

# Transnational mobility networks and academic social capital among early-career academics: beyond common-sense assumptions

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**Abstract** *Academic mobility is increasingly presented as indispensable for a successful academic career. This imperative is rooted in the assumption that mobility contributes to academic excellence because it allows academics to build transnational academic networks. Based on biographical interviews and an analysis of the mobility networks of early-career academics at three universities (Zurich, Cambridge, and UCLA), we examine the composition of these academics' networks at different times and discuss the role of transnational ties within them. We find that increased mobility does indeed result in more transnational networks, but it does not increase academic social capital. The additional transnational ties mainly consist of transnational kinship and friendship relations. Furthermore, the mobility of early-career academics triggers various forms of mobility among their family members. Finally, early-career academics can build transnational academic ties without necessarily becoming mobile themselves, thanks to the mobility of higher-ranked academics.*

**Keywords** ACADEMICS, ACADEMIC SOCIAL CAPITAL, QUALITATIVE MIXED METHODS, SOCIAL NETWORKS, TRANSNATIONAL MOBILITY

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Transnational mobility among academics has increased significantly in recent decades (Bilecen and Van Mol 2017), and it is increasingly presented as indispensable for a successful academic career (see, for example, Ackers and Oliver 2007; Leemann and Boes 2015; Morano-Foadi 2005). We define *academic mobility* here as cross-border movements on the part of academics to take up a position or conduct fellowship activities at a tertiary-level institution abroad. This definition excludes international student mobility and short stints abroad to attend conferences or conduct fieldwork.

In the early stages of their career, many academics, urged by the *normative imperative of mobility*, integrate stays abroad into their career path. The premise behind this imperative is that academic mobility contributes to academic excellence because it allows scholars to build transnational academic networks. Obviously, mobility is but one aspect of academic excellence, with publication record and research grants being the most obvious others. But in Switzerland and elsewhere, academic mobility has increasingly become an indispensable prerequisite for academic positions and funding<sup>1</sup> (Ackers 2008; Bauder et al. 2017). The existence of a relationship between mobility (stays abroad) and the development of transnational academic networks is often taken for granted, including in the academic literature (Bauder 2015; Lutter and Schröder 2016), and there is a lack of empirical research on the subject.

Recently, a few studies have begun to investigate the mobility-network nexus, with particular regard to collaboration and knowledge networks and focusing on specific countries. In their study about Portuguese scientists, Fontes and colleagues (2013) showed that academic mobility does not always favour transnational knowledge network formation and is not the only means of developing such networks. Investigating how French academics' geographical trajectories might influence their collaborations, Bernela and Milard (2016) found that job-to-job mobility does no more to promote the development of co-authorship networks than other mechanisms. Focusing on mobile academics in Singapore, Wang and colleagues (2019) observed an increase in academics' local collaborations after a cross-border move, but at the expense of their transnational collaborations. In contrast to these findings, Scellato and colleagues (2015) examined the collaboration patterns of migrant and non-migrant scientists in 16 countries and found that migrant scientists (foreign-born or returnees) have larger transnational-collaboration networks than their non-migrant counterparts.

While these studies have shown mixed results about how mobility affects network production and persistence, their focus is on collaboration and knowledge transfer. In this article, we are instead interested in understanding academics' networks with regard to the resources embedded in them. Concretely, we ask the following question: how is the academic social capital of transnationally mobile early-career academics connected to their cross-border mobility, and how does their mobility influence their network transnationality?

This article is part of a special issue about the new opportunities that *qualitative* social network analysis (SNA) offers for transnational migration research. It brings together a transnational perspective (Dahinden 2017) with tools developed in quantitative SNA that are here adapted to qualitative SNA. As a result of the transnational turn in the 1990s (Faist et al. 2013; Glick Schiller et al. 1992), it has become more common

for migration studies to focus on various dimensions of transnationality and their underlying networks. However, they rarely go beyond a metaphorical use of the term *transnational network* (exceptions include Bilecen and Amelina 2017; Dahinden 2005, 2013; Herz and Olivier 2012; Lubbers et al. 2018). *A contrario*, our qualitative approach to SNA makes it possible to systematically produce and analyse data about interpersonal relationships and generates detailed knowledge about the characteristics of networks, including their transnational aspects. In this vein, this article uses qualitative SNA tools to investigate the *composition of early-career academics' transnational networks*. Concretely, we examine the academic social capital that early-career academics accumulate as a result of their mobility. Following the work of Bourdieu (1980), Coleman (1988), and Lin (1999), we use a network approach to social capital that defines *social capital* as the social resources embedded in ego-centred social networks. Because we are specifically interested in academics' ability to pursue their career, we do not focus on their overall social capital, including all subdomains of life, but instead on their *academic social capital*, defined as all social relationships that have provided the early-career academics with academic resources related to their career advancement. Hence, we investigate whether early-career academics who were particularly mobile accumulated more academic social capital than their less mobile counterparts.

This article is based on interviews with 40 early-career academics at three universities (Zurich, Cambridge, and UCLA). We employed a qualitative mixed-method design combining different types of qualitative data: data triangulation makes it possible to understand not only the network composition – and the role of transnationality and academic social capital in it – but also the underlying meanings and mechanisms at play (for a similar argument, see Ryan and D'Angelo 2018). Our mixed-method design overcomes two well-known criticisms of network analysis. First, it makes it possible to avoid structural determinism and the neglect of meaning making and dynamics that have been identified as major weaknesses of *quantitative SNA* (Emirbayer and Goodwin 1994; Schweizer 1996). Second, it makes it possible to go beyond a metaphorical understanding of networks.

