDS RAS; She Figures 2006

Proportion of female researchers with scientific degree by field of science (%)



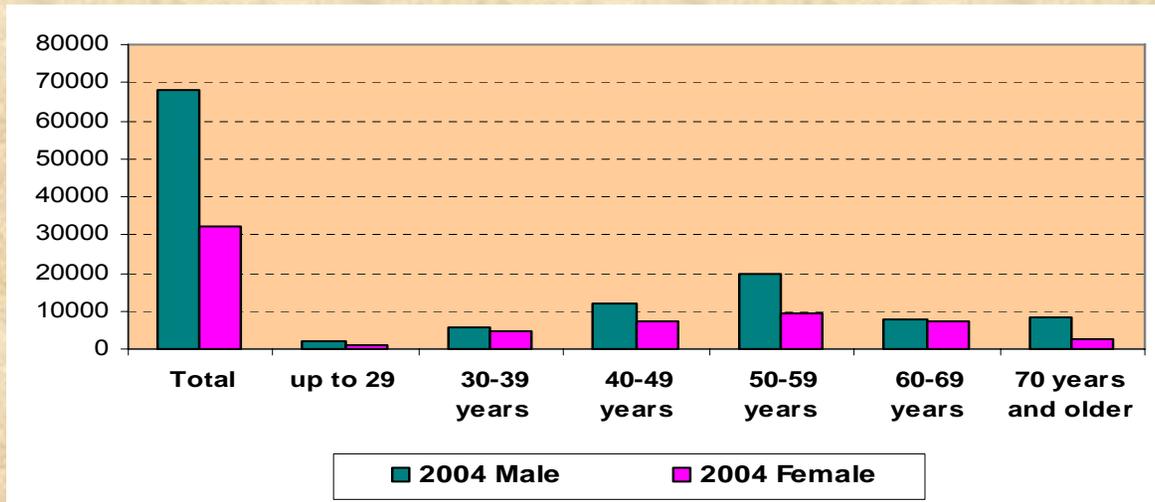
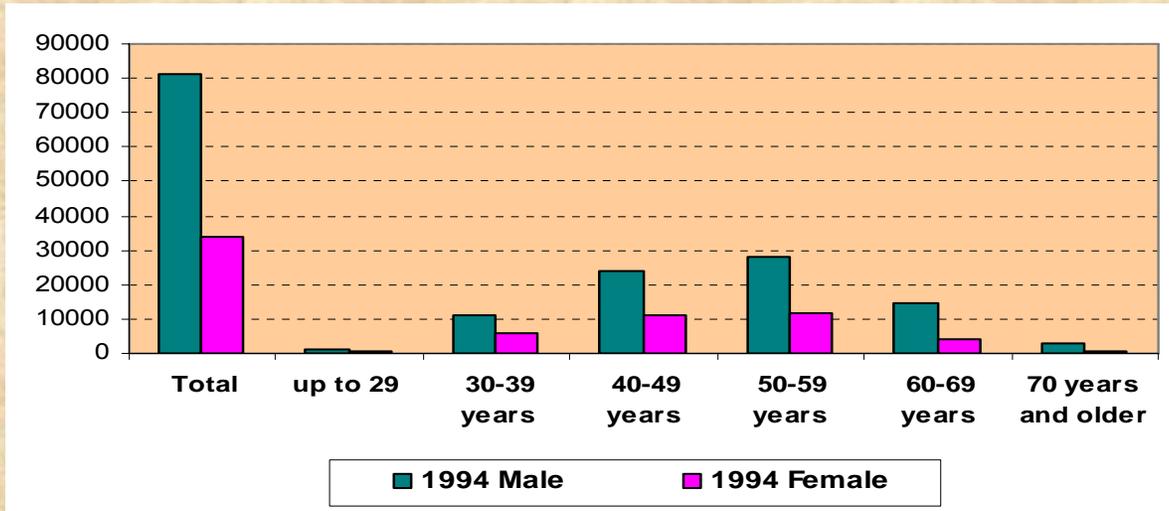
Source: CSDS RAS

