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Professional networking in the field of social sciences[1]

Abstract

Professional networking is of paramount importance for academic researchers in terms of their professional development and career advancement. In the national and international literature, research on network building typically takes a quantitative approach, while research using qualitative methods on network building is less common among researchers. Furthermore, gender differences in the field of networking tend to be more typically studied in male-dominated STEM fields (science, technology, mathematics and engineering). In our research, we conducted twenty-five semi-structured interviews with researchers who obtained a doctoral degree in the social sciences in Hungary, asking them about the importance of network building in their profession and career development, whether they have been trained for networking, and how consciously they build their professional networks. Moreover, we asked our respondents to subjectively evaluate the quality of their own networking skills. The results show that researchers are clearly aware of the crucial role of networking in their research careers; they also encounter the positive aspects of networking as well as its downsides; and although they have not been formally taught the importance and methods of networking, the older generation in senior positions may already be keen to share their experiences with younger researchers. The modes and self-assessment of networking varied by gender, with women's disadvantage in the social sciences also confirmed. Another novel finding of the

research is that social scientists perceive countryside residence as a disadvantage for networking in Hungary.

Keywords
network, professional networking, gender inequalities, doctorates, social sciences

Introduction

Network building, or "networking", is of paramount importance for the professional development and career advancement of researchers and academics. Network building implies and presupposes mutual help, which is a mutually beneficial activity (TRAVERS – PEMBERTON 2000), as the network creates social capital, status (BURT 1998) and community (PUTNAM 2000). Researchers also develop informal relationships, as they do not cease to be human outside the organisations. Informal networks can be created accidentally – because their existence provides a sense of security for individuals, reduces tension and stress, and enhances self-esteem – and consciously, when someone tries to gain information or power within an organisation by bypassing formal relationships. Meanwhile, formal and informal networks of relationships are so intertwined that it is difficult to separate them (MINTZBERG 1983).

Networks are key elements in the development of science: the dissemination of scientific knowledge, the visibility and recognition of scientific achievements, and the exchange of information and results all take place through networks (HAEUSSLER 2011). Researchers acquire new knowledge and skills through formal and informal networks, which enable them to embed themselves in the scientific community (RAWLINGS – MCFARLAND 2011; PATARIA et al. 2015). In the world of science, the role of networks has been most studied in relation to authorships (publications) (ABRAMO – D'ANGELO – DI COSTA 2009), research collaborations (JONES – WUCHTY – UZZI 2008; ADAMS et al. 2005), mentoring (FEENEY – BERNAL 2010) and leadership (EBADI – SCHIFFAUEROVA 2015). Not without reason, as these are perhaps the most important areas and

indicators of knowledge flows and career progression. For example, the assessment of researcher performance is increasingly based on objective measures such as the number of publications and citations (MUSSELIN 2008), which in turn is based on researcher collaborations.

Professional progress naturally is influenced by many factors other than the network, such as the organisational culture or the ranking and network position of the institution (GIBSON - HARDY – BUCKLEY 2014; VAN BALEN et al. 2012). One of the main characteristics of networking is that it differs according to gender, i.e. women and men network differently and build different types of networks (IBARRA 1993), and this is also the case in academia (FOX 2005; FORRET – DOUGHERTY 2004; MCGUIRE 2000). For example, having children can make it more difficult to (re)build a network of relationships and thus negatively affect performance, especially for women (MOSS-RACUSIN et al. 2012; HUNTER – LEAHEY 2010).

Gender differences in the development of professional relationships have been studied mainly in the male-dominated STEM fields (Science, Technology, Engineering and Mathematics), where women are a significant minority (ABRAMO – D'ANGELO – MURGIA 2013). These studies have highlighted the fact that women are less aware of the importance of the network (BURKE – ROTHSTEIN – BRISTOR 1995). An international study of 26,000 people in 19 countries found that women are less likely to participate in international collaborations, and that men without children (whose partners are researchers) are the most likely to have international relationships, while women (whose partners are not researchers) are the least likely (UHLY – VISSER – ZIPPEL 2015). Moreover, research on the type of professional collaboration has shown that women tend to be more involved in mentor-based collaborations, while men are more involved in networks linked to work-related tasks (BOZEMAN – GAUGHAN 2011). Nevertheless, there have also been studies whose results show no gender-based differences in researcher collaborations (BOZEMAN – GAUGHAN 2011; MELKERS – KIOPA 2010), and instead see differences in geographical location and academic status (KEGEN 2013).