In the following, we first discuss the methodology. Next, we present the composition of early-career academics' networks that emerged from the name generator and interpreter tools (network data). Our findings indicate that the connections between transnational mobility and academic social capital – as an aspect of academic excellence – are much less straightforward than often assumed. While increased mobility results in more transnational networks, it does not lead to enhanced academic social capital. Furthermore, additional transnational ties mainly consist of transnational kinship and friendship relations, and the mobility of early-career academics triggers various forms of mobility among their family members. Finally, early-career academics can build transnational academic ties without necessarily becoming mobile themselves, thanks to the mobility of other higher-ranked academics. In other words, similarly to what scholarship on international migration has theorized for other groups, whether highly skilled or not (Raghuram 2004; Ryan and Mulholland 2014), professional academic realms are densely interconnected with kinship and family networks, which can be considered a form of indirect academic social capital in that they often enable early-career academics' mobility.

## Methodology

### *Qualitative mixed-method design*

Our study focuses on early-career academics who had obtained their PhD a maximum of ten years prior to the research study and who had moved to a university abroad after their PhD, either as a job-to-job move (for fixed-term or permanent positions) or as a visit move (to conduct fellowship activities). They held positions at all academic levels, from postdoctoral positions to tenured professorships. We included three universities from different countries: the University of Zurich (Switzerland), the University of Cambridge (UK), and the University of California, Los Angeles (UCLA) (USA). We chose these universities because they contain faculties in the humanities, the social sciences, and STEM disciplines and enjoy some degree of international renown, making them attractive to international scholars.

We used a qualitative mixed-method design, which required meeting with the academics twice. In the first session, we conducted a biographical narrative interview (Rosenthal 2007) to understand each academic's mobility trajectory by reconstructing its genesis and interpreting it in the overall context of their life, their social relationships, and the wider societal context. Biographical interviews offer diachronic insights into the interviewees' mobility and academic experiences and the social relationships involved.

The second session consisted of a two-step network interview (Dahinden 2005; Perry et al. 2018) (see online appendix). We first grasped the interviewee's *mobility network* in a systematic way using a name generator. The name generator consists of situational questions to elicit all social relationships (alters) relevant to the mobility of the interviewee (ego), whether regarding decisional, instrumental (including financial), professional, emotional, or general support. Academics who experienced several stays abroad after their PhD were interviewed specifically about their most recent – ongoing or past – experience of mobility. The questions referred to different periods, in particular the one immediately before this mobility experience (decision-making period, organization of mobility), hereafter referred to as 'time-zero' (t0); and the period during this mobility (upon arrival and after having settled down), hereafter referred to as 'time-one' (t1). Second, through a name interpreter, we collected socio-demographic data about the alters and information about the interviewees' relationships with them. As is usual in qualitative SNA, the interviewees were invited throughout the network interview to discuss in detail the meanings and contents of their social ties, triggering open-ended narrations that connected elicited alters to the interviewees' overall lives and wider societal contexts. The systematic procedure – name generator and interpreter – structuring the qualitative network interviews made it possible for these data to be encoded into a statistical database (network data). The biographical interviews and the narratives of the network interviews were combined to construct case studies that were subsequently analysed individually and thematically.

This article draws upon interviews carried out with 40 academics at the three universities between December 2013 and April 2015. The interviews took place in English or, in a few cases, French and were tape-recorded and fully transcribed.

Quotations in French were translated into English. The network data encompass information about 40 egos and 710 alters, for an average of 17.75 alters per ego. We analysed these data with the statistical software platform, SPSS, in order to evaluate the links (or lack of thereof) between key parameters (or variables) and provide insights into the networks' composition. The analysis of the narratives from the biographical and network interviews provides a deeper understanding of the mechanisms at play in the academics' networks, and of the underlying meanings of their relationships.

### *Purposive sample*

We followed a purposive sampling strategy, including early-career academics representing a variety of profiles in terms of sex, family situation, academic position, and area of research. This allowed us to identify the social processes involved in early-career academics' mobility and construction of transnational networks. The academics were identified on the universities' websites or, in a few cases, referred to us by other interviewees. They were individually invited via email to take part in the interview process. This sampling procedure is appropriate for the qualitative approach we followed.

Our sample (40 academics) comprises 20 women and 20 men between the ages of 30 and 50 at the time of interview, with a majority (33) in their thirties; 24 academics were from the natural sciences and engineering, and 16 from the humanities and social sciences. About a quarter of our sample (11) were in a 'permanent' – tenured or tenure-track – position at the time of interview. The remaining three-quarters (29) were employed under fixed-term conditions. In terms of family status, 34 were involved in a relationship (married or unmarried) when their mobility started. Of these, 27 had moved with their partners. When their mobility started, nine had children. All academics who had children moved with them. At the time of the interviews, 36 interviewees were involved in a relationship (married or unmarried); by this time, 20 had children.

Table 1 summarizes the mobility characteristics of the interviewees. We defined transnational mobility in relation to the country where they had obtained their PhD. At the time of the interviews, 33 academics were currently mobile (that is to say, not in the country in which they had pursued their PhD), even though some had arrived years earlier and had not moved (transnationally) since then; the remaining 7 had returned to the country of their PhD after one (or several) stays abroad. The length of mobility of currently mobile academics was calculated from when their (last) mobility started until the time of interview. The length of mobility in our sample thus ranges from less than one year to up to ten years. Yet, because t1 focuses on the period *upon arrival and after having settled down*, we avoid the possibility that the length of time spent abroad affect the analysis of the network data.

