

N. Sretenova, N. Obreshkov, H. Ambareva, D. Angelova

Institute for Philosophical Research, BAS

**What are the deficiencies and difficulties that the young (women) scientists come across in Bulgaria in their career development? (Postdoctoral specializations abroad – the only perspective for survival of young Bulgarian scientists)**

*“I can say that when I go abroad on a postdoctoral specialization I do not intend staying there for life. I do this in order to provide myself a future when I come back here.”* (Early career researcher, chemistry)

*“In Bulgaria the situation is like this– one cannot miss such an opportunity – specialization abroad. Simply has no right to give it up. Especially, when one has a family and children, whom (s)he must provide a good start”.* (Early career researcher, biophysics)

In May 2007 a team from the Institute for Philosophical Research, BAS conducted an empirical study of two target groups – women PhD students and women early career researchers before habilitation, in order to examine the problems, arising before young women scientists in Bulgaria in their career development. Two sociological methods for data gathering are employed – focus group study (main method) and survey with two separate questionnaires (supplementary method). The participants in the two focus groups (FG1 and FG2) were recruited from different academic institutes of BAS and universities according to preliminary designed criteria. Each focus group consists of six representatives of natural sciences and engineering and four of social sciences and humanities. The study is part of the 6FP project “Building a European Network of Mentoring Programmes for Women in Academy and Research” (EUMENT-NET), in which IPHR is partner. The project coordinator is Switzerland and partners are Germany, Austria and Bulgaria.

In this article we will attempt presenting some of the accents in the analysis of the shorthand records of the two group interviews, which, in our opinion, are indicative for the difficulties that all young Bulgarian scientists come across in the beginning of their scientific and academic career.

The prevailing image of the future of one part of these young women scientists is related to the defense of their PhD dissertation. Those who have already obtained the degree channel their efforts towards going abroad on a postdoctoral specialization. For most of them staying in Bulgaria amounts to taking unjustified risk, reflecting not only on their career development but also on the possibility for realization of their families and especially – children.

*Planning the scientific mobility and career in middle term (3-4 years)*

The young (women) scientists in Bulgaria, as well as their colleagues in the west countries, take into account the significance of scientific mobility and particularly of the postdoctoral specializations for their career development. It is quite disturbing that all

respondents view the post-doc not only as a necessary stage of their career development, but mainly as the only opportunity to provide satisfying future for them and their families. Some of the representatives of exact sciences do not plan coming back in Bulgaria due to the lack of money, modern equipment and stimulating working environment, necessary if one wants to make good science.

**Participant (P) 8 (PhD student, natural sciences, FG1):** *“The contracts are for a year or two. But I would try to stay longer and come back here when the situation in my area improves. Till then it is very hard for one to succeed at all”*; **P3 (PhD student, technical sciences, FG1):** *“Me, as my colleague, intend first to defend my dissertation and after that I will go probably abroad. But only for a given period – one year for example, maximum two. I know that a lot of projects in nanotechnologies are stimulated, but there are no money. In spite of this there are no money in Bulgaria”*; **P10 (early career researcher, natural sciences, FG2):** *“I defended my dissertation, so this is already outside my plans. The possibility to go abroad is quite great. I have applied for many post-doc scholarships on different projects... My dream is to go as soon as possible abroad.”*

The motivation of the last respondent is based not on the poor wages as a young scientist, but on the miserable conditions in her laboratory.

**P10:** *“It is difficult because we lack simple things in the lab. Certain results are expected from me and in the same time I open the drawer of the desk and there is no reagent in it. And they want, for example, to make catalysts. How is this possible? They want the results in two weeks. If I have no friends abroad who can send me the necessary things, I cannot do anything.”*

**P11 (career researcher, natural sciences, FG2):** *“...I am in BAS since it can give me good start to go somewhere else – there is no use to spend a lot of time here. This means postdoctoral specialization or work in another field...If I am abroad my kid will learn the language fluently; if I stay here I must give a lot of money for a school with German language and finally – he will learn nothing.”*

***What are the deficiencies and difficulties which the young (women) scientists in Bulgaria come across?***

- 1. Lack of skill for team work** – due to the fact that the scientific community in a given field is quite small (there is no “critical mass” of researchers) or it is “closed” (do not welcome newcomers), or due to the individualistic attitude (as it is in social sciences and humanities)

The respondents coming from humanities as well as their colleagues from the natural sciences point out the absence of team work – one of the main flaws in the Bulgarian science. This leads not only to deficiency of effective scientific communication, but is also a factor causing obvious emotional discomfort. Here is the key to one of the main hindrances for Bulgarian science – it cannot be a collective product in a lot of areas, which is in great contradiction to the tendencies in the world. This kind of discomfort is one of the causes for the young researchers to look for realization abroad. The young women in science are well acquainted with these tendencies but face insurmountable inner practice, demotivating them.

