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SCIENTIFIC REVIEW

The Women in Science in the Countries of European Union*



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ABSTRACT

We live in a time, when few people concern of that, why is so few women in the science; although nowadays is coequality between men and women. We would not to forget the reality; that women could have to study on the universities only from the 19th century. That could be one of the reasons, why nowadays is so few women in science. Certainly, the other reason is the fact; that women in history didn't signify more in the society. Their maximal success in their life was to perform the position of the mother and wife. Their role was the nascence children, so that the parentage would be well-preserved and would not threaten the decrease of population; and not last one reason was the care about the household. The resource to employ was the utopian soon. The man was the bread-winner. In 19th century were the women too, those attended the educational institutions, the private or the public too. They were the women; those had to perform the wife-position of some officer, higher positioned man, in the future. The thinkers of enlightenment performed the opinion, that women can't study and to develop the science, because they are very emotional. This description belongs to antipoles in the science, those the scientists' couldn't have to know. The most important in the science is the rationality and the objectivity; and especially these descriptions have men better developed.

KEW WORDS: *women, science, research, education, European Union*

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The Position of Women in Science Intra-European Union

The European Commission and the General management of European Union for the research concern of the trouble of women-influence in science. Their basic target is to back-up the women in science and in research. So creates the group of women-experts – the active standardized workers from the different science-departments and science-research from more countries (for example Bulgaria, Czech Republic, Hungary, Poland, Romania, Slovak Republic, Slovenia, Serbia, the land of ex-German democratic republic, Lithuania, Latvia, Estonia). This group had the name ENWISE (Enlarge Women In Science to East) and its influence is dating from 1st January 2003. The basic role was to give a full account of the position and situation of women in science and research in these countries. It was the group, which knotted on the antecedent works of expert groups as for example:

ETAN (European Technology Assessment Network) – it informed about the situation in science of European Union's country.

Helsinki's group – developed for the back-up of the patronymic coequality in science intro-Europe.

Nowadays are most women – scientists employed in the science-departments, where the costs for the science and research are lowest. Women aren't adequately substituted in the leader positions, in the critical authorities, in the commissions, or in the crest functions on the universities. The stats confirm, that the probability to achieve the higher academic positions, the strategical positions and first of all the approval by science community is for women in average three times smaller than by men. Despite these realities, the science women-workers go actively into European experimental space and they wire into the science-research activities. The other situation is with today's younger generation of women-workers, which break some regalia's in the demonstration of their potential and in the growth to the authority. This barrier is universally double or tippole role of woman (mother – wife – science woman-worker). Because of this is the substitution so low between the women-holders of scientific title CSc. and pedagogical titles docent, or professor. Because of triple role of woman, this gender often occupies only these positions; those are placed lower in the leader hierarchy. It is caused, that wife has already the other responsibilities than the free woman, for example she have to care for the household, to cook, to bake, to clean, etc. when she gets

married, then she has the children, her sorrows grow up and she hasn't enough time for education. So the more women don't try to grow up along.

The Barriers in Women Self-improvement

Every woman certainly thinks about that, what she would do in the future. Generally is it the time after the ending of high school. Especially in this moment she makes a decision that she will continue after the achievement of the academic title in the study or she will domicile and set up family. These two possibilities connect to the one isn't always easy, because the day has only 24 hours. We couldn't forget the reality, that the life of free person is another than the life in marriage. We care not only for me, in marriage, but for the spouse and for the children too. So we talk about the barriers, those inhibit the women to purchase the higher position. They are a lot, so we reduced them to four barriers:

1. Factor of the understatement

Many people meet in their work, home or in the circle of their knowns with the method of understatement. As the same time it could be enough only some honorable words and the person now begin to believe in themselves and although he is good in his work, he would try to be better.

Women	Frequently understated, that influences their output.
Men	Bigger professional onset; identification with profess; the interest for the higher scientist positions .

2. Factor of the low pushingness

It's not enough only want to be good, but important is to show that the others, in what we are good, too. We could be good painter, but when our pictures don't go along than to our atelier; nobody will not notice us. We have to know "sell" us and to stay face to face with our competition.

Women	The self-depreciation, small assertively, problems with the performance on the public places.
Men	The possibility to achieve the heads tart, when the woman is on the maternity leave.