### *Concepts and their operationalization*

Based on the network data, we explored the composition of the academics' networks, and we built specific indicators and variables to this end.<sup>2</sup>

**Table 1: Mobility characteristics of interviewees (ego)**

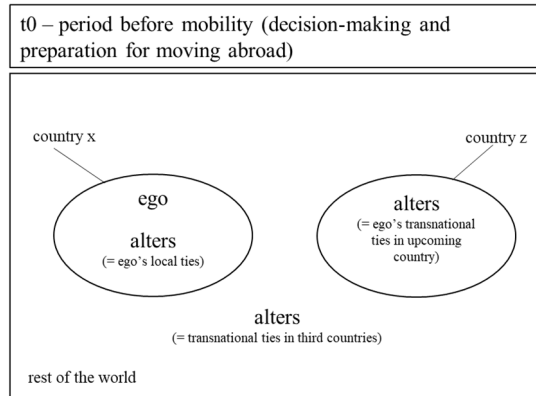
	<b>Total</b>
N	40
<b>Mobility type</b>	
Ongoing mobility	33
Past mobility	7
<b>Length of ongoing or most recent past mobility</b>	
< 3 years	25
3–5 years	11
7 years and more	4
<b>Mobility degree</b>	
Low mobile	20
Male	12
Female	8
Highly mobile	20
Male	8
Female	12

*Mobility degree* is a synthetic indicator of the degree of interviewees' transnational mobility. It is based on the number of previous and ongoing stays abroad for an academic position (namely, doctoral positions or any post-PhD academic positions, including when funded by fellowships). This variable has two modalities: *low-mobile academics* and *highly mobile academics* (see Table 1). The former did all of their academic education (including their PhD) in the country where they grew up and thereafter moved abroad once for a post-PhD position. The latter moved abroad twice or more, either a first time for their PhD and then (at least) a second time to another country for a post-PhD position, or after their PhD to take up positions abroad, at least twice and in different countries.<sup>3</sup>

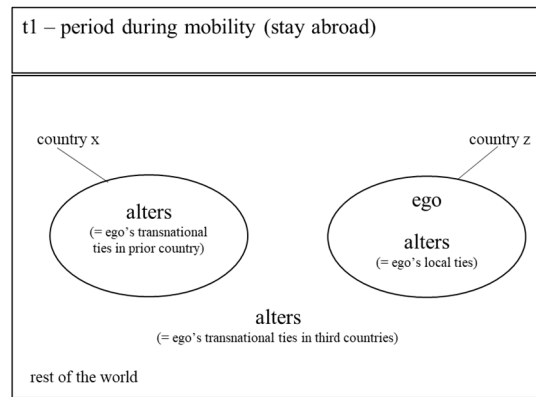
*Network transnationality degree* refers to the proportion of transnational ties in one's personal network. This variable also has two modalities, *low* and *high*. It was construed based on the median value of the proportion of transnational ties for all participants. Figure 1 illustrates the geographical – namely local and transnational – categories of alters with reference to ego at both times. Alters were coded as *local* ties when located in the same country as ego and as *transnational* ties otherwise. We further distinguished *transnational* ties into three subgroups, transnational ties located in ego's *upcoming country*, in ego's *prior country*, and in a country other than these, namely *third countries*. In other words, alters mentioned in regard to a question referring to t0 (period before mobility) were coded as *transnational – upcoming country* if they were in the country where ego would be at t1 (during mobility); alters mentioned in regard to a question referring to t1 (during mobility) were coded as *transnational – prior country* if they were in the country where ego was at t0 (before moving); alters, whether mentioned in regard to t0 or t1, were coded as *transnational – third countries* if they

were located in any country other than ego’s upcoming or prior countries. Moreover, because ego’s countries of reference changed over time, alters mentioned for t0 and for t1 were coded as *local* for one of the time periods and as *transnational* for the other, unless they themselves moved across borders in the meantime.

**Figure 1: Ego’s and alters’ geographical locations at t0 and t1**



At t0, ego is located in country x, deciding about and preparing to move to country z (destination). Alters located in country x are ego’s local ties; alters located in country z are transnational ties located in ego’s ‘upcoming country’; alters located in countries other than x or z are transnational ties located in ‘third countries’.



At t1, ego is now located in country z. Alters located in z are ego’s local ties; alters located in x (the country from which ego arrived to z) are transnational ties in ego’s ‘prior country’; alters located in countries other than x or z are transnational ties located in ‘third countries’.

Apart from these indicators, we built a proxy and specific variables to measure *academic social capital*. In line with a network approach to social capital (Bourdieu 1980; Lin 1999), we focused, regarding *academic social capital*, on social relationships providing academics with resources useful for career progression, including information, advice, and encouragement related to academic vacancies, funding opportunities,

or career strategies. These resources are typically provided by higher-ranked academics who may act as supervisors, mentors, or referees for early-career academics, or who have far more distant relationships with them, while also being ‘gatekeepers’ for academic positions (van den Brink and Benschop 2014). Hence, we used ‘*professors*’ as a proxy for academic social capital. Professors are a valuable proxy for academic social capital because they have the capacity to hire (junior) academics, act as referees, and partake in faculty hiring committees, and junior academics may capitalize on these relationships in order to access academic opportunities, whether these relationships represent weak or strong ties. Concretely, we defined as ‘professor’ any alter holding a professorship or equivalent position (including assistant professors) who (previously, currently, or potentially) had a professional link with ego.<sup>4</sup> Thus, because the interviewees’ networks contained people who helped them in their most recent mobility (t0) and who were relevant during that mobility (t1), all of whom might be relevant for future moves as well, the ‘*professor*’ proxy allowed us to grasp actual and potential social capital at the same time. Academic social capital was then measured according to a procedure common in network research (Dahinden 2013; Flap 2002; van der Gaag and Snijders 2004), for which we developed three indicators of academic social capital based on the ‘*professor*’ proxy.

