Early Career Women in Academia:

An Exploration of Networking Perceptions

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Instrumental or evolutionary? Understanding networking of female academics

The old saying 'It is not what you know, but also who you know' has a host of implications when it comes to career development strategy and one's career outcomes. This phrase refers to the connecting of (like-minded) people, meaning creating relationships and networks that are a valuable asset as they can provide the individual with support as well as intangible and tangible benefits, like access to information and social resources (Nahapiet and Ghoshal, 1998). Although building relationships and networking is not a novelty for academia, some authors argue it is the

internationalization of higher education and the growing need for international activities and strategic alliances between universities that has made professional linkages and networking with other scholars worldwide essential for academics (Ismail and Rasdi, 2007). Mavin and Bryans (2002), for their part, suggest that the networking process in academia has redrawn the departmental and geographical boundaries. This affects how the arena for networking is conceived: on the one hand we relate academia to the organized settings of the higher education institution where academics are located; on the other hand we understand academia broadly as a transnational scientific community which researchers relate to and which is mainly defined by disciplinary fields.

Much of the literature on networking and specifically gender differences in networking practices is based on studies on career advancement and success, conducted in non-academic settings, such as companies, banks, social services etc. Although such studies contributed significantly to our knowledge of the nature of networking, differences between academic and non-academic setting have to be acknowledged as well. Besides providing support for career development (Mavin and Bryans, 2002; Forret and Dougherty, 2004), support for attaining power within an organisation (Brass, 1992), and psychological support (Kram and Isabella, 1985; Ibarra 1992; Mirvis and Hall, 1996), as many of the studies done in non-academic settings suggest, networking in academia seems to entail a dimension that is closer to core academic activities, particularly of research.

Fetzer (2003) views networking in academia as a mechanism to build a sense of community among scholars within a specified disciplinary field. Maack and Passet (1993) argue that in academia, networking is about keeping up with the literature, doing innovative work, and presenting research work at conferences and in publications with other academics of the same interests. Nabi (1999, 2003) suggests networking is about self-promotion, as it increases the

visibility of the academics by signaling their quality, ability and potential to the academic community.

Some authors argue that one's personal and professional reputation in academia is heavily dependent upon integration into formal and informal networks in the research community (Bagilhole, 1993, 2000; O'Leary and Mitchell, 1990). Atkinson and Delamont (1990) further argue that success in the academic community is not achieved by publishing more, or even by doing better research, but through personal contacts, friendships and cooperative work with key players in the disciplinary field. As academics often identify themselves with the chosen discipline rather than the university where they are employed, it is of no surprise they also identify themselves with important (national and international) disciplinary networks (Ismail and Rasdi, 2007) and key players in the chosen field (Atkison and Delamont, 1990). Just like the ability to successfully publish high quality research, the social competence in creating networks that benefit not only the individual therein embedded, but also the research group or institution in which he or she works, contributes to the labour market attractiveness of a scholar. Thus, some authors see networking as one's most valuable career management strategy, having in mind that individuals are responsible for their own employment and career development (Altman and Post, 1996; Arthur and Rousseau, 1996; Hakim, 1994; Sullivan, 1999). Similarly, academic careers are not tied to a single organisation, such as one university, but instead the trans-boundary and international nature of discipline-based academic work enables academic careers to span institutional and state borders (Välimaa et al 2014).

The two main concepts arising from these premises are networks and networking. We define networks conceptually as more or less durable linkages between academics; such networks allow the flow of a particular resource, which is social capital. We assume thus that the degree of social capital possessed by an academic affects one's opportunities to advance in the career trajectory (Bourdieu and Wacquant 1992, 113-114; Burt 2000). Quinlan (1999), for example,

suggests that connections with powerful people such as highly respected scholars, members of grant committees, editors of journals or one's department head or dean, make for an influential network in the academic arena. Similarly, we define networking as an activity of acquiring those networks.

Previous research shows the importance of networking and networks for academic work and career paths. Bagilhole and Goode (2001) argue that networking is a skill necessary for academics to develop in order to create the kinds of professional relationships, which can act as a 'capital' in making academic career progress. Networking enables the individuals engaged in it to gain access to new information and collaborations, contributes to career planning and strategy, provides them with better professional support and encouragement, and ultimately impacts on their upward career mobility (Ismail and Rasdi, 2007). It is increasingly acknowledged that not only having a mentoring relationship (so common for academia), but especially a network of developmental relationships may be essential to achieving career success (e.g. Baugh and Scandura, 1999; De Janasz and Sullivan, 2004; Higgins, 2000, 2001; Higgins and Thomas, 2001). Seen as the process of building and nurturing of personal and professional relationships to create a system of information, contact, and support, networking is crucial not only for career progress but personal success as well (Whiting and De Janasz, 2004). Peluchette (1993) and Greenhaus and Callanan (1994) have pointed out three mechanisms found in networking: (I) increased support and advice, both emotional and practical; (II) enhanced sense of competence through skill development; and (III) greater access to power and control over one's career prospects through self-promotion of abilities and aspirations.

Although recognized as a 'highly time and energy consuming' activity (Šadl, 2009), networking seems to evolve into one of the crucial determinants of one's academic career, as academics usually find themselves embedded in both formal and informal networks. Beside mentor-related relationships, broader networks of supporters have also been identified as influential to career

success (Ibarra, 1993) as both mentors and interpersonal networks may have instrumental value (i.e. enhancing job performance and career advancement) and expressive value (i.e. providing psychosocial support), as argued by Tichy (1981). Aisenberg and Harrington (1988) emphasize the need for both formal and informal networking in academia, showing that, in contrast, isolation is costly in terms of 'intellectual and informational exchange'. However, the networks that are relevant for one's career may be located at different levels: along the same corridor, in the same institution, nationally or globally. Still, some authors recognize the successful development of relationships and networks as one of the key challenges faced by early career academic staff (Bazeley et al., 1996), especially junior female academics (Qinland, 1999). This is further supported by Rothstein and Davey's study (1995) as their data reveals that networks are seen as more important to younger, less established female academics who are more in need of support at this particular stage of their academic careers.