3. Factor of habit

We are led from the childhood to this, that the father is the head of family, because he is the man and he is the person, who have secure us before all bad. Women usually stay in the shadow of the man. It is the unwritten rule that the leading have to be on the arms of the man. It could be, that it is influenced by that too; that nowadays media describe the women only in the positions of models, cover girls, prophetesses, rarely in the positions of women-leaders. It's the shallow image of actual woman, witch that is intent on the beauty and on their emotional problems.

Women	They have to face the same barriers than the man in science.
Men	The stereotype dominates, that men have to lead; the questions of workplace consult at first with the separated men in the background and only then on the public and official forum, where the women participate too.

4. Factor of "men's world" science

We can thank for the most of devises to the men, for example the sadiron, computer, television. They can think more technically than women and it's conditional by this, that women don't have a time to address oneself to the research of something new, because they usually have to care for the family more than men.

Women	There hold the other "unwritten" rules for women than for men.
Men	In some profession dominate the men.

Despite of all these remembered barriers, the women push oneself gradually always more in science and in research. In every country act (acted) some responsible women-scientists.

Maria Agnesi: (*1718 - +1799) Italy

She was considered a first presontator of the modern math, in the time when the European people don't take for women as the equivalent in the education.

The handled 5 languages: Hebrew, Latin, Greek, Spanish and France.

She was the woman that published two alliances of math: the bases of math and the math for the forward.



Marie Curie (*1867 - +1934) France

Her biggest success was the theory of radioactivity, the technic of partitions the radioactive isotopes and the discovery of new chemical components: radium and polonium. Thanks of these new-discovered components she won the Nobel price.

Under her leading toke place the first researches of therapy the cancer with the help of radioactivity all around the world.

Lise Meitner: (*1878 - +1968) Austria

She lingered upon physic and chemistry and together with Otto Hahn and Fritzo Strassmann discovered the uraniumlysis. She had worked up the exact methods of measuring the energetic spectrum of electrons ejected by beta decay. With her nephew Otto Frisch had explained the atomic nucleus fission.



The Women Representation in Particular Science Branch

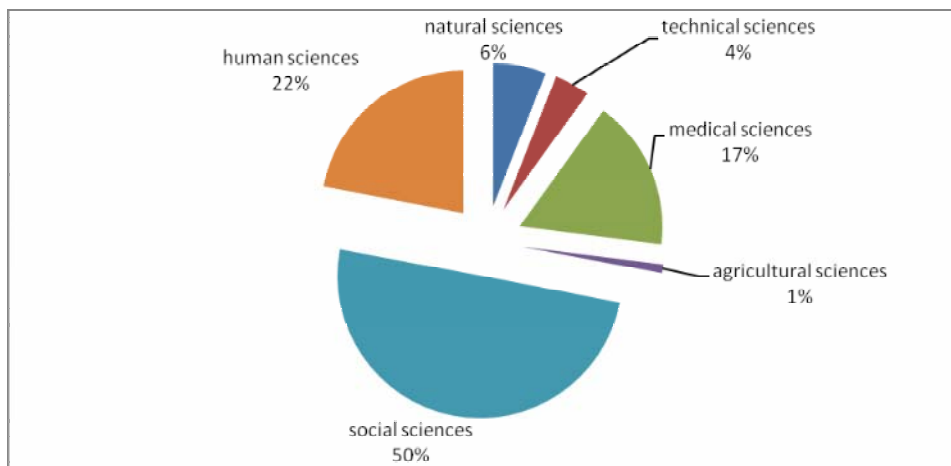
For the science settlers we can consider the philosophers from the antic Greek, those their opinions deduced from the spy and logic. The creation of modern science we date only from 17th century, when the scholars tried for the first experiments and their declarations so to verify. Gradually all actual science branches separated from philosophy.

In this time we know this partition:

- natural sciences,
- technical sciences,
- medical sciences,
- agricultural sciences,
- social sciences,
- human sciences.

These charts treat about the women representation in particular science branch, where we had compared the quantum of women-scientists in countries of European Union (Chart 1) and in Slovakia (Chart 2).