- a) *Volume* indicates the number of ‘*professors*’ (as defined above) mentioned by ego.
- b) *Multiplexity* indicates the proportion of ‘*professors*’ mentioned for more than one dimension of support. This indicator is based on the hypothesis that when a relationship is multiplex, it is more probable that alter is willing to make their resources available to ego. Hence, the higher the proportion of multiplexity within a network, the higher the potential for ego to access academic social capital. The dimensions were built by grouping the name-generator questions into five dimensions of support: decisional, instrumental, professional, emotional, and general.
- c) *Diversity* refers to the distribution of the proportion of local and transnational ‘*professors*’. Networks composed of diverse social ties and resources provide more social capital and increase an individual’s chances of attaining their goals. We operationalized diversity in terms of the geographic dispersion – local and transnational – of ties with ‘*professors*’. The closer these proportions are to a 50–50 split, the higher the diversity indicator. Conversely, the further from a 50–50 split, the lesser the diversity indicator (values are given in percentages, where 0 = no diversity at all, and 100 = local and transnational ties equally represented).

Finally, we analysed the distribution of role relationships between the interviewees and their alters. The variable *role relationship* has four modalities corresponding to four main groups of relationships: (1) *family*, (2) *friends and acquaintances*, (3) *people from academia*, and (4) *others*. When several role relationships applied, roles were coded according to the most significant one.<sup>5</sup>

**Table 2: Sex and transnationality characteristics of alters and ‘professors’ (proxy)**

	Alters		Professors			% of subgroup total*
	(No)	(%)	(No)	(%)		
<b>Overall networks:</b>						
All ties	710	100	220	100		31
Female	321	45	70	32		22
Male	385	54	149	68		39
Unknown sex	4	1	1	1		25
<b>By time:</b>						
<b>At t0†</b>						
All ties	383	100	121	100		32
Local	235	61	73	60		31
Transnational	148	39	48	40	100	32
Upcoming country	95	25	64	31	77	39
Third countries	53	14	36	9	23	21
<b>At t1</b>						
All ties	401	100	105	100		26
Local	252	63	76	72		30
Transnational	149	37	29	28	100	20
Prior country	76	19	51	15	55	21
Third countries	73	18	49	12	45	18

\* This column displays the proportion of professors among all alters for a specific subgroup, such as for instance the proportion of female professors among all female alters.

† As regards t0 (period of decision-making regarding and organizing the upcoming mobility), we filtered out alters mentioned by the interviewees but with whom they had never had contact before the hiring process. When these alters were mentioned for t1 again, they were included in our calculations for t1.

*Analysis of network data*

To describe our empirical results, we chose median rather than average values because of skewed distributions. As median values do not provide a comprehensive description of the data, we performed Mann–Whitney U tests to compare the extent to which distributions might differ significantly across groups and gain supplemental information in explaining our findings. Finally, we completed the analysis by qualitatively exploring the shape of the distributions, and we calculated three-section frequency tables for variables whose distributions were highly polarized (namely the *multiplexity* and *diversity* variables measuring academic social capital). Table 3 displays all of these results.

**Mobility, proportion of transnational ties, and academic social capital**

Our network data show a positive relationship between the academics’ degree of mobility and the proportion of transnational ties in their network. The networks of highly mobile academics are more transnational than those of low-mobile academics; this is valid for t0 and t1. Table 3 displays the proportion of transnational ties in networks by

degree of mobility. The test results confirm the findings based on median values. The distribution of the proportion of overall *transnational ties* and *transnational ties in third countries* are significantly different between low- and highly mobile academics at both t0 and t1. Moreover, there is no significant difference as regards *transnational ties in upcoming country* at t0 or as regards *transnational ties in prior country* at t1.

Thus, a higher degree of mobility goes together with a higher proportion of *transnational ties*, especially, as shown in Table 3, of *transnational ties in third countries*. This first output from the network data raises the question of whether the higher network transnationality of highly mobile academics translates into more academic social capital.

Our data show no convincing link between the two. Table 3 displays the values of the academic social capital measures by degree of network transnationality. At t0, the volume and quality of academic social capital of academics with a low degree of network transnationality and academics with a high degree of network transnationality are similar. This interpretation is confirmed by the tests, which conclude that there are no significant differences between the two groups, and by the distribution tables, which present a very similar proportion for each of the three sections. At t1, the results are less clear. Academics with a low degree of network transnationality tend to have a higher volume of academic social capital (median 3) than their counterparts (median 2), but they have lower values for the quality indicators (for both *multiplexity* and *diversity*). However, a closer look at the distribution tables suggests that these differences are due to a threshold effect, as values are distributed more equally between the two groups than what the median values suggests. This is notably due to a high proportion of zero values for both. The frequency tables show that a similar pattern of distribution can be observed qualitatively, although the proportions are not quite the same. Finally, the statistical tests also do not show any significant differences between low- and highly transnational academics; however, the test result for the *diversity* variable is not strong.

Hence, we conclude that a higher degree of transnationality does not translate into more academic social capital. This finding raises the question of whether the degree of mobility itself affects academic social capital such as we have defined it.

Again, a close look (see Table 3) reveals no link between the degree of mobility and academic social capital. Academic social capital indicators are distributed rather equally across the degrees of mobility at both times. Low-mobile academics even have more academic social capital than highly mobile academics in terms of volume (median number of professors of 3 versus 2). At t1, low-mobile academics have a higher proportion of multiplex ties with professors (median 42% versus 7%). However, the frequency tables indicate that the difference in median values for diversity at t1 is again due to a threshold effect, since both tables show an equal repartition of the proportion for each of the sections. Lastly, the statistical tests do not confirm that the differences between the two groups are significant for any of the academic social capital variables at either t0 or t1.

In sum, this result indicates that highly mobile academics do not possess more academic social capital. They do, however, have a higher proportion of transnational ties in their network. These findings raise two additional questions. Who comprises the supplementary transnational ties, and how can we understand the meanings and dynamics of this network composition?