While we acknowledge that networks are functional to academic career advancement, we also aim to define them in the broadest possible manner. Networks may be the outcome of external pressures – e.g. conducting collaborative research in order to get funding, or the output of an intentional strategy – e.g.to foster one's own career. We argue that networks can also be the unintended consequence of socialization – e.g. attending a doctoral school, satisfying group or personal needs or expressing individual traits. Thus we characterize as networks *any linkages academics hold or have held with colleagues*; in other words, networks are linkages that do not have to be focused primarily on academic tasks, but that can also be framed by more personal relationships: friendship, partnership, or acquaintance. Networks may be born out of conscious activity to "network" but also as an unintended consequence of meeting people in work or social contexts. Šadl's study (2009) suggests that academics create networks both to gain political power and advantage in organizational politics (e.g. 'old boy networks', Kaufman, 1978) and to satisfy practical needs, such as socializing with sympathetic colleagues.

In this paper we want to further explore women's networking perceptions by focusing on a specific group: early career women in social sciences. The motivation for this exploratory study arises from our personal interests and experiences as early career women: precarious career situations resulting from short term funding, discrepancy between scarce academic positions and abundant new graduates, the toughening competition early career researchers face, and the importance of networks for our personal career paths. These experiences and the perception that they are widely encountered by early career scholars in Europe; sparked our interest in studying how the early career women carry out and think of networking.

We ask three empirical research questions. Firstly, we ask how early career women define the early career stage in academia. We consider this relevant in understanding the self-perceptions of female academics who, on the one hand, may - or may not- share a group identity of being early career women, on the other hand present heterogeneous characteristics in terms of institutional affiliation, national context, specific position and age. Secondly, we ask what definitions, meanings and interpretations they give for networks and networking. Thirdly, we inquire how they construct the networking process and their ability to establish and/or join networks, as early career researchers and as women. Given the exploratory nature of our research, this paper starts by discussing different analytical perspectives, and then presents in detail the empirical setting. We then offer our analysis according to our three research questions, we discuss our empirical findings from a conceptual perspective and conclude by presenting a potential future research agenda.

Gender studies, social capital, academic profession

This paper addresses the perceptions early career women in academia hold about networking for career purposes. Despite a plethora of studies that scrutinize differences in male and female

networks in the workplace (Brass, 1985; Moore, 1990; Ibarra, 1993, 1997; McGuire, 2002), the perceptions of networking held by women in academia, as well as the patterns of their networking, remain less understood. Previous research offers two possible approaches to understanding the difference in the ways in which women network in academia for the purposes of advancing their career.

According to the first approach, women and men foster qualitatively different patterns of interaction within their work settings. Kaufman's study (1978) reveals that women have larger, more integrated and more homogeneous networks than their male colleagues and surround themselves with same-sex colleagues more than males would. Furthermore, her study reveals that women tend more to associate with those of similar or lower rank, as well as with those whose research interests are (very) different from their own. Similar patterns were detected in other studies as well. Rothstein and Davey's study (1995) also reveals that female faculty had significantly more females in their networks than did male faculty, suggesting homophilous networking by both men and women. Furthermore, their study indicates that female faculty realize the importance of social support more than men, and make a greater effort than men to extend their networks to obtain higher levels of support. Šadl's study (2009) reveals that men and women use different strategies to attract attention and visibility and to enhance their chances and opportunities. Men are more willing to use confrontation and public relations strategies to put themselves forward, whereas women seem to be more worried about their legitimacy and the appropriateness of their actions. The male respondents' in Šadl's study (2009) showed political manoeuvring and the practical and purposive nature of their information-seeking practices stand in contrast to the female respondents' 'no-planning' approach to social networking. Similarly, Ledwith and Manfredi's study (2000) showed little signs of gain-seeking networking amongst junior or senior women in academia. Other studies suggest women tend to have network compositions with more diverse participants and connections to several other networks, and tend

to be linked to fewer influential connections in their networks (Brass 1985; Moore 1990; Ibarra 1993; Ibarra 1997; McGuire 2002).

Female academics are often excluded from academic networks, especially in their early career phase, which puts them at a disadvantage (Kaufman 1978; O'Leary and Mitchell 1990; Toren 1991, 2001; Vazquez-Cupeiro and Elston 2006). Exclusion results in them experiencing greater isolation, a higher level of stress, a lower level of self-efficacy and self-confidence (Vasil, 1996). Women are often excluded from the most resourceful networks despite their career location (Miller, Lincoln, and Olson 1981; Ibarra 1992), and there are gender differences in the rewards of social capital (Ibarra 1997; Burt 1998). Men appear more able than women to leverage credentials such as hierarchical rank, existing network contacts, or educational degrees, in addition to managing a higher number of relations. Even female academics in executive positions are frequently excluded from the networks through which male academics hold more powerful positions in decision-making (Šadl, 2009). Brass (1985) argues that women's networks may be valued less, as women are perceived to be less competent.