Distribution of researchers by gender and age in 1994 and 2004



Source: CSDS RAS

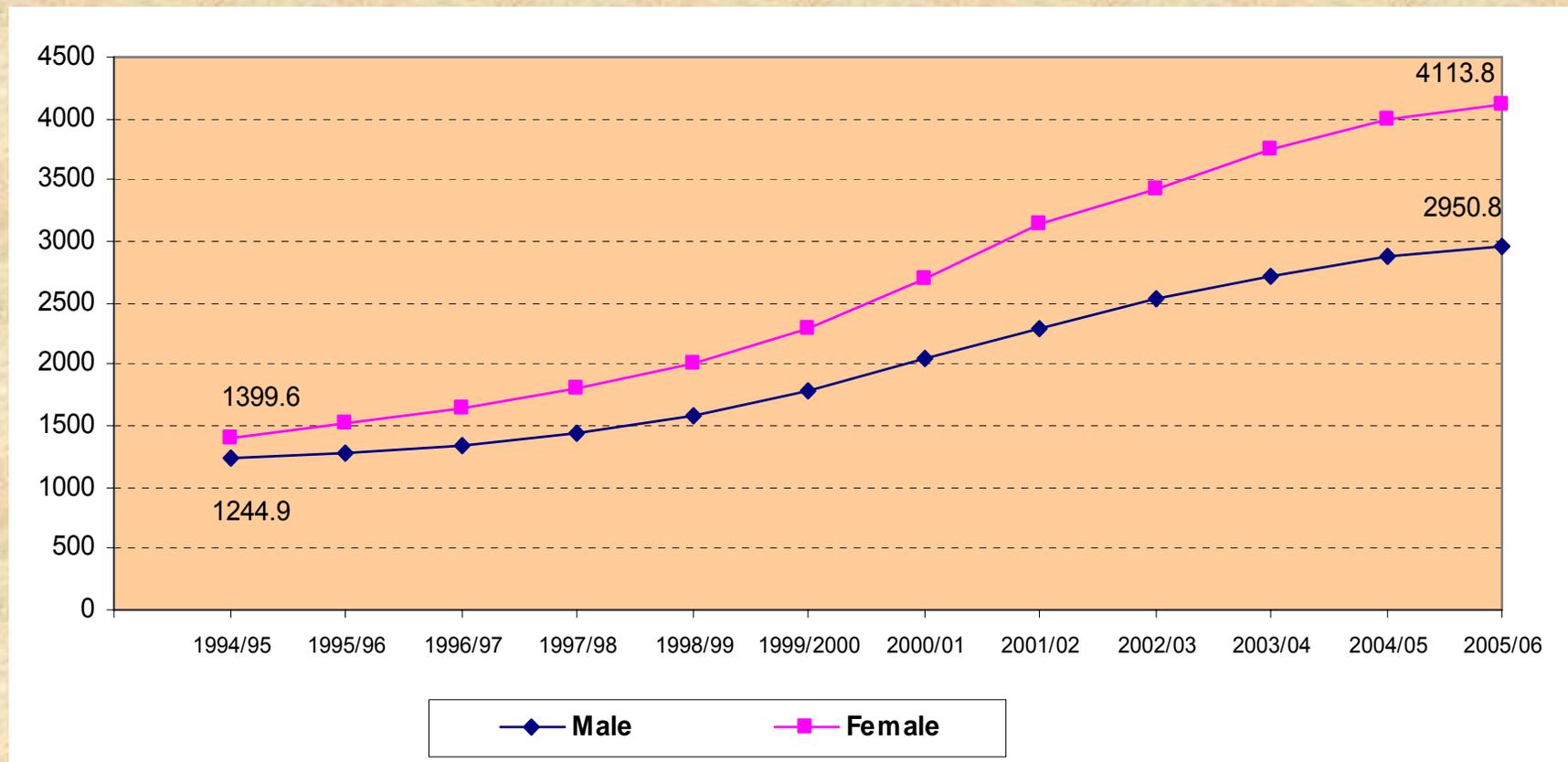
Distribution of researchers with a scientific degree by gender and age in 1994 and 2004