**Table 3: Network transnationality and academic social capital by groups (continued on next page)**

	Sex		Mobility degree		Transnationality degree	
	Female	Male	Low	High	Low	High
	Median (N=20)	Median (N=20)	Median (N=20)	Median (N=20)	Median (N=20)	Median (N=20)
<b>t0</b>						
<b>Number of alters</b>	10	8	9.5	8	9	8
<b>Network transnationality (%)</b>						
Transnational ties	37	38	29	47	17	56
Transnational ties – upcoming country	19	17	23	17	17	32
Transnational ties – third countries	0	2	0	15	0	21
<b>Academic social capital</b>						
Volume	3.5	2	3	2	2.5	3
Multiplexity (%)	33	17	29	23	23	25
Diversity (%)	50	40	50	50	50	50
Distribution table <sup>‡</sup> (%)						
0	15	45	20	40	30	30
]0;100[	75	45	70	50	60	60
100	10	10	10	10	10	10
Distribution table (%)						
0	25	40	25	40	30	35
]0;100[	50	45	60	35	45	50
100	25	15	15	25	25	15

<sup>o</sup> = p < 0.1; \* = p < 0.05; \*\* = p < 0. n.s. = not significant.

<sup>†</sup> Mann-Whitney U test.

<sup>‡</sup> The distribution tables summarize in three sections the proportions of individuals at each end (0 and 100 values) and the proportions of individuals in between (end values excluded).

**Table 3: (continued)**

	Sex		Mobility degree		Transnationality degree	
	Female	Male	Low	High	Low	High
	Median (N=20)	Median (N=20)	Median (N=20)	Median (N=20)	Median (N=20)	Median (N=20)
<b>tl</b>						
<b>Number of alters</b>	11	8	8	10	7	9.5
<b>Network transnationality (%)</b>						
Transnational ties	38	25	25	41	17	45
Transnational ties – prior country	22	11	24	13	14	30
Transnational ties – third countries	8	0	0	20	0	20
<b>Academic social capital</b>						
Volume	3	2	3	2	3	2
Multiplexity	42	0	42	7	0	38
Diversity	0	0	0	0	0	25
Distribution table <sup>‡</sup> (%)	0	65	45	50	55	40
]	45	15	30	30	30	30
100[	25	20	25	20	15	30
Diversity	0	0	0	0	0	25
Distribution table (%)	0	70	65	60	75	50
]	40	15	25	30	20	35
100[	5	15	10	10	5	15

° = p < 0.1; \* = p < 0.05; \*\* = p < 0. n.s. = not significant.

† Mann–Whitney U test.

\*\* The distribution tables summarize in three sections the proportions of individuals at each end (0 and 100 values) and the proportions of individuals in between (end values excluded).

### **The meanings and dynamics underlying network composition**

The distribution of role relationships between the interviewees and their alters, as revealed by the network data, and the analysis of the biographical interviews and the narratives of the network interviews make it possible to identify some of the mechanisms involved in the dynamics connecting (or not) cross-border mobility, network transnationality, and academic social capital.

#### *Durable ties with family and friends, but fading ties with professors*

Table 4 illuminates why the higher proportion of transnational ties in highly mobile academics' networks does not translate into more academic social capital: the large majority (three-quarters) of their *transnational ties in third countries* consist of family or friends, both at t0 and t1. These ties provided multiple types of resources but no *direct* academic support.

The narratives of the biographical and network interviews provide additional knowledge about these transnational relationships in third countries. First, these family and friendship ties were strong, long-term relationships with people whom the academics had known all or most of their lives.<sup>6</sup> These alters have remained in the countries where the academics grew up and studied, and which they left when they engaged in successive episodes of mobility. Second, in the few cases in which highly mobile academics kept ties with transnational professors in third countries, these were predominantly former supervisors located in the country where the academics grew up and studied. In the few cases when they were not located in this country, they had either moved to other countries themselves or were still located in the same country where the interviewees had met them during a previous mobility episode (for instance, an academic exchange as part of their study programme).

The interviewees turned to these professors in third countries at t0, while considering their upcoming (transnational) career move. They asked them for formal academic support, such as recommendation letters and sometimes career advice. However, these professors were rarely mentioned again at t1, which suggests that these relationships faded over time, or at least became dormant. Indeed, throughout their mobility episodes and career stages, the interviewees' research interests sometimes shifted substantially, thus rendering former supervisors less relevant to their career, as Marc's experience illustrates. While considering moving from the UK to Switzerland, Marc, a highly mobile academic, contacted his former PhD supervisor in the United States: 'I needed a [recommendation] letter from him to be able to move. And I was like, "Hey, I intend to go to [name of institution], and I need a letter from you for that".' Later in the interview, asked about his current relationship with this professor, Marc answered: 'I have less and less contact with him, just because he's far away and because we followed different directions in terms of our research interests. ... He developed an altogether different research topic, and I didn't take that path' (Network interview).

The same finding holds for low-mobile academics who, as they progress through their career, turn less to supervisors from their early days in academia, even though they