The second approach to studying women's networking addresses this imbalance through social capital theory and argues that women - along with young men - are perceived as "outsiders" in the workplace (Burt 1998, 2000; Aisenberg and Harrington, 1988; Atkinson and Delamont, 1990). Thus, Burt argues, women do not have the legitimacy or capacity to network successfully, nor are they recognized as able and/or entitled to build and maintain fruitful connections in order to advance in their careers. This outsider position requires women to act differently in order to increase their social capital through networking. Instead of creating their own network women are better off if they "borrow" the network from a "sponsor", who is high(er) in the hierarchy, such as a mentor or a supervisor. Women in Burt's sample profit the most from close relations to superiors, and from being in dense networks with direct ties to close colleagues. Burt attributes this to the need for women to attain "borrowed social capital" in the

eyes of their superiors, who make decisions about their upward mobility (1998, p. 6). They can thus achieve quicker career advancement than if they stay on their own or attempt to network exclusively from their position (Burt 1998). Also Šadl (2009, p. 1251) in her study of 22 mid-career male and female academics, identified senior (usually male) academics as holding the most powerful positions and acting as 'sponsors' for female colleagues in networks. She also suggests that the combination of age and gender hierarchy doubly deprives younger women in academia, while in the case of their male colleagues their disadvantageous position in the age hierarchy is offset by their privileged position with regard to the gender hierarchy. Atkinson and Delamont (1990) conclude that the position for women as 'outsider' scientists is therefore complex and less under their own control than is publicly portrayed.

However, Leathwood and Read's study (2009:176) suggest many female academics continue to 'construct a "space of their own" within academia that provides many pleasures, comforts and rewards'. Other studies suggest women actively seek out satisfying career supportive relationships, often within the group of peers, but mostly among other women as the women's network plays a significant role in providing them with the instrumental, emotional, psychological, and social support that is vital for survival in the male-dominated workplaces (Quinlan, 1999, Ismail and Rasdi, 2007). Ibarra (1992) suggests that women's homophilous ties – those with other women – may be chosen to serve primarily expressive functions, while ties with men may be for more instrumental purposes.

Recognized as a web of intellectual, social, personal and political ties that acts as one of the most influential career supportive elements (Travers et al., 1997), networking has become one of the greatest career challenges – especially for early career women in academia (Quinlan, 1999). Ismail and associates' (2004) study, for example, revealed that successful female academics capitalized on their post-graduate studies to initiate their networking. Thus, their post-graduate

studies paved the way for their academic networks. The ability to establish contacts with other scholars from around the globe was one of the factors contributing to their fast career mobility.

Empirical setting: exploring networking of early career women in social sciences

Our starting point is an explorative study rooted in social constructivist methodology (Broido & Manning, 2000). This approach makes sense of the experience and perceptions of early career women in academia by interpreting the meanings they make of their own thoughts on and engagement with networking in different arenas and with various agendas in mind (Denzin & Lincoln, 1994). It highlights the salient phenomena in our own academic contexts and draws attention to women's self-understanding of their position and opportunities. The qualitative group interviews used to collect the empirical data allow us to gain a holistic understanding of the context in which early career women operate, while capturing data on participant perceptions "from the inside" (Miles and Huberman 1994, p. 6). The analysis aims to understand "the complex world of lived experience from the point of view of those who live it" (Schwandt, 1994, p. 118). Therefore, despite our personal preconceptions regarding networks, we aimed not to predefine the concept of networks or networking, or assume the perceptions of the interviewees. As previously argued, we acknowledge networking as a purposeful activity to achieve career advancement; at the same time though, we explore with our respondents all possible meanings attributed to networking in academia as establishing any type of linkages with colleagues. In a similar vein we do not claim to produce generalisable information about early career women across continents and academic fields. Rather, we present our case as a valuable starting point to develop new research – new concepts, hypotheses, methods and cases – on how female academics interact with their colleagues in academia.

In keeping with our personal interest, we decided to limit our study to our own disciplinary field and context, higher education research. In collecting the data through group interviews of early career women, we made use of two international conferences, as they provided access to potential participants in our field. These were the 34th Annual Forum of the EAIR – the European Higher Education Society), organised in Stavanger, Norway, 5-8 September 2012 and the 25th Annual Conference of The Consortium of Higher Education Researchers (CHER), in Belgrade, Serbia, 10-12 September 2012. The selection of these conferences formed a setting for a purposeful selection of the desired target group: an international set of early career women in a particular academic context and the European arena for higher education research.

Both interview events were planned and organised in close collaboration with the conference organizers. Relevant information about the study and how to participate in the interviews was announced on the conferences' websites and through mailing lists, and interview groups were included in the official programme as additional academic activities. We also contacted a dozen participants of the two conferences and sent them a personal invitation. The Call for Participation included relevant information about the background of the study, and introduced us and our research. Participation in interview groups relied on the voluntary engagement of interested parties. The guidelines concerning the definition of early career women were loose, and we welcomed everyone who perceived themselves as part of that group.

The first conference yielded a group interview with three and the second one with nine early career women (see appendix 1). [1]There was also some interest amongst established female academics and early career male researchers to participate, which indicates the timeliness and genderless-ness of this exercise.

[1] Additionally, the interview session at EAIR was briefly visited by another person, who did not however, fill the participant information questionnaire or sign the letter of consent. Thus the few remarks made by her are not taken into account in the analysis.

The group interview sessions lasted for 1 hour 40 minutes and 2 hours respectively. Our main goal as facilitators was to encourage all members to participate, while trying to prevent the discussion from being dominated by few. Before the group interviews, participants were invited to sign a letter of consent and fill a background questionnaire containing information about the participant's highest degree, current position, institutional affiliation, age, nationality, and membership in formal academic networks and associations. The interview sessions were semi-structured (see appendix 2), and the discussions were audio-taped, and later transcribed, amounting to more than 26,000 words. In the following text, the quotes have been lightly edited for grammatical clarity. The participants were later offered an opportunity to comment on a draft version of this chapter.

Our analysis of the data has followed an exploratory research design. We have analysed the transcripts individually and collectively at several stages, as we have discussed our impressions, and detected emerging issues and recognizable patterns. Furthermore, we have considered several strands of literature that we thought resonated with our empirical data. During the process many possible interpretations were debated and then discarded. Nevertheless, the process has allowed us to get to know our data in some depth, to develop a common frame for discussion, and finally to come up with a shared fine-grained analysis.