Our study is based on empirical research on the individual professional network building of doctoral social science researchers and academics in Hungary. During the semi-structured individual interviews, we explored the main characteristics of the doctoral holders' network building, and also the main network arenas of academic life: publication, research collaboration, conference participation, and for differences in these network arenas by gender, geographical location and age. Domestic research has not yet examined the networking of doctoral holders in such depth, and although there have been studies on the disadvantaged position of women in STEM fields (LANNERT – NAGY 2019; PAKSI – NAGY – KIRÁLY 2016) and a literature review on some characteristics of workplace networks, including gender differences (KÜRTÖSI 2004), there is little qualitative information on professional networks in research and innovation (R&D). Therefore, in this paper we present the main characteristics of networking of doctoral holders participated in our qualitative research. Based on their subjective perceptions, first, we examine the extent to which the researchers are aware of the importance of network building, then we show whether they have learned about professional network building during their careers, and how consciously they have built and are building their professional relationships, finally we describe how they evaluated their own network building.

METHODOLOGY

The population of our study consisted of PhD holders in social sciences living in Hungary. Twenty-five semi-structured interviews were conducted with researchers and academics with PhDs in the social sciences. The sample available for this research was selected by non-random purposive sampling. We sought to represent a diverse sample of PhD holders: women and men, younger and older professionals from countryside towns (Debrecen, Szeged) and the capital (Budapest), public and business sectors in R&D and from different disciplines. The basic distribution of the twenty-five people with scientific degrees is as follows: 14 men and 11 women; 15 interviewees from Budapest, 6 from Debrecen and 4 from Szeged. Approximately half of the interviewees were under 40 years of age, the other half were over 40 years of age, and all but three researchers worked in the public sector. The interviews were mainly conducted face-to-face, with only a few cases via Skype between 2017 and 2018, and lasted on average one and a half hours. The interviews were coded and analysed using NVIVO qualitative software.

RESULTS

The importance and role of relationship building

The social science doctorate holders we interviewed considered personal network building of high importance, regardless of gender. In their opinion, research projects, conferences and publications are clearly the most important arenas for building professional relationships. Research projects were rated as the most important by both men and women, while conferences and publications were cited as a priority networking tool by men in the interviews. Many felt that although a wide network of contacts is not necessarily important for teaching, what counts more is "whose person you are", namely, the extent to which you are embedded in the institution. In several cases, interviewees working in universities in Szeged or Debrecen pointed out that a student who graduates from a countryside university has a very low chance of being accepted to a doctoral school in another university, especially not in Budapest, which is an irrecoverable disadvantage in their career.

"The academic network you come from makes a big difference. Staying at university (permanently employed) is still by invitation only. (...) Szeged, Debrecen, Pécs, I don't feel disadvantaged there, because they are planets revolving around themselves; I could describe them as having their own little epicentre around which they orbit. I think there is practically no chance outside of these universities in the countryside. If you're studying at the University of Sopron and you're not doing your PhD in Budapest or in one of the countryside centres, I think it's a career dead end." (Interviewee #12, Szeged, male, over 40).

The role of participation in professional committees or organisations in network building came up several times during the interviews. A female researcher emphasised the positive side of science administration, saying that those who put in the time and effort to build good contacts, and those who manage to get involved in the work of a scientific committee, where they initially act as a science administrator, can build good contacts. However, one male researcher rather highlighted the downside of science administration when he criticised the fact that colleagues with few scientific

achievements can also succeed if they are actively involved in science administration thanks to their good contacts. *"He has publications etc., but the content is not really what he writes, what he researches, but who he knows and what he organises. The problems start where they start giving out science titles for science administration."* (Interviewee #01, Budapest, male, under 40). In his case, the criticism is more about the judgement of scientific performance, which also evaluates the work of science administration. The problems of measuring scientific performance were also criticised by several researchers.

Finally, the social scientists interviewed highlighted the negative role of network building in other cases. Typically, women researchers from countryside universities indicated that networking had given undeserved advantages to several of their colleagues who had gained senior positions through intensive networking without the appropriate knowledge and expertise. *"Of course, it's an objective matter of how to get ahead in the academy ranks, but a lot of that is overridden by who has what networking capital."* (Interviewee #06, Debrecen, female, under 40).