Source: CSDS RAS

Gender aspects of the Russian higher education

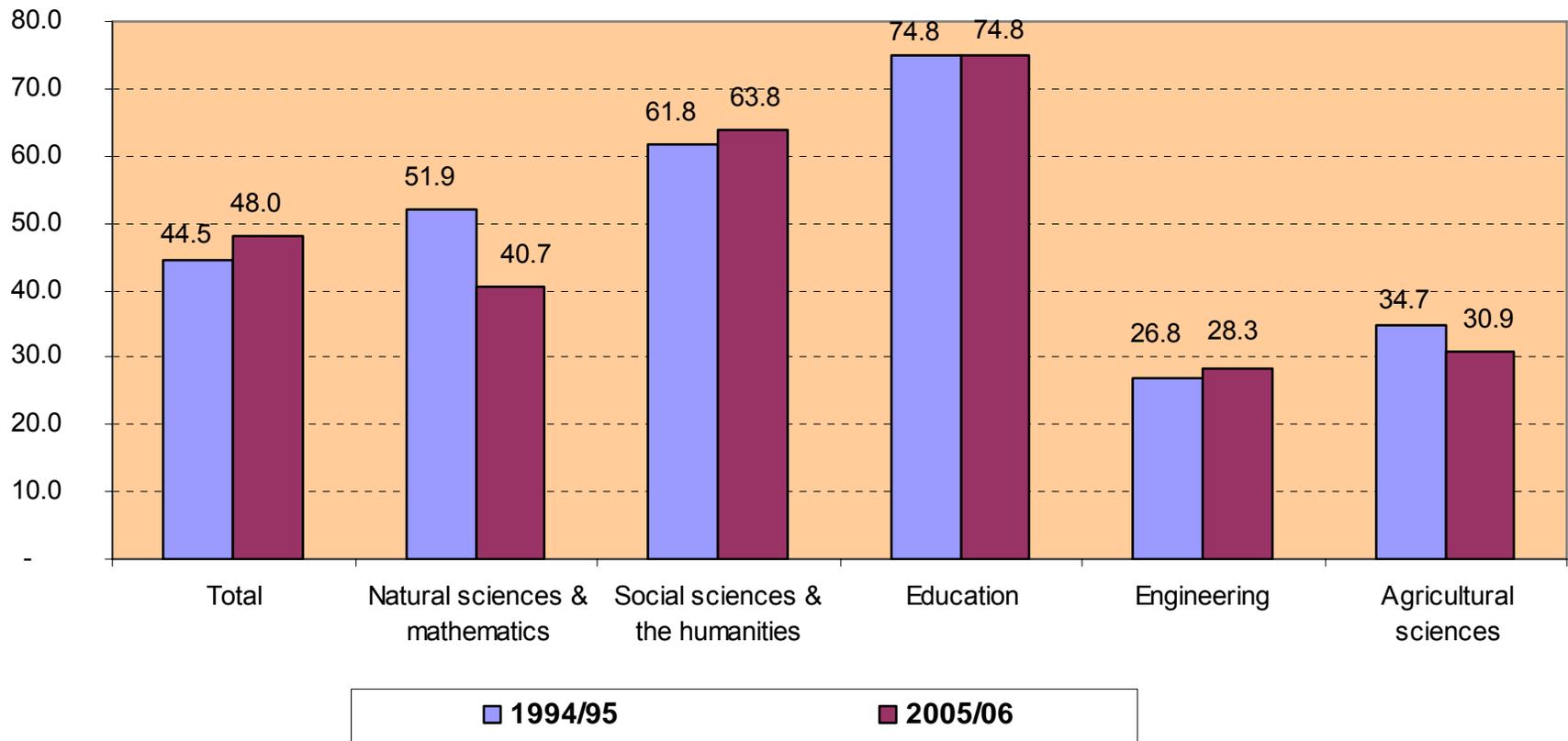
Student enrolment in HE institutions (by the beginning of the academic year), thousand persons