In order to triangulate our analysis further, we have also applied a different method to verify the robustness of our findings. Thus, once we achieved an advanced draft of this chapter, we coded the group interviews with NVivo software by testing our concepts and dimensions, while at the same time challenging ourselves with new interpretations (see appendix 3). This exercise has proven helpful in systematizing further our previous findings and in examining them with different lenses. Concomitantly it has confirmed our major findings, hence strengthening our analysis and interpretation.

Perceptions of early career women on networking in academia

Early career as stage and agency

The group interview participation was based largely on a self-selection framed by a loose set of guidelines and thus the participants held varying positions in academia, from PhD student positions to associate professorships. Yet they had all elected to participate, thus presumably identifying themselves as early career scholars, or at the very least wanting to express their opinions regarding early career scholars. This discrepancy between self-identification as an early career scholar and relatively speaking advanced position may have several explanations. It may indicate the simultaneous fuzziness and sharp definition of boundaries between the different ranks in academia: PhD positions and several post-doctoral stages are all considered early career; yet at the same time they are removed from the full professorial position, which stands at the top of the academic hierarchy (Clark 1983, 112-113; Neave and Rhoades 1987; Fumasoli et al. 2014). Early career was perceived to mark the stage of entering the academic society; or as a testing period where both the individual and 'the academia', especially department or the individual supervisor, are testing the person's suitability for an academic career. Early career stage was variably considered to start when an individual entered into an employment contract with the university with a purpose of completing a PhD, or alternatively, start after the completion of a PhD degree.

> *I would say that in (country) perhaps that (the early career stage) would be when you enter as a PhD student, then you start in a way your career, because you are an employee and you get money and you are supposed to do your own project, and after you are finished you can work as a researcher or apply for another job within the academic community. (A7)*

The concepts of “early career” and “young" or "junior” person were also perceived to differ from the rest of the society, reflecting a sense of academia as a specific institution or field (Fumasoli et al. 2014). The early career stage was considered to be longer in academia than in other professional sectors, and to be populated by older people than elsewhere. Similarly, someone who has already held a more “senior position” outside academia may well hold a “junior position” in academia.

The perceptions related to the early career thus reflect the two-fold nature of academic careers. On the one hand, the perceptions represent a linear understanding of the career, with early career as a stage or phase in (academic) life, with a beginning, duration and an end, as well as specific capacities and responsibilities that are embedded in the hierarchical structure of academia. In the case of second careers, early career does not necessarily denote young:

> *For me this is kind of my second career because I have put 10 years into an administrative position so this is kind of a new career [...] but I agree with (name) it's like, during your PhD it is like you are percolating around all of this different ideas trying to figure out who you are and what you want to do. (A3)*

On the other hand, the early career is characterised by a particular type of agency, focusing on a search for legitimation, and coping with limitations of capacity to act:

> *I think about being legitimated and maybe an early career person, or woman, is still someone that is looking for, or in need of, legitimation. (A11)*

> *Even if you are young it doesn't necessarily mean that you would be considered unequal or less important. It's maybe more up to you to find your own reassurance, to know that you are able to do this and that you are able to find something and then to speak about your findings with some authority.(A10)*

The perception of a researcher's agency as changing over time and being dependent on the career stage implies that those who have acquired responsibilities for other people are no longer early career researchers. The broadening scope and capacity to act in relation to one's job and tasks, and a sense of responsibility going beyond matters related to oneself to those over other people are part and parcel of the transition from early to midcareer position, as indicated by the following quote by a participant who no longer considers herself as an early career scholar, although has elected to participate in the session.

> *Interviewer: Ok, so do you feel you are an early career researcher?*
>
> *No, I don't think that anymore. Because I have worked for 13 years so it seems more, it's not early career anymore. My answer would be like that, because I see a lot of younger people around me and I have PhD students. You are responsible for somebody, so you are not at the beginning anymore. (A11)*

Understanding, joining, and maintaining networks

We address networks and networking through four questions, namely what definitions early career women give to networks; what they perceive to be the ways of acquiring or joining networks, what they perceive to be the reasons affecting their ability to form or join networks and, finally, what motivations they give for networking and whether they consider networking as an intentional or unintentional process.

At the beginning of the paper, our empirical characterization of a network was that of "*any linkages academics hold or have held with colleagues* ". When analysing the data, a much more fine-grained picture of describing networks and networking emerges. Firstly, we can identify a functional idea of a network, based on shared work and tasks, rather than on individual or

institutional attributes or values. It emphasizes outcomes, tangible or intangible, as ways to pin down the existence of a network.

> *Interviewer: So, I mean, if you get an assignment to try to work on your definition of networking, so what does it mean to you?*
>
> *Collaboration with other research teams or other researchers, researchers from other countries or even in the same country but other institutions but above all collaboration and exchange of ideas, of work, of doing something together, papers or participating in the same research projects, networking, yes. (A1)*
>
> *Ok, so for me the question is who do I collaborate with and I collaborate with people from my department, people in (country) who work as researchers on the issue of higher education, people who work in the civil society in those issues and people who work in states institution like ministry on these issues and then internationally I collaborate with researchers who work on these issues... (A9)*

The second definition of network arising from the interviews is that of a peer group sharing interests and values. This similarly reflects a functional idea of a network, although the function is more tacit than in the first case. Instead of co-production of something tangible, such as a shared article, the function in this second case is social, based on the social aspects of interaction between people.

> *I have maybe very wide and superficial ideas of network. For me it is just to get to know other people [...] to speak a little bit just to get to know people and then one day maybe we will strongly collaborate on a project or maybe not ... it is for me is something very social, so first step of networking for me is something just a social-ish, not really work-ish.(A4)*

The third definition of networks relates to knowing people, who are in a position to provide help or information, or, more profoundly, support an early career researcher to develop their own

research or move ahead in academia. The participants constructed two types of examples of such networks: hierarchical ones with an imbalance of power within the network members, and non-hierarchical ones without a power imbalance and larger reciprocity among participants. The extract below demonstrates the perception of network as essential element in establishing oneself in academia, and how one's own position mediates access to networks as well as enables one to do one's own job.