**P7 (early stage researcher, humanities, FG2):** *“In my field you can hardly find professionals who can give you an advice or adequate answer... Sometimes I consult myself with some of the colleagues, but on a certain stage of the communication, a kind of distancing is felt... And after the defense **there is not so exactly consultation, but rivalry.** I do not understand it since they know much more and we are not their rivals. I really need someone to consult me; I need people with whom I can share and discuss problems.”*

**P8 (early stage researcher, natural sciences, FG2):** *“I feel the same lack of team work in Bulgaria. I work on... On such problems in BAS, in the universities, in the country as a whole work three scientists. This is quite a small number. In the west countries, even in one of the subfields work at least 10-15 persons. Due to this we cannot be their rivals. We have very small teams. Hence we cannot apply for equipment. It is almost impossible to receive expensive equipment that costs over 600000 Euro for teams consisting of 2-3-5 persons. A kind of unification could be a solution and lead to greater efficacy and perspective for young scientists.”*

## **2. Lack of dynamics and innovation and of opportunities for applied research. The perspective to combine the scientific work in academy and in industry – realized, but unachieved dream of the young women scientists in Bulgaria**

Most of the participants have already had visits in scientific institutions abroad (laboratories, universities) and the comparison with the work at their home institutions and the lack of perspectives for applying their research in our, yet, underdeveloped industrial sector are demotivating factors for further pursuit of scientific career.

**P11 (early stage researcher, natural scientists, FG2):** *“Here, in BAS a lot of things develop very slowly. I need more dynamics. Here I measure... 10 months I sit before the PC... And when I finish my papers this thing is already measured by no one. I am far behind the others. Abroad I could do the same work for 1-2 months.”*

**P7 (early stage researcher, humanities, FG2):** *“Honestly I wish I could change my work with another – more dynamic. I wish I was at more flexible, more dynamic, more innovative institution.”*

**P4 (early stage researcher, humanities, FG2):** *“I support your opinion. I am now in my best years and despite I work on different projects I feel I am stuck.”*

**P10 (early stage researcher, natural sciences, FG2):** *“Now most of the projects are connected with production of biofuels. I wish there were a possibility to combine academic work and industry... **For every scientist this would be a dream fulfilled.**”*

**P7 (early stage researcher, natural sciences, FG2):** *“... In our field there is not much respect to the interdisciplinary approach...”*

## **3. Feeling of age not gender conditioned discrimination (are there clear rules and criteria for successful career?)**

The aging of the scientific community in Bulgaria and the slowly working habilitation system has left the PhD students with the wrong impression that the Law for the Scientific Degrees requires age limit – 45 years.

**P4 (PhD student, social sciences, FG1):** *“Everything connected with the career development depends on the ambition and on chance. Personally, I do not intend engaging in such, since I came across a chaos in the things happening. Simply, things do not happen easily. So, I want to finish my dissertation, to defend it and then, I hope, I will go back to the real practice. I think it is very difficult making science in Bulgaria... The young ambitious researchers are impeded in their way to the habilitation. **The age limit is an absurd!**”*

**P10 (PhD student, humanities, FG1):** *“At the institute we have a too traditional community. And whatever you do, if you have not reached the age, you cannot become senior researcher. No one is inclined to help or support you. There are some people who are very active, ambitious, with specializations and 3-4 books. But they are young – for example 30 years old. And they would become senior at 45 for example. There are people who are 45 and do nothing, but their procedures have already started. **I suppose that it isn't the only place with such respect towards age.**”*

#### 4. Institutional obstacles

The participants in the group interview in FG2 have affiliation in BAS or in a university. The respondents share the obstacles they face in their career development, which are caused mainly by the governing bodies of these institutions:

- Refusal to announce calls for application for researchers with constant affiliation – in the same time the duration of the scientific career is declared as very important and losing one's time is taken as something negative, not to mention that BAS experiences lack of young researchers. One respondent says that she has two MAs and a PhD and still works in the administration.