Source: CSDS RAS

Gender aspects of the Russian higher education (continued)

Proportion of female student in HE enrolment by professional direction (by the beginning of the academic year)*, %

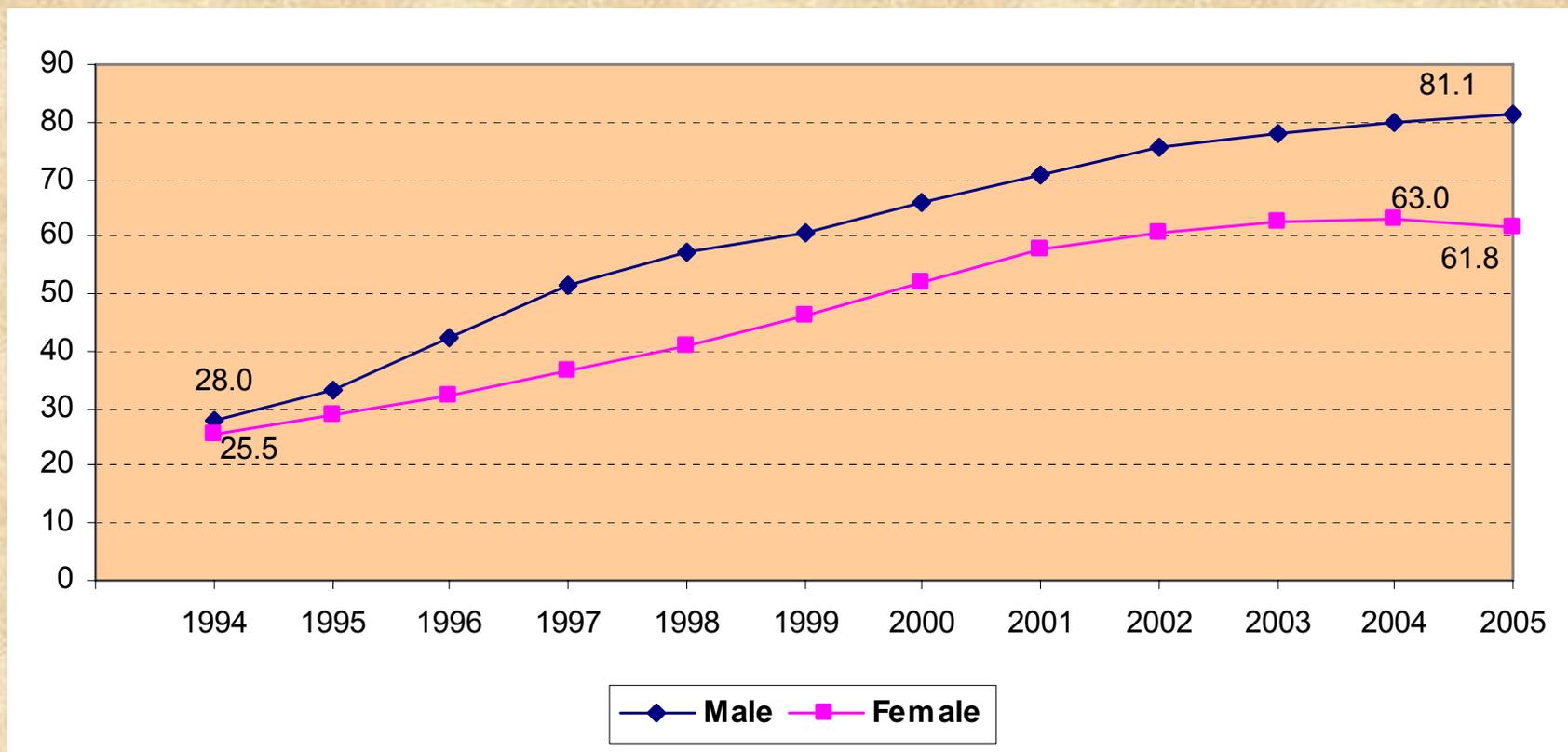


Source: CSDS RAS