> *I first understood how important networking is when I started a large project and we started looking for people to bring into the project. My senior colleagues who were in the middle of very important networks, were very able to bring people into the group […]It was very easy to gain information about those people because you can always write your colleague, who is in the network and ask their opinion about a person. And when I approached somebody, they would ask "Who are you? […]Why are you writing to me?" After a couple of years I found that the situation is slowly changing and that people respond in a very different way now. It seems that this may be because I am part of a network now. (A11)*

The participants had divergent views regarding the locations of such networks at local or institutional scale, national scale and international scale, reflecting the multilevel character of higher education (c.f. Marginson & Rhoades 2001). They are also mediated by the national and institutional contexts, and the career stages of the participants themselves. The following excerpt illustrates the perception that in contexts where academic mobility is limited, institutional networks and mentors become important.

> *In my country, there is little mobility between universities. It means that if you start your career in one university, you will end your career at the same place with 80% probability. So, for us networking in the university normally is much more important than between universities. It is really hard to gain external ties because people just stay at one place.*

[...] the main tie of young people within a university is, I would say, only the PhD advisor or the faculty or department chair. (A11)

If you are just stuck in your institution as you explained, I guess that would mean your relevant network is with the other people within the institution. But if you have the opportunity to have also international activities that of course then means that you are going to meet relevant authorities in the field internationally. (A10)

While discussing networking and networks, the interview participants also construed different ways of accessing or joining networks. We can identify three primary ways, which we are calling *work-based, attribute-based,* and *mediated network access.* Firstly, in *work-based network access,* a clear collaborative task and/or prolonged collaborative work facilitate the emergence of or inclusion to a network. This may be participation in mutual research projects, professional and scholarly associations, and contacts outside academia related for example to one's research topic or earlier career.

There is one network that is particularly important to me. It is related to a group of people who have come together to deal with different issues like sustainable development and economics and different people come together to see whether there can be a new platform for change in [country]... (A9)

The interview participants construed the joining and creating of networks as taking place through meeting and bonding with other people in a similar career stage so that the career stage was the determining factor in joining a network. We may call this mode of *attribute-based network access* and it is based on common traits of the participants, such as being female PhD students of a roughly similar age.

If I look behind the first year of my PhD, I did a lot of networking with my colleagues, other PhD students.[…] My first step was just to go to seminars and workshops. […]

After two years of my PhD I think I knew more or less all the PhD students in my faculty. (A4)

I've networked with my PhD fellows... informally and of course they were friends but also… sometimes you also kind of need to know somebody to help out, to advice you or whatever, just for socialization. It's networking as well. (A6)

Burt's (1998, 2000) argument about early career women needing to canvas for support of their supervisors in order to gain access to networks also finds support amongst our participants, who noted that they acquire networks through supervisors and other senior colleagues acting as mediators or gatekeepers to pre-existing networks. As one participant pointed out, before one becomes known, being part of networks is based on other people around oneself being already known in the scientific community. We shall call this *mediated network access:*

So you always need to reveal some information, which is familiar to other people to build a trust relationship. […] So for example how can I invite you to write paper if I know nothing about you? But if I know that you are working with some important people who produce good work, I would be happy to invite you. (A11)

The ability to join networks was considered a social skill, at which some people were naturally more adept, or which they had learned. Also personal characteristics and career stage were seen to impact on the ability to join or build networks. Alternatively, the ability to join or acquire networks was seen to depend on the reputation and prestige of the institution and one's supervisor, and by the support the early career women were able to get from their institution. This is important as it relates to the organizational structures, where networking takes place, which empower or constrain academics' behaviour according to reputation and legitimacy (March and Olsen 1989, 1995). This seems to point to the perceived necessity of being legitimized by formal attributes, like institutional affiliation or supervisor's reputation. The

relevant networks may be located at one or several layers at the same time, which reflects the understanding of academia as a field which is twofold: constructed around organized settings and professional and disciplinary communities (Clark 1983). Networking opportunities are thus shaped by several arenas, which overlap each other and/or are embedded into one another, as well as operate at different levels (Gornitzka 2009). The process through which these networks can be joined thus also varies.

> *If you have a very well established supervisor or a very well established institution then you are much better off [...]. And if you are not in a network, if nobody knows you, you have huge problems.[…] So if you want to be part of this cutting edge research you simply must be in a very good and very well established and very well-known and very famous network . If you are not there, you are out [...] If you are in a good university with good people, then you somehow automatically become a part of it. It is much easier for you. (A10)*

The perception of our respondents provides a complex picture of networking, which was simultaneously construed as an activity that was intellectually and personally stimulating and related to developing new ideas for one's research and thinking; as a natural part of the job, of working and growing as a researcher; and as a way of acquiring useful contacts to help early career researchers progress on their careers and acquire future positions. Networking was thus construed both as driven by intellectual curiosity and the desire to do one's job well, or portrayed as a purposeful activity arising from strategic considerations for some explicit gain. A logic of instrumentality and a logic of appropriateness (March and Olsen 2006) appear to co-exist in the words of some of our respondents, who recognize blending their academic interests with career goals.

> *Networking is about getting to know useful contacts. It can be from just exchanges of ideas to introducing yourself to potential employer…so yeah it's a strategy and I think I don't*

know to what extent I can separate how I embody that through my socialization, professional socialization process. (A9)

On the one hand, networking arising from intellectual curiosity-driven and socially-driven motivation, networking with one's peers and colleagues with whom one shares similar values and interest, or networking in a context, was presented with a positive connotation.