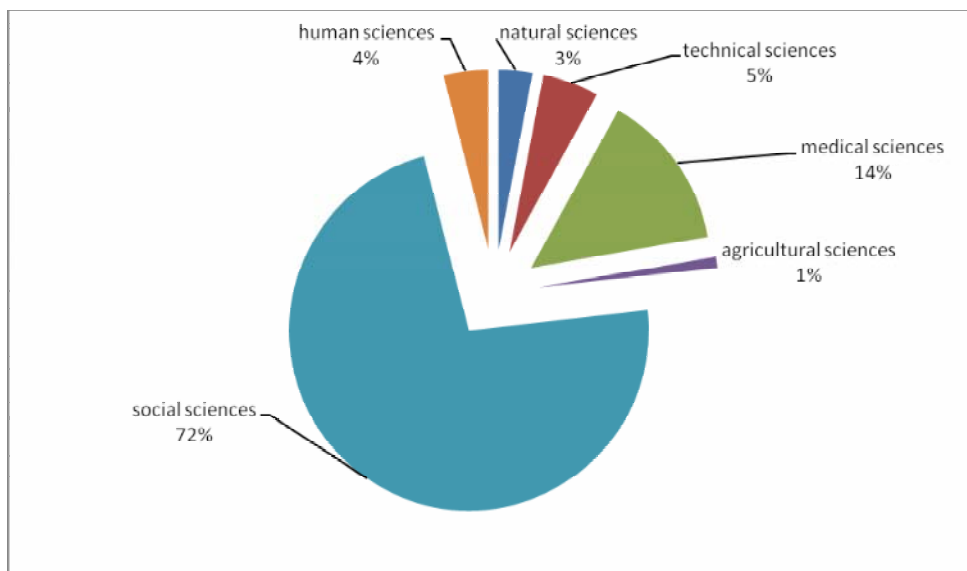
Chart 1: Women in science in countries of EU



As we can see from the chart 1, the most women in EU are substituted in social sciences, it declares 50%. On the second place are the human sciences and after them the medical sciences. The low percents have the natural, technical and agricultural sciences, that concerns about the representation in science by female gender.

Chart 2 shows the woman representation in particular science branches in Slovakia. In the comparison with the antecedent chart the quantity of women in social sciences is higher. We can pride with 72% population of female gender in these sciences in Slovakia. The other sciences are around on the same level as in countries of EU, they different only with the low percent.

Chart 2: Women in science in Slovakia



The Suggestions for Increase the Motivation of Women in Science

We detected after the analysis, that women have the liberty to study on universities, but not always feel they the need this study to graduate.

On the base of detected knowledge so we suggest these arrangements; on base of them women could be better motivated to this, that they will have an interest to address oneself to the science work after the ending of study:

1. Time severity

More women are dissuaded from the other science work by the time oppression. It begins to emerge the fear in their unconscious that they will not be able all to chase so, than they planed.

Suggestion:

- Determining the own priorities – every woman has to define, what she want to achieve in her life, what will maximally to fill her.
- Planning of work-time – it's important, that women have to perceive, those tasks are important for them and those not. They could to order them from the most important to less important.
- Definition the time for the family and for friends – the women-life can't consist only of the work, co it's needs, that they have to find the time for fun, for relax and friends too.

2. Work time

The work for the scientists means to make the researches daily 24 hours, 7 times in a week. They don't know the word relax, and when they know it, they use it only in small measure, because the work is all for them.

Suggestion:

- It would be advisable to afford opportunity the flexible work time.

3. The woman in the role of wife, mother and scientist

More married women are dissuaded by the fear from the science work that they will not to be chase in the time the needed deadlines; or to perform the work responsibilities liable. They will to make a decision, what they will do, to be with spouse and with family or the work is the first.

Suggestions:

- To afford the opportunity for women to work from home.
- To increase them the salary of the amount, for that they could provide for the babysitter, that women can quiescent address oneself to science work.

4. Health

The women in science and research are often under the great stress, because they have to perform diverse deadlines and also to perform a great quantity of the other tasks. This all reflects in quality of their work and their organism is exposed to stress, that is opened after it for the diverse illnesses.

Suggestions:

- Mutual substitutability of women in the case of the sickness absence.
- The possibility of recondition placements and using the sauna, pools or gyms, those would be paid by employer.
- Season-tickets from the employer for the diverse cultural or sport undertaking in the case of workers-relax.

Summary

Every woman has the possibility to decide, what does she do in her future and in which realm she wants to perform. It's on each of us, that we choose the simpler way and right after the ending of study we find the suitable work, or we choose the way, that isn't so simple, because we have to work on us all life hard and faithfully. When we want to discover, how abilities we have, the best result is to venture at way of science work.

We have to remember: "Throughout we are only the small blobs in the sea, we will be these blobs; those will change the ocean".

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