**Table 4: Alters' role relationships and 'professors' (proxy) by location variable and by mobility degree**

	Low-mobile academics		Highly mobile academics	
	Ties (no)	Ties (%)	Ties (no)	Ties (%)
<b>t0</b>				
<b>Local ties</b>	138	100	97	100
<b>Role relationship (most significant)<sup>†</sup></b>				
Family	59	43	27	28
Friends, acquaintances	11	8	13	13
People from academia	67	49	53	55
Other	1	1	4	4
<b>Academic social capital<sup>‡</sup></b>				
'Professors' (proxy)	44	32	29	30
<b>Transnational ties – upcoming country</b>	54	100	41	100
<b>Role relationship (most significant)</b>				
Family	2	4	5	12
Friends, acquaintances	12	22	16	39
People from academia	40	74	20	49
Other	0	0	0	0
<b>Academic social capital</b>				
'Professors' (proxy)	23	43	14	34
<b>Transnational ties – third countries</b>	7	100	46	100
<b>Role relationship (most significant)</b>				
Family	3	43	24	52
Friends, acquaintances	0	0	10	22
People from academia	4	57	12	26
Other	0	0	0	0
<b>Academic social capital</b>				
'Professors' (proxy)	1	14	10	22
<b>t1</b>				
<b>Local ties</b>	133	100	119	100
<b>Role relationship (most significant)</b>				
Family	18	14	18	15
Friends, acquaintances	38	29	34	29
People from academia	72	54	63	53
Other	5	4	4	3
<b>Academic social capital</b>				
'Professors' (proxy)	43	32	33	28
<b>Transnational ties – prior country</b>	43	100	33	100
<b>Role relationship (most significant)</b>				
Family	25	58	13	39
Friends, acquaintances	5	12	8	24
People from academia	12	28	12	36
Other	1	2	0	0
<b>Academic social capital</b>				
'Professors' (proxy)	9	21	7	21
<b>Transnational ties – third countries</b>	7	100	66	100
<b>Role relationship (most significant)</b>				
Family	2	29	33	50
Friends, acquaintances	1	14	17	26
People from academia	4	57	16	24
Other	0	0	0	0
<b>Academic social capital</b>				
'Professors' (proxy)	2	29	11	17

<sup>†</sup> Proportions are rounded to the unit; hence, percentages of the different *role relationship* categories do not always total 100 per cent.

<sup>‡</sup> Professors are mainly categorized as *people from academia*, but they may also fall under another (most significant) *role relationship* category.

might be geographically closer to them. Overall, this suggests that, along their (highly or low-mobile) career trajectories, academics often do not maintain strong or long-lasting relationships with former supervisors situated in a relatively distant past, especially when their research interests have drifted apart.

When closer relationships with former supervisors from the early days were maintained, whatever their locality, it was either because the relationship had become more personal (and multiplex) while still sharing research interests, or because those professors were located in interviewees' past countries to which they were eager to return. The professors were then mobilized for advice about how to reintegrate into this specific academic labour market.

#### *Transnationally mobile long-term friends*

Some of the interviewees' long-term friends, whom they had met during their childhood or youth, themselves engaged in transnational mobility. While the persons at both ends of the relationship were transnationally mobile, they managed to maintain a vivid relationship at a distance, meeting physically whenever possible. Eva developed a highly mobile career path. She moved from Poland to the UK to do her PhD. During her PhD, she did an academic exchange in Switzerland and, after graduating, moved to the United States as a postdoc. Asked about the people she sought out to discuss personal concerns after her arrival in the United States, Eva recalled:

Via Facebook, my few friends that are close friends ... that are still my very good friends from ... high school [one still living in Poland, the other two] living abroad. Those were the people I contacted regarding my changes in life and concerns. Those are people that I stay in touch with on a regular basis; they knew I was moving. So obviously, the first thing after I landed, I already got messages. 'Did you arrive okay?' 'How is everything?'

(Network interview)

These friends from high school all went to different universities in Poland and followed different educational paths. Like Eva, two of them moved abroad. Eva kept in touch with her friends mostly by phone and Facebook, and they visited each other when possible. To emphasize the strength of her ties to her network of friends, Eva added: 'We are almost like *Sex in the City*, except not in the same city' (Network interview).

Like Eva, Nicole has been highly mobile and stayed in touch with close transnational ties located in different countries. After her Master's in France, Nicole conducted short research assignments in different countries before relocating to Austria for her PhD while her now husband moved to Japan for his own career. Afterwards, she moved to the United States for a postdoc. There she maintained frequent contact with her husband and her best friend from France, who had herself moved to Switzerland:

I talk to my husband every day on Skype, as well as with my friend who is now in [Switzerland], three-hour Skype-conversations [laughs]. ... Skype made my

stay a lot easier. Essentially, on Saturdays, from 9 a.m. to 3 p.m., well, I do little but skype, talk to everyone, discuss. I even prepared my wedding on Skype [laughs].

(Network interview)

These excerpts show that long-term friendships may very well persist despite physical distance and repeated mobility. Furthermore, these long-lasting connections allow emotional support to flow transnationally, all the more so thanks to electronic means of communication and social media. However, the resources provided to the interviewees by strong and durable transnational relationships were not limited to this type of resource. They also comprised on-hand practical support, as we will show in the next section.

*Transnationally mobile kinship ties: tied mobility and satellite mobility*

The analysis of close transnational kinship ties leads to two main findings. First, when interviewees were in – married or unmarried – relationships before moving, in 80 per cent of the cases their partners moved with them. These joint mobility experiences, sometimes involving children, required the couples to negotiate and organize their gendered configurations, as we have shown elsewhere (Schaer et al. 2017).

Second, the qualitative analysis reveals the presence of what we refer to as *satellite mobility*, cross-border moves of close family members organized around the mobility of the interviewees in order to provide them with instrumental support. Indeed, although they were located in countries other than those in which the interviewees currently were, transnational family members travelled across borders in order to help them *in situ*, regardless of their degree of mobility. When Fabio moved from Denmark, where he had just finished his PhD, to the United States, where he was about to start a postdoc, his parents travelled from Italy to Denmark to attend his PhD defence and help him move out. Then, joined by Fabio's brother, they all flew to the United States and helped Fabio settle down in his new place:

My parents actually came for the defence, and they also helped me move out and all these things. ... My parents actually packed everything, because then I also realized that we shipped stuff that could have stayed in Denmark. ... My head was somewhere else because of the thesis, the defence and whatever. So they did that, and my father took care of booking the plane tickets to come to the US. We all came together. ... So, yes, they helped me a lot. And when we came here, I looked on Craigslist for houses, or for places, and when I chose one they helped me move in all my stuff and clean everything up.