But sometimes it is also a way to stay there for the others and to help each other, because one of the networks that I belong to, we are developing some research projects, [topic], and we have never been able to get financial support for the project until now and we keep going with that. We are from 8 different countries and we are actually supporting each other and trying to see: "Well we have an opportunity here let's see" - and it's more, it's not hierarchical…it is different I think. (A8)

On the other hand, many participants expressed some ambiguity towards networking as a purposeful activity. It was recognised as an important process in academic contexts, yet rejected as something too "planned", evoking feelings of awkwardness and being uncomfortable, as well as going against one's nature.

My association with networking is a piece of advice I was given early on in my career that it is very important to network and I remember thinking at the time that it seemed so planned. [...] I think networking actually involves more planned, more directed approach, and it is about identifying people from whom you can benefit in some way. And I often find myself feeling almost awkward at conferences about meeting useful contacts. (A9)

For the sake of analytically distinguishing these two different construals of networking, we may call them '*organic*' and *'strategic'* networking. Organic networking refers to an incremental activity, in which networks arise either through social means or through research groups or collaborations. Organic networking also includes an idea of egalitarian, peer-based reciprocity.

Strategic networking refers to networking as a purposeful activity done in order to advance one's career, or deliberate attempts to network with people in more powerful positions, especially outside the context of a shared research project.

Whilst the value connotations of these two understandings were by no means unanimous, strategic networking was often given a negative connotation, even presenting a caricature of a networker, implying a rude and self- important person, somebody one does not want to identify with.

> *I am not comfortable with that idea of getting to know someone only for specific purposes, [to have] lunch with someone at a conference or sit near someone just because I want something. I don't like that kind of meaning for networking. (A1)*

> *I don't think I would become a strong networker … you know this type of person who takes the initiative, go to interrupt people while they are chatting with others just to say hello. (A4)*

However, the portrayal of strategic networking was not wholly negative, and its importance was perceived to increase over one's career. Participants also pointed out that funding schemes and the general competitiveness of academia nowadays requires strategic collaborative partners, and that external funding requires increasing networking in order to submit applications based on collaborative research. This represents a way to construe a positive notion of strategic networking. The necessity of establishing networks of researchers in order to apply for funds and conduct research appears to nuance the perceived negative features of strategic networking. Perhaps funding acquisition provides a sense of common enterprise towards a shared goal, thus liberating strategic networking from its individualistic traits, such as personal career progression, and adding a sense of collective endeavour benefitting a group of colleagues. However, the

distinction between organic and strategic networking processes was not always easily identifiable.

Perceptions of networking and gender

While the participants approached networking as a purposeful activity with ambiguity, they also indicated having encountered a whole host of cultural expectations as to how women should behave, which seemed to discourage networking. For example, women are perceived to rely on their looks to get ahead, they should be seen but not heard, they should not make a big deal of themselves, they should have appropriate topics for discussion, or be interested in particular research methods. Some participants also expressed feeling uncomfortable being 'visible' in a way implied by the activity of networking.

> *For me [networking] is about making yourself visible. I don't often feel comfortable making myself visible in front of men, seniors, academics, researchers etc. So I think that's something I bear in mind. And I also find as a woman I think about how I dress[...] whether I'll be taken seriously depending on how I look and how I talk. So I am definitely aware of the male gaze more. With women I feel much more comfortable. (A9)*

However, despite the fact that participants explicitly voiced a perception of gender bias in academia, where they even expected to be treated differently from men, some participants also wanted to challenge what was perceived to be the role assigned for women, namely one based on looks or certain kind of behaviour.

> *I know it's there and I've seen research on how young female scholars are not taken seriously but I just choose to ignore it, just literally. I mean, I know the evidence is there but I ignore it because I will not let this sort of thing influence the type of research I can make. I know if I want to get anywhere I have to produce quality work. (A5)*

Some of the participants told of having encountered bullying or gendered jokes in the work place and presented different responses to that. They portrayed a discrepancy between the official discourse and the reality of (in) equality encountered by some of the women. One of the interviewees presumed that women play along with the gendered jokes in order to gain access to the "boys' club", while two others pointed out conscious resistance to the expected stereotypes of female behaviour, and refusal of the participants to acknowledge in their behaviour that these existed.

Although this study does not reveal anything about the real differences in the networking of men and women, the participants themselves perceived there to be a difference (Ibarra 1997, Burt 1998, Sadlak 2009). Men were thought to have a more strategic or perhaps more competitive approach to networking than women, and some participants pointed out that they had received encouragement from male peers or mentors or colleagues to "better stick up for themselves".

> *I have a feeling that yes [men network more strategically], but it's just a hunch. [...] When I scan through people that I know, I would say that in men's group the majority do that, in the women's group only some. (A10)*

> *I've got the same advice from numerous I would say male bosses. [...] They think that (networking) is very important. You need to go out there, you know, shake hands with people and introduce yourself. And to me, I am just like … I mean I do it because I am more curious, not because I want to get something. [...] So I think maybe it works, maybe there is this gender thing. I don't know, but for me it doesn't feel comfortable. (A7)*

Discussion

The different understandings of networks and networking presented by our participants can be summarised in the following tables, where the first rows are linked with the second rows:

functional networks and work-based networking are linked, as are peer group networks and access to them based on shared attributes; or strategic networking motivation and purposeful networking process. The most obvious empirical observation is the complexity arising from the group interviews. The participants often saw two sides of the networking coin: i.e. although some individuals indicated that they were not comfortable with strategic networking, they at the same time thought it important or necessary in academic careers.