**P7 (early career researcher, humanities, FG2):** *“I defended my dissertation in 2006. And I am waiting. I hope I will obtain the position of a researcher at last...”*

The governing body of the particular institute delays the call for application

**P10 (early career researcher, natural sciences, FG2):** *“I have 10 publications and all of them are in journals with impact factor. According to the new law I should be associate researcher I<sup>st</sup> degree, but Mr. Director will never tolerate such thing.”*

**P10 (early career researcher, humanities, FG1):** *“At our institute if you want to become associate researcher II degree, not a docent, you must have 15 years spent there.”*

There is an opinion that deliberate impediments are created in order to prevent the young researchers to go abroad since it is more useful for the institution to keep them in the institutes.

**P5 (early career researcher, humanities, FG2):** *“I even think that if someone have his own contacts with colleagues abroad, his boss or someone else would always make obstructions. The purpose is to keep the young in the institute.”*

Part of the respondents share that they have some extra job and it carries them away from the scientific work, even if this extra job is teaching.

### 5. Deficiency in practical skill

The education in BA and MA programmes is predominantly theoretical and the PhD students say they lack practical skills in their particular scientific field. In both target groups this lack is articulated in relation to the special skills necessary to apply through projects here and abroad.

### 6. Discontent with the public image of science in Bulgaria

It is not accidental that one of the main points appearing in the discussion is the bad public image of BAS. This is decisive for the young women to get ready to sacrifice their poorly paid and unprestigious career, especially if they do not have the idea that they do something important, which is equal in quality to the work of their colleagues abroad.

**P11 (early career researcher, natural sciences, FG2):** *“When you tell someone that you work in BAS, he does not pay any attention to you anymore”.*

**P10 (early career researcher, natural sciences, FG2):** *“The discussion starts when they ask you “what do you complain from?”... You achieve good results and they do not care how they are attained. We are underestimated in society – that’s all.”*

**P7 (early career researcher, exact sciences, FG2):** *“And I can assure you – here no one appreciates his staff.”*

**P2 (early career researcher, natural sciences, FG2):** *“Since the payment is symbolic and in BAS is ridiculous. You must rely on money which you receive from another institution, firm, enterprise... Otherwise, if you rely on these poor payments from the university, or the institute – simply it doesn’t work. Everything takes us in this direction whatever we say about this problem.”*

### 7. Specific deficiencies in humanities and social sciences: lack of clear criteria of assessment of the scientific production and often – “generation conflict”

In the analysis of the records from the interviews one main demarcation line showed up: it is conditioned by the differences between the disciplinary cultures or, in other words, by the belonging of the respondents to natural sciences or engineering, on one hand, and to social sciences and humanities, on another (the famous problem of the “two cultures” of Ch. P. Snow). It appears that notions like “scientific hierarchy”, “individualism”, “competition”, “generation problem” (conflict between the different generation in science) are articulated mostly by representatives of “the un-scientific culture” (according to Snow). The difference in these disciplinary cultures however determines the building of two different contexts and ways of speaking on problems, related to science and scientific career.

**P1 (PhD student, social sciences, FG1):** *“As far as the clear criteria of assessment are addressed, the words of one sociologist come to my mind: academic life is a wild uncertainty... I do not know if in humanities any criteria exist, in order to assess clearly what you have achieved... I think that in this field it is problem that so many different paradigms exist and different people cling to different paradigms. So, it is possible the*

*things you do to be neglected or underestimated. And the other way round. I do not claim that this is something bad, it is simply specific.”*

**P10 (PhD student, humanities, FG1):** *“I think that in humanities and social sciences exists big gap between the old generation and the younger. The problematic discussed nowadays are rather different and you cannot gain much from the older generations. The methodology is different and the problems also.”*

**Conclusion:**

The main problems of the professional development of young (women) researchers appears to be the lack of stimulus for further progress. From one side, the insufficient recognition causes unwillingness to work ambitiously, from another – their unrealized dream to be successfully involved in their scientific communities where their efforts would receive formal and informal assessment and from third – the institutional obstacles which the young researchers come across. Only one small part from the respondents say that they receive full and wholehearted support in their institute or university and enjoy good prospects for career development.

The common characteristic is that the situation is perceived as highly problematic and the most effective solution is “**leaving**” – going abroad, change of problematic, shift to another (closely related) scientific field, change of the institutional affiliation. Staying “**still**” and ‘on spot’ is conceived as a risk.