Building the network

Social scientists have described their own networks in comparison with STEM fields, but we also asked them to do so. The consensus was that the social scientists' network is slightly more extensive than that of their colleagues in the natural sciences and technical fields. They believe that the specificity of the discipline means that social scientists work in a more open scientific community. Some argue that this open community is also due to the inherently more open personality of social scientists and that they have somewhat better communication and other networking skills than scientists in STEM fields. Accordingly, the role of skills in networking was seen as a priority in the social sciences, where the presence of skills is an advantage and their absence a disadvantage in the field. They agreed that good communication and networking skills help career progression and that a well-constructed network can compensate for minor professional shortcomings, as one of our interviewees in the capital put it. *"I have seen unsuccessful doctor of the Hungarian Academy of Sciences applications from scientists I consider to be very good. He's not a doctor of the Hungarian Academy of Sciences and he never will be, because (...) he doesn't communicate well and he's made a lot of enemies."* (Interviewee #01, Budapest, male, under 40). However, interviewees argued that communication and networking skills are highly personality-dependent, not everyone has them, but added that these skills can be developed, i.e. networking can be learned. Several scientists would see it as useful to teach and learn networking, even in a formalised way, as this female researcher emphasised:

"Increasingly I think it's more important to have these personality traits and these skills, how I approach others, how I try to say something. So I think people should learn psychology to put themselves in the other person's shoes. (...) Because it's one thing what I want, but the other thing is how can I get him to behave the same way or how can he cooperate with me." (Interviewee #25, Budapest, female, under 40).

Interviewees also expressed that the openness of their discipline has led social scientists to be more open to other disciplines, initiating more research collaborations, which has resulted in an increase in interdisciplinary publications. Interdisciplinary network of a young sociologist, for

example, has been built up in an unusual way by acting as an intermediary between the life sciences and the natural sciences.

"In fact, it was so decisive that it became part of my professional identification (...) working on a project with epidemiologists, mathematicians and me as a sociologist. Roles spontaneously developed, which they later couldn't talk about because they didn't understand each other's profession. They used words differently […] and I developed a mediating role there, which later became formalised." (Interviewee #15, Budapest, male, under 40).

At the same time, several social scientists noted that networking opportunities may vary from discipline to discipline depending on the type of work organisation. Where teamwork is less common, such as in law and history, it is more difficult to build a broad network of contacts due to their relative isolation. Finally, it was pointed out that, unlike in the natural sciences, particularly in engineering, their broad network of contacts is unfortunately less likely to be translated into economic capital.

Awareness

The research also explored whether the interviewees were aware of the importance of networking at the beginning of their careers; whether they had ever learned how to build a good professional network; and how consciously they built their networks. Few of the twenty-five interviewees had attended any communication or knowledge management courses or training, and few had been taught or encouraged to network informally. They typically mentioned that there had been a course at university in the fields of sociology and economics, where the importance of networking was discussed, mainly in relation to the importance of references and publications. Meanwhile, they were not significant, and were a long time ago, and their memories faded. In these disciplines, however, they do see their colleagues occasionally teaching network building, but mostly only those whose research area is about networks explicitly.

Young women social scientists repeatedly missed that not only had they not been taught about the importance of relationship building, but that they were not supported to date, especially in practice. On the one hand, their supervisors or senior colleagues are not likely to share their contacts, or they are not so likely to be introduced to the world of academic communities. On the other hand, even if they manage to attend a conference, they are not able to take advantage of the networking benefits due to a lack of confidence, as this young economist from Budapest has well described: *"There is no one to hold my hand at a conference to take me there, to introduce me, they don't even teach it or do it at home. I don't know whether they do it abroad or what the situation is there, but it would be very, very good if they did it at home." (Interviewee #22, Budapest, female, under 40).*

On the other hand, a senior female sociologist from Debrecen said that young female colleagues do not dare to address more experienced colleagues even if they have the opportunity to do so, due to a lack of confidence. Moreover, if the person is male, it makes them even more discouraged. However, she stressed that these young women colleagues are good professionals, as their publications show. *"What I see with my colleagues, the young beginners, the young girls in particular, is that they start to have this girlish behaviour, that they get embarrassed when they*

talk to a person in a higher position or when they talk to a man (...) and they can't really show themselves. They don't have the confidence to represent their professional credibility, which, if they close the door on themselves and put their knowledge down on paper, is a fantastic thing." (Interviewee #22, Debrecen, female, over 40).