Definition of networks	Functional networks	Peer group networks	Information sharing networks (hierarchical/non-hierarchical)
Access to networks	Work-based	Attribute-based	Mediated by institutions or seniors

Table 1.1: Networks and network access

Motivations for networking	Curiosity-driven or socially- driven	Strategic
Networking process	Organic	Purposeful

Table 1.2: Networking motivations and process

While this empirical observation is easy to understand, and aligns well with the previous research on women's networking in academia (Kaufmann 1978, Brass 1985, Burt 1998, Higgins 2000), it is more challenging to discuss its implications for our conceptual understanding of networking and networks as pertaining to the social capital and its use in leveraging positions in academia. As our case illustrates, early career women adopt different opinions regarding networking in the field of academia. We find examples where strategic networking with more established people in the academic field is preferred, but also examples of preferred networking with other early-career peers based on social relations and mutual interests. Early career women may have few traditional resources such as prestige and reputation, which are increasingly measured through quantitative indicators such as research output, and act as monikers of the capacity of those individuals to bargain for positions in the field. However, as some participants pointed out, their ability to network is partially dependent on the leverage their supervisors, mentors and senior colleagues, as well as the standing of the institutions they are affiliated with can offer, in order to be able to access a targeted network, and thus position themselves in the field.

The participants seemed to have a nuanced awareness of the stratification of the field and the operation of the two types of power in academia, namely academic power related to the control over resource distribution and scientific power, linked to scientific knowledge production and its related reputation (c.f. Bourdieu 1988, Delanty 2005). On the one hand they perceived as important connections those with academics who possess academic power and therefore are able to offer a potential contact for job opportunities. On the other hand they deem as important those linkages to academics with scientific power, considered valuable contacts in terms of advice for research activities while also offering reputation gains through their own status. Academic and scientific power also play out differently at different points of the process, and the nature of the

power dynamics are very different in a context of a local competitive horizon of one's own institution (Hoffmann et al 2011), than when operating on a global competitive horizon, where the relevant networks may be less immediate and localised. The rules of the field, the leverages for gaining position in that field and the actions considered appropriate by individuals are also different at different points of operation. For those operating mainly inside their own institution, institutional-level networks may be significant in terms of moving from a precarious career situation to a more consolidated position, whilst for someone aiming at an international research career, the international networks and research outputs may be more significant. Different individuals can thus operate on different competitive horizons, each presenting their unique challenges and requiring different approaches to networking.

The gendered nature of networking in academia is evident in the way our participants reported having encountered gendered treatment, stereotyping or jokes as women; and in their perception that women's networking differs from men's. Previous research argues that (younger) women are outsiders in academia with less legitimacy, and thus less capacity to network on their own, and that they are better off if they are able to use mentors and supervisors to mediate their access to networks in the field (Burt 1998). Our participants demonstrated a desire to consciously challenge and step over the gender divide, for example by actively challenging the stereotypes of appropriate behaviour for women;

> *I am not leaving my job any time soon, I am just being assertive, what I believe in I stand by it. How many times you go to meetings and you see this?(A12)*

or by seeking to strategically network even if they were uncomfortable with it or by emphasising networking as a social, curiosity driven activity amongst peers rather than an activity aiming at personal gains through connecting with more senior colleagues.

Another thing is to have, to develop networks in order to do research and that is very an interesting and stimulating thing. I have been at least in 2 different networks but actually I have never done anything to entering to them [...], I don't do networking in an intentional way. (A2)

In the comment stage for this study, a question was raised about how the early career women in our sample seemed to be determined to network, even when they did not necessarily feel very comfortable with it. Our commentator pointed out that perhaps our sample comprised ambitious 'high flyers', who were determined to 'get on'. The importance of networking was, indeed, not challenged in the interviews, which tells about the widely held, deeply seated belief in the importance of networking for an academic career, but also to the nature of academic work itself. Instead of abandoning efforts to network when it clashed with their personal inclination, our participants reframed what counted as networking, what were the motivations for doing it and whom to network with. The concepts of compliance and differentiation (Deephouse 1999) are useful here. On the one hand, we may view networking with actors holding higher positions or prestige as an example of compliance with the established rules of the field and the perceived traditional goal of reaching higher positions. On the other hand networking with lower-prestige peers is a way of differentiating or distancing oneself from the mainstream rules and creating a new set of rules for playing the 'game'. The multiple voices from the group interviews demonstrate that early career women construe networking strategies along the lines of both compliance and differentiation (Deephouse 1999), often at the same time. While networking along the lines of compliance strategy is recognised as important, the early career women also demonstrate a desire to redefine the rules of the field by using differentiation strategy in their networking, thus challenging Burt's findings (1998) and his notion that only mediated networking is available for women, while they do not hold enough credibility for more

autonomous types of networking. Following our reasoning on compliance and differentiation, we can assume that early career women act as strategic as well as organic networkers. These two different roles carry different types of agency as the individuals engage through the strategic or organic networker roles to find space for themselves in the academic field.

> *If we talk about academia, academia has been dominated by male for long time, so we are breaking into foreign place where you have to network with them; most of the people in network are men, actually. So we can't start comparing ourselves when we are just breaking into you know their own territory, because it's theirs, it has been their territory. But like I am saying, for me my mentors have been mostly men and I think I charm with only one thing, not my looks but my work and what I bring to the table, and also by being assertive. I think that is one thing that I have displayed and being to do what higher education requires, being critical. (A12)*

Strategic networkers accept the dominant rules of the field and strive to follow them by engaging in networking with established seniors in the field and thus seek to legitimate their position. Organic networkers contest those rules and try to establish an alternative set of rules in order to legitimise themselves and establish agency for themselves. In Bourdieu's words, early career women are aware of the struggle for stakes in the academic field and perceive themselves as carriers of alternative stakes. Along this continuum, it is relevant to scrutinize the different roles combining both strategic networker and organic networker characteristics. This will allow us to characterise more in-depth the dynamics between agents - individuals and groups - and the field as well as the perceptions of early career women on their mutual relationships. Early career women are aware of and do consider strategies of compliance and differentiation with respect to networking. In this sense they reflect the shifting balance between structure – rules, norms, values – and agency – the capacity of individuals and groups to originate change in the field and its social institutions. Further research is needed to determine to what extent socialisation into

the rules of the field influences the networking strategies selected by the early career women. We may hypothesise that longer stay and a higher position in academia contributes to a more traditional understanding of the rationales, uses and implications of networking.