(Network interview)

Transnational family ties also provided another type of instrumental support when they travelled to help care for the interviewees' children. Living in Switzerland with his wife and child, Marc appreciated his father-in-law's readiness to travel from

Denmark for that purpose. Similarly, Irina, who moved to Switzerland for a position after she had obtained her PhD in Finland, received support from her mother, who travelled from Russia in order to help with the baby when Irina returned to work after her maternity leave. Making this type of resource available is obviously demanding. Nevertheless, the academics' degree of mobility does not influence the propensity for close transnational family members to provide interviewees with on-hand practical support. Rather, such support is contingent on alters' opportunity to travel across borders (for instance in terms of time – for example being retired – right to enter the country, willingness to travel, health and financial circumstances). Moreover, the frequency of such support is linked to the geographical distance between ego and alter, which renders such transnational support regular or occasional.

These examples show that academics' mobility triggers cross-border moves on the part of close transnational family ties. Lisa's experience demonstrates that this satellite mobility may be quite complex. After repeated mobility episodes in Europe and to the United States, Lisa moved to Switzerland for a professorship. She and her children subsequently relocated in Switzerland. Her husband, however, kept his job in Germany and spent half a week in Switzerland and the other half in Germany. To overcome the insufficient day care, Lisa relied on her mother's help to take care of their children: 'We have three days in day care, and I'm very lucky that my mother comes down for two days a week right now ... from Germany. That's quite a commitment on my mother's part, right?' (Biographical interview).

Her husband's flexible work schedule also helped make this family arrangement possible. When a child was sick, for instance, he could decide to work from home or go to work on another day. Being flexible as well, Lisa could then take turns with him. As Lisa herself emphasized, her mobility would not have been possible if members of her network had not also been mobile: her children, who moved with her; her husband, who commuted weekly between Germany and Switzerland; and her mother, who travelled to take care of her grandchildren.

These results demonstrate the need to incorporate familial relationships and wider social networks into the study of career trajectories. Indeed, academics engaging in cross-border mobility to pursue their career do not move as isolated individuals, nor are they isolated when they seek to reconcile their professional and family lives. Other people in their network partake in the decision-making process and the arrangements deriving from it. In this sense, family and friendship networks might be considered indirect academic social capital as they enable academics to pursue their career abroad.

#### *Transnationally mobile professors and co-presence encounters*

The normative imperative of mobility stems notably from the belief that mobility allows academics to build transnational academic networks. The narrative data, however, show that interviewees often established relationships with transnational professors in contexts in which they were not necessarily mobile themselves. This finding shows that transnational academic networks may also develop in other ways. While we do not dispute that transnational mobility (experience abroad) may be fruitful in many

ways, we question the assumption that holding a position (or conducting fellowship activities) abroad necessarily leads to more academic social capital than positions or fellowships that do not involve a transnational move. Furthermore, non-mobile early-career academics may develop transnational networks through the mobility of other (higher-ranked) academics, and may be able to capitalize on these relationships at a later point.

Enzo is an emblematic example of a low-mobile academic who developed useful transnational relationships with professors. Enzo was born and educated in Italy. He did one stay in France and another in the United States during his undergraduate studies, but he otherwise completed all of his academic education at the same prestigious institution in Italy, including a short postdoc. He then moved to the United States, where he had obtained a tenure-track professorship. Enzo considered his relationships with four professors particularly helpful at that stage of his career. Two transnational professors from the United States were particularly involved and advised Enzo throughout the application process. Recalling one of them, Enzo explained:

[He] basically coached me on how to handle the interview process, on how to prepare for questions that concerned teaching. ... [He] had me do mock interviews, and then told me that I had to study syllabi, so I did spend a lot of time studying syllabi from American universities that I found online, and tried to adapt my ideal syllabus to those that I was reading online. So I was coached, and that was really essential, as I found out later. ... I know that my colleagues, my current colleagues, were particularly impressed with the way I handled the questions that concerned teaching. They did not expect a European who had never taught in the US before to be so well prepared.

(Biographical interview)

As well, Enzo stated that all four letters of recommendation were from professors in and/or from the United States. In addition to the two above-mentioned US professors, those letters came from the former supervisor of his undergraduate stay in the United States and from his PhD advisor. What is interesting here is how Enzo met and developed ties with these four professors. Enzo's PhD advisor was from the United States. He held a dual-professorship and was teaching in Italy and the United States. Enzo met him in Italy, in the institution where he studied, and the transnational mobility of this professor was therefore crucial in his encounter with Enzo. Second, Enzo met the two professors who helped him throughout the application process while they were visiting his institution in Italy. Indeed, throughout his PhD studies, Enzo had often met with US scholars who visited his university: '[My PhD advisor] would always invite American scholars to come to give talks, and since he was so busy, he always asked me to look after them, so I established other relationships with them' (Biographical interview).

After Enzo's first encounter with one of the US professors, their relationship developed further, as the professor became a member of Enzo's dissertation committee. The other US professor happened to be in Italy again for a sabbatical precisely when

Enzo was applying for professorships. Enzo's relationship with the fourth professor was one that he established through his own mobility, during an undergraduate stay in the United States.

Enzo's case echoes other interviewees' experiences: they frequently developed relationships with professors who themselves engaged in cross-border moves, whether for sabbaticals or to teach at summer schools, take up new appointments, attend conferences, or give talks. Through their mobility, these established academics were an active part of the transnationalized dimension of academia and made it possible for even not (so) mobile academics to experience physical co-presence (Urry 2003) and establish relationships with them.