Very few of the interviewees we interviewed thought they were consciously building their professional relationships. Women repeatedly emphasised the role of luck rather than awareness in helping them in their careers, and the importance of building professional trust that can bring the expected results in the long run. A disadvantage for women was that the time lost as a result of having children can significantly reduce the time available for relationship building. Men took much longer than women to think about consciously building up their network of professional contacts. They see the lack of conscious network building in R&D more as a systemic problem. A social scientist in the capital, who has a deep insight into the way doctoral schools operate, cited, among other things, the still prevalent traditional teaching methods as not allowing the development of professional links between younger and older generations of scientists: *"This Prussian training does not in all its elements promote (the building of professional networks) such a master-student situation. It is also a kind of mass production (...), while, well, it should not be a frontal education system." (Interviewee #03, Budapest, male, over 40 years old).* The same interviewee also mentioned the peculiarities of the research funding system as a problem. In his view, it is the pressure to apply due to the underfunding of research creates interdisciplinary networks rather than professional interest – which is not particularly conducive to the development of science.

Taking this idea further, a senior countryside researcher raised the problem of the Matthew effect, whereby only those who already have a network of some kind will have a wider network. From this point of view, he tries to raise his students' awareness of the importance of network building and to help them take the first steps as mentors: *"If you have a strong supporter when you are young, you will have a professional-scientific career very quickly, so you will be embedded in the professional-scientific community very quickly. That's what I teach young people to learn." (Interviewee #05, Debrecen, male, over 40).* Finally, in several cases, male researchers from countryside areas outlined that if they had any conscious professional networking, it tended to be collective at their university, because despite their best efforts, mainly due to distance, they were unable to get involved in professional communities in the capital. For this reason, they have consciously started to develop a strong common, local network of contacts in their field.

Self-assessment

The doctoral participants in our research were asked to assess their own individual professional networking to find out how satisfied they are with themselves, how they rate themselves and whether they would like to change. The following analyses are thus based on self-assessment and subjective perceptions of how skilled, practised and "skillful" the PhD holders are in building professional networks. As before, we have focused on gender and place of location differences, and we have also related the networks both to national and international contacts.

Most of the social scientists rated their own network building as either good or poor, with relatively fewer rating it as medium. Almost half of the 25 interviewees (12) rated their own networking as

"good" or "partly good", while slightly more than half of the interviewees (13), rated their own net-working negatively. A strong pattern emerged in terms of capital versus countryside region: among those who considered themselves good network builders, all but two were from the capital. There was also a significant gender difference in self-assessment: two thirds of men (9 out of 14) and only a quarter of women (3 out of 11) perceived their own network building as "good". The proportion of networkers with a "poor" self-assessment is clearly higher in countryside locations (8 out of 13).

Men who perceived themselves as poor networkers cited laziness and small-mindedness, and several countryside doctoral holders cited distance as a barrier, as we have seen above. Some also argued that they are aloof, "lone wolves", like to go their own way and need trust to connect, which is difficult to develop at work. This is in line with the experience described above that networking also requires an open personality, according to the interviewees. *"Because I have this reluctance to approach someone or to seek a relationship with somebody. For me, one meeting is not enough, you have to have some kind of trust in the other person, without which it doesn't work for me." (Inter-viewee #16, Debrecen, male, above 40).* For women, a lack of confidence and self-assurance was clearly a deterrent, and they often cited networking – in their words, "smooching, fraternising" – as not fitting their personality. *"Obviously, it could have been easier if I had a different personality, because that's the kind of person you really need in the academy and for networking." (Interviewee #24, Budapest, female, under 40).*

At the same time, both genders clearly acknowledged their own responsibility for their poor networking skills, which they felt needed to change. Doctoral holders in the countryside and capi-tal universities who considered themselves to be moderate networkers (a mix of women and men) typically had been able to build a relatively wide network over their professional careers. However, their self-assessment is more negative, as they either consider the role of the network less important in their career progression or would consider a more extensive network to be more fortunate. *"So I'd rather devote my energy to reading and writing than to building relationships. I know that's a bit of an old-fashioned attitude in this day and age, by the way, so I could hype myself up even more, but for some reason I just don't have the stomach for it. But maybe I will." (Interviewee #01, Budapest, male, under 40).* We also found examples of people who had little interdisciplinary links and use of social media, or whose own discipline was less emphasised at university than at universities in other regions.

Discussion and conclusions

In our research, we asked twenty-five researchers and academics with PhDs in the social sciences about the importance they attach to network building in their own profession and career develop-ment. We explored whether they have been trained for networking, and how consciously they build their professional networks. Moreover, we asked our respondents to subjectively evaluate the quality of their own network building. The modes and perceptions of networking were found to differ by gender. As a new finding, our research has highlighted that countryside residence is perceived as a disadvantage in networking by researchers working in the social sciences.

