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## **Internationalisation as transformation: trans-national mobility and research careers in the human and social sciences**

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### **Concepts: internationalisation as transformation**

*"The voyage, in bringing us closer, contributes to something prior, more radical than science itself: to progressively broaden who we want to be, and the type of life we deem worth living"*  
(Costa 2004)

International travel is inherent to the scientific profession, as given account by the abundant literature that has addressed the geographical flows of scientists and intellectuals from a variety of disciplinary perspectives. Historians inform us that the Renaissance was "a Golden age" of scientific and intellectual travel across European universities in which travel and scientific excellence were already conceived as united (Albiñana y Palao, 2004: 48). In the current global landscape, the association of international mobility and research excellence is practically taken for granted to the extent that international experience has become "a rite of passage" in the design and development of research careers (Ackers 2008). The geographical flows of researchers and their implications for science systems and scientific careers have been the focus of a considerable amount of scholarly work by economists and sociologists of science. In the recent years, the international mobility of researchers has been addressed, among others, as: a process allocating researchers across international scientific labour markets (Stephan 2012; Fernández Zubieta et al 2015); as conditioning scientific productivity (Fernández-Zubieta 2009; Franzoni et al 2015); as shaping collaboration networks (Jöns 2009; Fontes et al. 2013); and as a means to access increased levels of independence and autonomy (Laudel and Blielick 2016).

This paper takes a step back from the assessment of individual and collective 'outputs' that may derive from researchers' international mobility and digs into the underlying dynamics potentially explaining those outputs. It addresses the meaning and implications of international experience at the individual level by focusing on the transformative effects of international mobility. "Ideas migrate through transformation" (Scazzieri and Simili 2008, 231) of individuals and collectives. International mobility is associated with the recombination of elements from different traditions (Scazzieri and Simili 2008, 232). It is

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potentially a liberating force, freeing the human mind for creative work that it would not otherwise produce (Johnson 1965). It exposes researchers to new contexts, unleashing creative forces that may propel scientific production (Bauder 2012).

International experiences thus contribute to progressively shaping the identity of researchers (Lam 2016) and their styles of scientific thought and practice (Ash 2008, 170). Spivak l'Hoste and Hubert (2012) and Coey (2017) show how sectoral and geographical mobilities shape researchers' perceptions of themselves and of their role in scientific communities.

We build on the above premises to conceive the international mobility of researchers as a potentially transformative process subject to strong uncertainty, since each individual trajectory will imply a number of unique recombinations and connections deriving from internationalization. In addition, we build on an evolutionary conceptualization of human capital to understand individual research careers as 'self-discovery' processes, over which the researcher progressively builds her identity, gaining knowledge regarding her own capacities (Cañibano and Potts 2016). We conduct an empirical analysis drawing upon research undertaken in the course of a European Project across 13 countries, throughout which a total of 358 interviews were conducted addressing the factors shaping the careers of doctorate holders in the social sciences and humanities.

We build on those interviews to analyse processes of individual transformation and self-discovery triggered by trans-national mobility across three different contexts of change. We group the contexts in which transformation through mobility may take place in three main categories, distinguishing between: i) cognitive changes; ii) changes in the professional-organisational context; and iii) changes in the socio-cultural environment. We consider how trans-national mobility within these three contexts stimulates and shapes processes of transformation and self-discovery. The specific contours of individual self-discovery that shape researchers' identities and careers are thus considered to be outcomes of the diverse mobilities that are increasingly integral to the scientific vocation.

### **Data: internationalisation in the human and social sciences**

The data for this study derives from the full set of interviews collected throughout the European POCARIM project, which addressed the "Careers, mobilities and impacts of advanced research degree graduates in the Social Sciences and Humanities".<sup>1</sup> Interviews were conducted between 2012 and 2013, by 13 national research teams, mainly in person and occasionally by telephone and teleconference. Interviewees are distributed by country and gender as shown in Table 1 below. They were selected on the bases of gender balance and representation of PhD holders working outside the academic sector. Interviews were conducted in the corresponding native language, lasting an average of around one hour. They were subsequently transcribed and translated into English. The data was collated and coded using NVIVO software. For this study, the central analytical node is "internationalisation" and analytical categories are defined according to three dimensions of change defined: epistemic context, professional-organisational context and socio-cultural environment.

**Table 1 POCARIM interviews, by country and gender**

Country	Male	Female	Total
France	11	14	25
Germany	14	17	31
Hungary	17	8	25
Italy	9	16	25
Latvia	7	18	25
Norway	16	12	28
Poland	12	13	25
Portugal	14	18	32
Slovakia	20	5	25
Spain	19	9	28
Switzerland	13	12	25
Turkey	9	16	25
UK	23	16	39
			358

### **Preliminary findings: internationalisation and self-discovery**

The empirical exploitation of the data is in a very early phase. Only initial and very preliminary sketches of potentially important dimensions within our three analytical categories can be described.