* NOTE: Data refer to the limited sample of HE institutions of the government sector (5-8% of the total HE enrolment)

Gender aspects of training R&D personnel

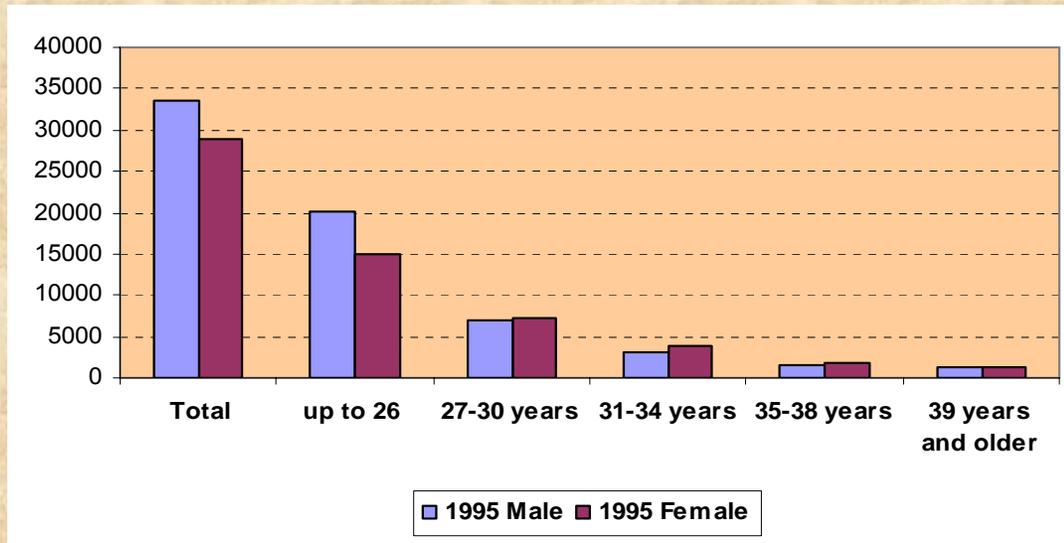
Postgraduate enrolment by gender, thousand persons



Source: CSDS RAS

Gender aspects of training R&D personnel (continued)