This paper has sought to sharpen our understanding of the topical phenomenon of networking in academia, as perceived by those who are presented with multiple disadvantages in networking both on the account of their gender as well as of their junior position in academia. This may have implications for the attractiveness of and retention on the academic career especially on the crucial early career stage. Previous research shows that networking on the early career stage is linked to higher research productivity of early career researchers and enhances the post-doctoral experience (Scaffidi and Berman 2011), thus contributing to attractiveness and retention. Similarly, the role of mentors as contributing to academics' decision to pursue an academic career (Lindholm 2004), or to foster the scholarly agency of early career researchers (Griffin et al 2015) is significant. Finally, the impact that socialization experiences, such as the access to networks, have on the self-perceptions of female academics and their preception of their career opportunities cannot be overlooked (c.f. Astin 1984), if we are interested on the retention of early career female scholars.

In terms of understanding the networking perceptions of early career female scholars, this study has certain obvious limitations and gaps, that could be remedied in future research. Empirically, the most conspicuous omission is that the notions of family and children are missing on practical grounds from the group interviews, even given that networking in relation to gender was one of the topics discussed, and that as previous research consistently points out, female academics with children are at a disadvantage in terms of their career progression (Levinson et al. 1989, Carr et al. 1998, Thanacoody et al. 2006). The most likely reason for there being hardly any mention of family in the data is that we as researchers did not include it in the agenda when designing the study. This is a curious fact, as for all three of us - being either in a long-term

relationship, married or married with children – the question could potentially be of great significance. Another gap arises from the European focus of the study, as all but two of the participants were of European origin, and all but one were working in European higher education institutions. All but one of the participants were of Caucasian ethnicity and mainly worked in what can be classified as research universities. In the next stage, therefore, it is important to include wider institutional and disciplinary perspectives, as well as the broader cultural and ethnic diversity of early career women to enable us to reflect upon the salience of the findings of the study. An international comparative setting would offer a potential for the critical discussion of networking perceptions of early career female scholars, highlighting the potential differences in a global context, whilst a comparison with early career male scholars, or alternatively with more established female academics, would offer valuable comparisons to contrast with the identified perceptions of early career female academics.

Finally, the organized settings of academic careers have not been used explicitly in our analysis. Recent research has shown that what Neave and Rhoades (1987) describe as department structure (with lower status distance between juniors and seniors) and chair structure (with higher status distance between the chair holder and his/her assistants) affect academic career prospects differently (Fumasoli 2015, Fumasoli et al. 2015). Hence a future venue for research would be to investigate how department and chair models influence the networking of early career women.

Conceptually, examining the different roles combining both strategic networker and organic networker characteristics would allow us to characterise more in-depth the dynamics between individuals, groups, and the field as well as the perceptions of early career women on their mutual relationships. Early career women are aware of and do consider strategies of compliance and differentiation with regard to networking and its uses. In this sense they reflect the shifting balance between structure – rules, norms, values – and agency – the capacity of individuals and

groups to originate change in the field and its social institutions. Further research is needed to determine to what extent socialisation into the rules of the field influences the networking strategies selected by early career women.

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APPENDIX 1 Respondents' characteristics*

	Position	**Country**	**Age**	**Memberships**	**Year of PhD**
A1	Post-doc researcher	Portugal	37	ECHER, APS, EAIR	2009
A2	Post-doc researcher	Portugal	33	CHER	2011
A3	PhD student	Finland	39	ECHER, EMA	-
A4	PhD student	Switzerland	30	EGOS	-
A5	PhD student	Norway	30	ECHER	-
A6	PhD student	Norway	37	Euredocs	-
A7	Post-doc researcher	Norway	41	CHER, 4S, NEON	2006
A8	Assistant professor	Portugal	41	CHER, ESA	2006
A9	Assistant professor	Croatia	34	HSD	n.a.
A10	PhD student	Slovenia	30	ECHER, CHER, EAIR	-

A11	Associate professor	Russia	38	n.a.	2003
A12	Associate professor	South Africa	47	HELTASA, BERA, EAIR	2002

*The name of the institution and the nationality of the participants have been deleted for considerations of anonymity.

APPENDIX 2

Early career women in academia (ECW): perceptions of networking

Interview template and tentative research questions

General RQ: What does our case tell us about early career women's networking in academic community?

RQ1: What is the self-perception of ECW like?

- What does early career mean to you?
- When is the early career stage finished?

RQ2: What definitions do ECW give for networking?

- What does networking mean for you?

RQ3: For what reasons do ECW network?

- Within the context of how you understand the networks, think about your own networking, and reasons for making any…why did/do you network?

- What did/do you want to achieve?
- What motivated/motivates you?

RQ4: With whom do ECW mostly network?

- Who do you network with?
- Whom do you find out to be most/least successful for networking and why?

RQ5: To what extent is networking an active or passive process – are ECW borrowing or constructing their own networks?

- Please describe how you go about networking.
- Are you getting included in the existing networks, or creating your own ones? Whose networks are those existing ones? Do you find one of them more/less successful and why do you think so?

RQ6: How do ECW perceive the effects of their gender and/or of the people they networking with on the networking processes?

- Is it harder or easier for you to network because you are women, and why do you think so?
- Is it/was it easier/harder for you to network yourself or to tap into existing network?
- Do you think gender have any effect on the process of your networking?
- Have you ever been excluded from some network on the basis of gender?
- Is there is anything you would like to add?

APPENDIX 3: NVivo coding

1 Networking rationale
Functional
information sharing
learning and socializing
Normative
Opportunistic
Social
2 Networking access
Collaborative
Mediated
Social
3 Networking approach
Institutional
Personal
4 Networking motivation

Organic

Strategic

identity-based

impediments to networking

6 Networking type

Formal

Informal