#### Cognitive change

International mobility appears to influence individuals thinking processes in part because it leads to the *challenging of preconceptions*:

It's also important to remember – what are you going to learn in one year? It is slightly dangerous to delude yourself that you will get an in-depth understanding and think you are an expert – you need to be very conscious of your own cultural limitations – so your conceptual horizon is limited by your context. You should at least acknowledge that the surrounding structures are varied. It is very important to realize that there is no such thing as objectivity (United Kingdom, female)

So you feel at times very stupid and this does not only have to do with language but with your cultural knowledge. So you are not the autonomous person anymore who is dominating your world but you have to adjust to a new environment and you have a completely different standing (German, female)

Another important impact of international mobility appears to be that encounters can influence individuals' epistemological frames, such as *discovering a new topic*:

It was quite a big topic in community studies at that time and I thought, even if it's not too relevant to my career in American cultural history, it's a topic that you can use to deal with different questions about the future of societies in Germany. Because at the time Germany had very strict immigration laws, so I had a feeling that with this topic I would not only cover a topic in my academic field but I will also deal with questions that have a relation to the communities around me (Germany, female)

### Changes in the professional-organisational context

Different organisations, which are shaped by a range of different institutional conditions such as laws, rules, norms and values, can shape contexts in which experience is accumulated. Such contexts can influence interactive *team-working skills*:

It helps you because it gives you a lot of exposure at the international level which qualifies you for work in intercultural teams or in other places than Switzerland (Swiss, female)

Such experience can also inspire the transfer of ways of doing things, which can be beneficial for return organisations, particularly where individuals acquire enhanced *management skills*:

When we are thinking about strategic orientation, this whole knowledge about what is going on somewhere else helps me to situate our institutions and to think about what are is being done abroad- is this something we could also import, somehow, in our institutions or not? Is the context different? And so on and so on. So this... at least indirectly helps me, still" (Swiss, male)

### Changes in the socio-cultural environment

As Corley and colleagues (2017: 12) state, "cultural experience plays a distinctive role in the career development of any scientist or engineer". Immersing oneself in a different socio-cultural environment can, for example, lead individuals to *become more open-minded*:

I think if I had stayed at home my whole life in my hometown I would not have been so open-minded and also more risk averse (German, female)

The opportunities to make connections in other countries can also expand scientists' social capital and collaboration networks. For example, Woolley and colleagues (2015) found that social scientists working in Australian universities who held dual or multiple citizenships had more collaborative projects than colleagues who held only Australian citizenship. Opportunities for new connections can thus be understood as leading to *extended social networks* of both friends and colleagues:

I have also actively tried to push international work because of contacts I have in other countries who over time have become friends and I enjoy working with them and I know they are reliable and if they are in the project it is much more likely the project will be a success (Portuguese, female).

## Discussion

This paper conceives of international mobility as a mechanism that facilitates processes of personal and professional transformation that have consequential effects on research careers. It identifies three dimensions of transformation at the individual level.

Cognitive changes refer to transformations due to challenges that emerge to established ways of thinking and understanding. Mobility can cause the individual to set their habitual opinions or ideas aside, to engage directly with the way things are understood, and done, in an international research group. Encountering new ways of doing things, alternative theories, or new research questions can also re-shape researchers' epistemic approach. The two dimensions of cognitive change identified in the preliminary analyses conducted require further supporting evidence, whilst other dimensions are anticipated to emerge.

Changes in the professional-organisational context refer to procedural and professional changes that can re-shape individuals' ways of working. Institutional conditions vary from research system to research system, and between research performing organisations within these systems. Direct experience of these different institutional settings and exposure to the formal and informal processes that structure routines in these contexts, can have transformative effects. Developments in interactive and management skills have been identified as potentially important dimensions of this category.

Changes in socio-cultural contexts can be considered as more diffuse, but also as leading to potentially very profound personal transformations. Understanding the way different social and cultural groups approach their work and attribute meaning to it, can be transformative for anyone in any profession. For scientists, increasing attention on the relationship with society and the contribution that science is expected to make to aspects of socio-economic development may be differently experienced in other countries, for example. Mixing with people with different values and beliefs can influence preconceived notions, and creating openings to new ways of thinking. It is likely that the influence of this context of change will be somewhat more difficult to identify as the analysis develops, not least because such effects can be subtle and specific traces not consciously perceived by individuals.

In summary, the work underway in this paper is designed to focus on sources of personal and professional development encountered through international mobility which shape and re-shape individual researchers. It is anticipated that such processes of re-shaping will be experienced to some degree by researchers as a self-discovery process. Whilst some aspects of such a self-discovery may be quite readily identifiable and reflexively described, others may be more ephemeral or may take years or even longer to be fully realised – or to manifest in consequences that can be linked back to past mobility. In this sense, a next step for this paper will be to also engage with a processual ontology of the research career as a way of moving beyond an understanding of international mobility as simply an event that introduces change in professional activities, but also as a process of self-development in which an individual researcher's past and future are intimately connected and co-constitutive of aspects of both their personal self and their professional career.

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