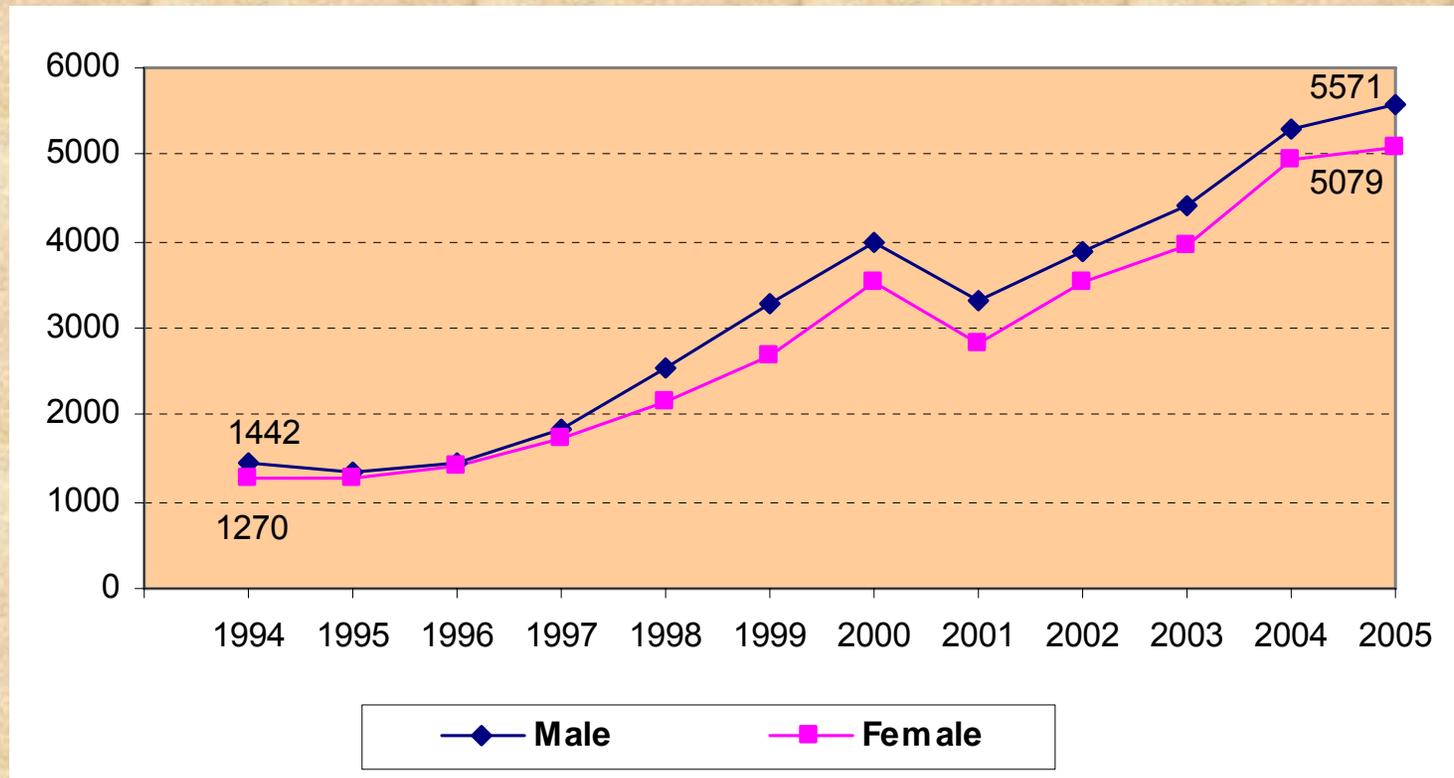
Distribution of postgraduate enrolment by gender and age in 1995 and 2005



Source: CSDS RAS

Gender aspects of training R&D personnel (continued)