Results show that researchers are clearly aware of the crucial role of networking in their re-search careers. Respondents, regardless of gender and place of residence, considered the building of

a personal networks to be of paramount importance and crucial to career progression. The narratives of those with a PhD degree also reflected an awareness of the importance of a personal network as social capital, an investment into the future and an essential factor for professional success (BURT 1998; PUTNAM 2000). However, in addition to the positive evaluation of the effects of networking, there was also a strong emphasis on the view that effective networking can have a negative impact on the supposedly objective evaluation of academic performance (MUSSELIN 2008). Some interviewees argued that, in contrast to the meritocratic principles that characterise the world of science, a high level of network capital and effective science management introduce subjective elements into the evaluation of scientific performance and may even replace real knowledge and performance or, on the contrary, prevent the validation of existing knowledge. The ambivalent - both positive and negative - assessment of the role of the personal networks is therefore a dominant phenomenon among people with a scientific degree.

Research projects, conferences and publications were identified by researchers as the most important arenas for building relationships, in line with trends described in the literature (ABRAMO – D'ANGELO - DI COSTA 2009; JONES – WUCHTY – UZZI 2008; ADAMS et al. 2005). The initial choice of a research topic, the continuation of the research area of the PhD supervisor, the adoption and extension of their network, on the one hand, indicate a positive, reciprocal relationship, which can greatly facilitate the integration of young researchers into the profession (TARDOS – PAKSI 2020). On the other hand, the opposite may be expected: for example, in the evaluation of EU ERC proposals, the criterion for research performance includes explicitly that the applicant should have an independent research topic from their PhD supervisor, and above all, that they should not co-author papers with their former supervisor.

Social scientists involved in our research have also typically sought to build interdisciplinary links. The openness of social scientists stems not only from the specificity of the profession, but also increasingly from their explicit search for collaboration with STEM disciplines. Indeed, performance-oriented science is increasingly forcing researchers to publish in high-prestige Q1 or Q2 journals. This goal can be more easily achieved if social scientists publish their research results with STEM colleagues in STEM journals (MUSSELIN 2008). However, it is not enough to seek and find relationships, but the acquisition of a 'common language' and meaningful communication between disciplines also need to be developed for efficiency and sustainability. This may also reduce the experience that professional social science contacts are poorly translated into economic capital.

The social scientists we interviewed had hardly ever encountered courses teaching relationship building, and had not participated in them during their careers. The interviews show that the younger generation already explicitly misses practical help and support in professional networking, but it is also evident that senior researchers are already making a conscious effort to teach the younger generation, albeit in a more informal way. They repeatedly stressed the importance of being able to learn and teach in a formalised way how to build professional relationships, in order to build their network of professional contacts more consciously in the future. Respondents also highlighted structural problems, such as the way teaching is carried out in universities, their organisational culture and the way they fund research being less conducive to the proper professional embedding of young people. All these practices and insights are encouraging for the future, but in no way make up for the gap highlighted by the social scientists interviewed: academic institutions should provide more support at individual and organisational level to build a positive, supportive environment, which would increase

professional collaboration by building up networks of contacts and thus improve the performance and career development of researchers.

During the interviews, we came across several phenomena that were a disadvantage for the women researchers, confirming the findings of previous international research. Lack of self-confidence and childbearing may also make it difficult for the female researchers in this study to build a network of relationships (MOSS-RACUSIN ET AL. 2012; HUNTER – LEAHEY 2010). Furthermore, the difference between women's and men's self-assessment of their networking skills was also noticeable. Women tended to underestimate their own networking skills compared to men, a phenomenon that has been typically found in STEM fields in the literature (FOX 2005; FORRET – DOUGHERTY 2004; MCGUIRE 2000).

Similarly, to international research findings, place of residence and geographical location were also decisive in the researchers' self-assessment of their networking skills (KEGEN 2013). The majority of those who considered themselves good networkers were from the capital, while those with poorer networking skills were over-represented among researchers working in the countryside towns. The overwhelming majority of social scientists reporting a positive self-assessment of networking skills were Budapest residents, while the majority of those with a negative self-assessment were countryside residents. In terms of countryside-capital competition, the question also arises as to what extent the difficulty of navigating between institutions in the country and in the capital can be attributed to the weakness of individual network positions or to differences in network positions between institutions.

Future research on professional networking should compare early and later career stages, the role of childbearing, the system of reciprocity, different types of relationships, formal and informal networks, the impact of the PhD degree and managerial position on professional networking. Furthermore, it would be worthwhile to examine whether there are gender differences in the way relationships and networks are built - or not - with PhD supervisors, and the impact on researchers' careers of having to break previously established relationships due to external professional demands.

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