Two mechanisms seem to have played an important role in Enzo's ability to establish useful relationships with transnational professors. First, the university (or department) he studied at evidently benefits from a reputation that ensures regular visits from established scholars from the United States. Had he studied at a peripheral university, he would not have been able to develop academic social capital to the same extent without being mobile. Second, he had the opportunity to develop personal relationships with these visiting professors while he was spending time with them, not only in academic settings, but also in more informal contexts. Having established these informal ties, Enzo could count on these professors' support when he needed it. This network dynamic relates to what is commonly referred to as 'old boy networks'. Research has shown the benefits associated with access to such informal networks with high-status (male) alters, and the ways in which such networks are gendered or racialized (McDonald 2011), as women and minorities tend to be excluded from informal conversations and opportunities that make it possible to establish these kinds of relationships.

## **Conclusion**

This special issue asks how qualitative SNA can offer new opportunities for transnational migration research. Our response to this question is threefold. First, our empirical study does not support the assumption that transnational mobility results in enhanced academic social capital. While early-career academics who experience a greater degree of transnational mobility do indeed have more transnational networks than academics with fewer mobility experiences, their higher proportion of transnational ties consists mainly of family and friends, not professional contacts. This finding is important for two reasons. First, it reveals a blind spot in the study of academics' transnational mobility – the role of family and friendship ties. Second, and more importantly, it challenges the common-sense assumption that transnational mobility is an indicator of academic excellence, an assumption that funding institutions and universities in several European countries draw upon when they formally require experience abroad to apply for funding or postdoctoral appointments (see also Ackers 2008).

Second, our study demonstrates the advantages of a mixed-method design involving qualitative SNA. The triangulation of the network data with the narratives of the biographical and network interviews makes it possible to uncover the dynamics underlying the networks identified. The higher proportion of transnational ties among

highly mobile academics' networks is due to old and well-established ties with family members and friends in the country of departure or sometimes elsewhere. These ties become transnational following the mobility of the academics and they continue to be invested, emotionally and time wise, throughout the academics' mobility trajectories. These results are not surprising. Migration scholars have long shown the importance of kinship and friendship in migration processes (Boyd 1989; Gold 2005). However, research on academic mobility has often neglected these aspects and presented academics as isolated economic actors, and not as individuals embedded in social networks. If we want to understand current transformations in globalizing labour markets like academia, we must include all social networks and fields, and not just professional ones, in our analysis.

Furthermore, family members sometimes become mobile themselves due to early-career academics' mobility, a phenomenon we refer to as *satellite mobility*. These family members engage in mobility in order to support the academics with childcare and other practical and emotional needs. While migration-induced care chains (Ehrenreich and Hochschild 2003; Parrenas 2001) have raised considerable interest among scholars, these kinds of *mobile* transnational care arrangements have rarely been theorized. Yet the support early-career academics receive through the satellite mobility of family members is sometimes decisive in enabling them to be mobile, and can thus be considered indirect academic social capital.

Third, this analysis calls into question the normative imperative of mobility from another angle. We have shown that transnational academic networks can also be established in ways other than through the mobility of the immediate academics concerned. It has been argued that non-migrants or sedentary people can be transnational and have transnational relationships within their networks (Carling 2008; Dahinden 2013). We have built upon this insight to gain a deeper understanding of the interconnections between actors' transnationalism and their (im)mobility practices. Because people with whom a mobile individual is connected are also moving, focusing solely on a given individual's mobility only imperfectly reflects the transnationality of that individual's network. Academics with low (or no) mobility may be able to establish equally important and powerful transnational ties with other academics due to the latter's transnational mobility. This physical co-presence allows early-career academics to build up academic social capital without necessarily being mobile themselves, if they are at renowned institutions pertaining to Global North-dominated knowledge networks.

Our results raise two issues that require further investigation. First, longitudinal methods could open up new avenues of research on this type of mobility by capturing longer-term dynamics in academic networks. Second, it would be useful to conduct comparative research including academics who do not engage in this form of mobility. The analysis of the networks of non-mobile academics could provide deeper insights into the questions raised in this article.

Finally, our results are highly relevant politically. In Switzerland, for instance, most funding schemes for early-career academics require transnational mobility, whether in the past or the immediate future. We believe that actors in charge of academic policy may want to reconsider their strategy in light of our results.

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## **Notes**

1. The Eccellenza fellowship programme of the Swiss National Science Foundation, for instance, requires that applicants have conducted 12 months of research abroad ([www.snf.ch/en/funding/careers/eccellenza/Pages/default.aspx#Participation%20requirements](http://www.snf.ch/en/funding/careers/eccellenza/Pages/default.aspx#Participation%20requirements)). At the European level, the Marie Skłodowska-Curie Actions run an Individual Fellowships programme for ‘experienced researcher looking to give [their] career a boost by working abroad’ ([https://ec.europa.eu/research/mariecurieactions/actions/individual-fellowships\\_en](https://ec.europa.eu/research/mariecurieactions/actions/individual-fellowships_en)).
2. Obviously, our qualitative sampling strategy does not allow for inferential statistics. The quantitative results of the network data are descriptive statistics and cannot be generalized to the overall academic population within the selected universities.
3. Consistently with our calculation based on *transnational moves to take up a position abroad*, when academics moved to a position abroad and then to another one within the same country, we did not count the second move as *mobility*. By the same token, when academics commuted between their country of residence and the country where their position was located, this counted as *one* mobility.
4. We purposefully excluded professors whom we could not be sure represented academic social capital for ego, such as for instance a neighbour who occasionally takes care of ego’s children and happens to be a professor in an altogether different discipline.
5. Furthermore, academic colleagues with whom the interviewees developed friendship ties were coded as *people from academia* when the relationship implied professional aspects as well.
6. The family members mentioned included parents, siblings, and spouses/partners in a long-distance relationship with ego. In a few cases, interviewees also mentioned in-laws living abroad.

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