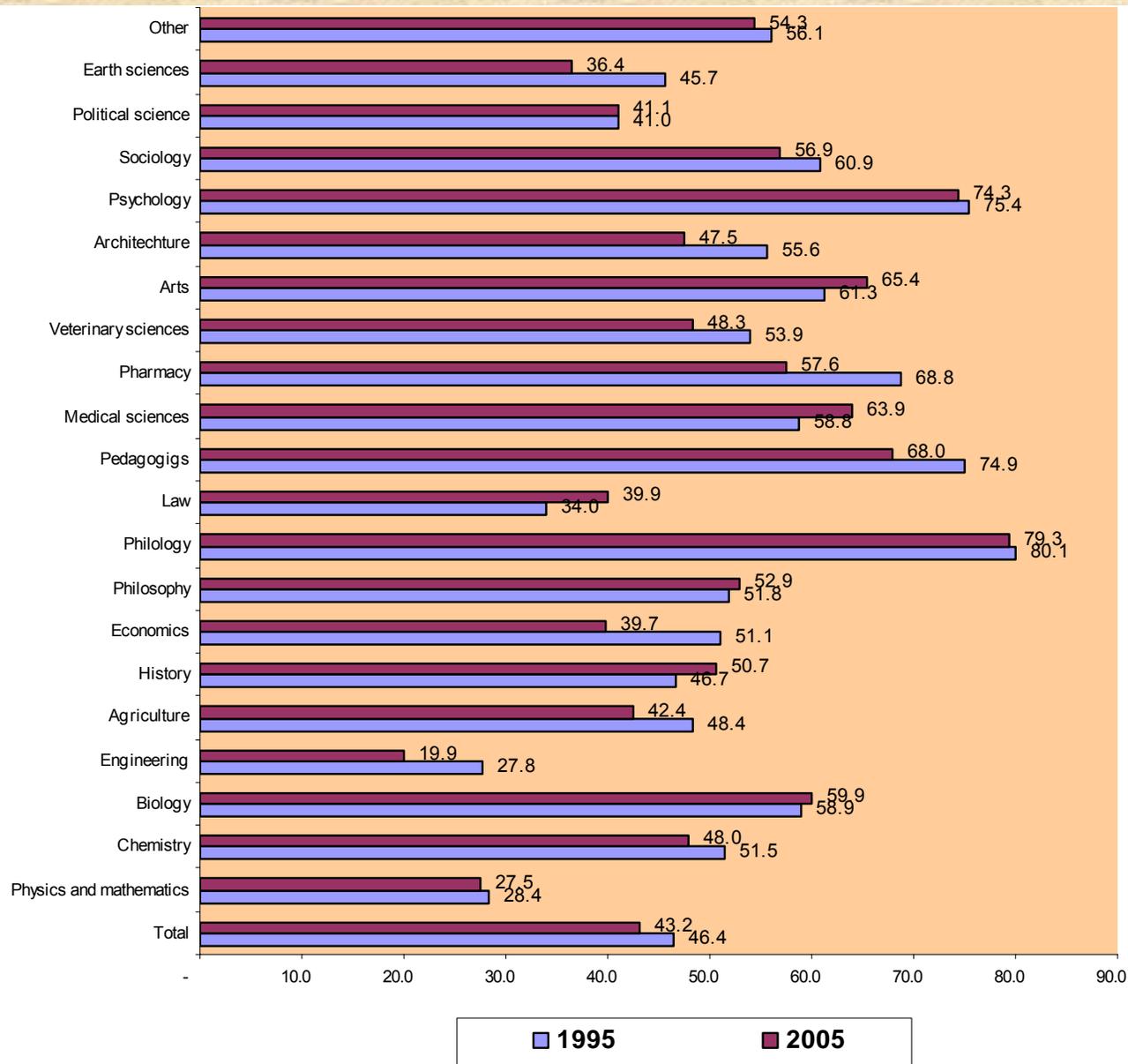
Postgraduate graduates with defended dissertations by gender



Source: CSDS RAS

In 1994, only 21.0% of male and 23.3% of female postgraduate students finished their education with defended dissertations (more 11% gap in results). In 2005, the proportions were 28.9% and 35.4% respectively (more than 22% gap in results).

Gender aspects of training R&D personnel (continued)



Proportion of female postgraduate students by field of science (%)

Source: CSDS RAS

Problem of vertical segregation

Distribution of administration and teaching staff of HE institutions by gender (the government sector), %

	2003/04		2005/06	
	Women	Men	Women	Men
Total, <i>thousand persons</i>	157.0	147.0	171.7	150.4
%	52	48	53	47
of which				
Rectors	7	93	8	92
Deputy rectors, directors of affiliates	23	77	26	74
Deans	31	69	34	66
Chairs	31	69	33	67
Professors	22	78	24	76
Associate professors	47	53	49	51
Senior lectures	68	32	70	30
Lectures, assistants	68	32	69	31

Source: Women and Men in Russia. 2004. Moscow, Rosstat, 2005;
Women and Men in Russia. 2006. Moscow, Rosstat, 2007

Problem of vertical segregation (continued)

**Membership of women in the Russian Academy of Sciences
(according to the current list of membership –
<http://www.ras.ru>, accessed 27.06.2007)**

	Total	Women	Percentage of women
Full members of RAS	491	8	1.6
Correspondent members of RAS	718	22	3.1
Foreign members of RAS	297	7	2.4

Problem of vertical segregation (continued)

Women in public offices (%)

	01.09.2003		01.01.2005	
	Women	Men	Women	Men
Occupied public positions at state bodies of the RF, thousand persons	436.6	203.2	487.0	197.2
%	70	30	71	29
including				
Legislature	55	45	56	44
Executive power	70	30	70	30
Judicial power	68	32	78	22
Other public bodies	60	40	60	40

Source: Women and Men in Russia. 2004. Moscow, Rosstat, 2005;
Women and Men in Russia. 2006. Moscow, Rosstat, 2007

Problem of vertical segregation (continued)

- ✘ In spite of women are widely represented in the public bodies, the ratio between men and women at the highest positions is 87 :13.**
- ✘ Share of female deputies in the Parliament (the State Duma) is only 10%.**
- ✘ The same picture one can see in S&T. Women directing state research institutions compose a set of exclusive examples. Traditionally, women are not considered as candidates for the highest vacant positions. PNP sector in S&T is negligibly small and can not influence on the situation.**
- ✘ There is no policy promoting women's leadership in S&T and HE as well as in the other public sectors.**
- ✘ There is no policy promoting carrier building and training leadership skills for young women in S&T and HE (or elsewhere).**
- ✘ Civil institutions, focusing on gender situation in the country, are extremely underdeveloped. Those existing, as a rule, are supported by foreign charity foundations and can not influence much.**

Problem of equal remuneration of labour

Ratio of women to men wages in the selected sectors of the economy in 2003, %

	Ratio of women to men wages, %
Average in the economy	64
Industry	63
Education	77
Science & related services	66
Administration	80

Source: Women and Men in Russia. 2004. Moscow, Rosstat, 2005

General conclusions

- ✘ Most problems inherited from the Soviet period are kept up-to-date:**
 - In spite of the ideological pressure and international isolation vanished, the double standards in assessing women's professionalism are still kept and women's contribution in all aspects of everyday life and economic development remains underestimated;
 - Women have to overcome more obstacles and to make more efforts in achieving a certain professional position as compared to men. As a result, they are vertically segregated and less paid;
 - The economic and social policy of the state does not consider women as an important object beyond the demographic aspects of the society.
- ✘ The “endless transformation” of the state R&D sector and the low effectiveness of the government S&T reforms hide the gender aspects of S&T:**
 - career disadvantages (professional segregation, male colleagues' arrogance towards women-researchers, obstacles in publications and performance of research results);
 - the low attractiveness of research for young women;
 - the hidden discrimination of women in taking top managerial positions in S&T.

General conclusions (continued)

- ◆ The achievement of equal opportunities *de facto* is not an easy task because the current situation is strongly linked with the patriarchal stereotypes prevailing in the Russian society. Many sociological surveys show that not only men but also a significant part of women in Russia contribute in maintaining *the status quo*. The impetus should be given to rising awareness of the importance of women's role in science as well as in other aspects of the modern societies. At least the following directions of changes can be indicated:
 - development of the civil society institutions together with different kinds of professional women associations and networks;
 - promotion of leadership training among women employed in S&T and HE;
 - breaking “family programmed” stereotypes at early stages of education of girls and boys;
 - promotion of new channels of information alternative to the wide-spread obtrusion of archaic stereotypes and ineffective models in existing mass media (especially, TV).

- ◆ In most aspects, the gender problems of the Russian S&T are similar to those in many developed countries of Europe and outside. Therefore, a background of common interests could be found for a co-operation in making the world more harmonized and the science more equitable.

Thanks for your attention!