

## **Explicit and implicit barriers to the international mobility of scientists**

**Peter Kolb** (Institut für Pharmazeutische Chemie, Philipps-Universität Marburg,  
Marbacherweg 6, 35032 Marburg, Germany) email: pkolb@postdocjournal.com

### **Abstract**

International mobility of academic researchers is expected in many fields. While experience abroad is furthering the scientific and personal evolution of an individual, it can also be hard to do. Despite the commonness of postdoctoral appointments in a foreign country, there are many implicit and explicit barriers that make such an endeavor challenging. In this opinion, some of the factors are listed and suggestions are made how the associated problems might be ameliorated in the future. The mobility imperative

### **The mobility imperative**

Many academic fields have a de-facto requirement for research experience in a country other than one's home country. This can range from rather obvious cases, e.g. language or cultural studies, to less apparent ones, e.g. the life sciences, where a stay in an English-speaking country is an almost necessary – although not sufficient – criterion for academic advancement. Thus, almost all research-inclined scientists will find themselves facing a move abroad. In many cases, especially for short-term stays up to a couple of months, excellent programs exist which allow for a rather worry-free experience. However, for the majority of researchers, and here especially postdocs, such programs are not in place.

In what follows, I will list several points that I believe are key obstacles to international mobility. Naturally, this list is biased towards my own experience and the stories of colleagues. I still believe that it presents a relevant list that should be considered before a move, however. Ideally, these issues will more and more be considered by political and corporate leaders when they make demands on the education of the “top brains”. In my opinion, even the much-lamented “brain drain” that occurs in many Western European countries (Brain drain, n.d.) and elsewhere is a direct effect of these obstacles: the financial, psychological, time and effort barrier of returning to the home country is only marginally lower than for the move in the opposite direction and becomes of more similar magnitude with every year spent abroad.

### **Explicit barriers**

I define explicit barriers as issues that are a direct consequence of a relocation, and arise no matter what the individual situation or psychological disposition of the researcher in question. To be fair, many of these points are being dealt with and facilitated on a political or at least institutional level. There are many cases, however, where such aid does not exist or cannot be guaranteed.

#### **Visa**

Depending on the nationality of a scientist, obtaining a visa can be easy or almost impossible. Fortunately, most countries offer special and more readily granted visa types for academic researchers. And in the case of conglomerates of many nations, such as the European Union or the Commonwealth, taking up residence in another member state is essentially barrier-free. In all other cases, not only the entry but also the exit can present inconveniences: either because the visa rules force an individual to immediately leave once the research period has ended, sometimes even making a transfer to another visa close to impossible; or because there are limitations on the ability to return to the host country, again explicit (as in the case of the United States' “two-year home country physical presence requirement”) or implicit, e.g. when an individual is refused a visa purely for the reason that the authorities suspect that they want to illegally work again.

#### **Insurances**

First, and foremost, this concerns health insurance. While it often is provided by the host country or host institution, barriers arise from the fact that one has to change insurance company frequently, leading to gaps in coverage or disadvantages in long-time care. More immediate problems concern the choice of provider and plan. Other types of insurance, such as personal liability, inability to work, etc., might be advisable for certain countries, but it is hard to figure out the real needs, because almost every researcher presents a unique combination of home country and countries that they have lived in before.

**Housing**

Looking for accommodation requires physical presence and thus cannot be done from abroad. Many schools offer housing, but since the schedules of postdoctoral researchers do not adhere to academic calendars, all apartments might be gone by the time of arrival. Private short-term housing is expensive and might not be feasible for researchers on a tight budget. Another aggravating fact is that in most countries it is common to ask for proof of financial reliability (e.g., “credit history” in the United States). Having never lived in a particular country before, the postdoctoral researcher automatically becomes a less desirable person on the market due to the lack of history. How this barrier is overcome is left to the creativity of the individual.

**Implicit barriers****Personal life**

Moving to a foreign country either separates you from your family or makes them move with you. If your spouse is not a scientist, too, finding a job for him or her (if he or she is allowed to work at all) can be very hard, especially when the job requires country-specific certification, as is the case for lawyers, medical doctors, pharmacists, a.s.o. This can put a strain on a relationship because the partner is forced to job-related inactivity. Volunteering or child care are used as an alternative by many couples, but this will likely still put a dent in the career trajectory of the spouse. In many cases, it will remain uncertain whether the spouse will be able to re-enter the work force at an appropriate level once the sojourn is over. In the face of this risk, many couples decide on a temporary far-distance relationship or commuting, but this is rarely a satisfactory solution.

**Cultural adaptation**

Part of what makes you grow during an international postdoctoral experience is the exposure to an unfamiliar environment in which you have to prove yourself. Not only the style of research at the host institution will be different, but also the lifestyle of your host country or town. While this will be a challenge for most people, it is ultimately rewarding. However, we must not forget that in many countries xenophobia is a very strong force. Being exposed to its effects is never rewarding, quite the contrary.

**Retirement**

Moving from country to country means also moving from social security system to another. On an immediate time scale, this will affect an individual's rights to unemployment benefits and health care coverage. On a longer time scale, this will affect the retirement –

although most countries have bilateral social security treaties, these treaties only help you reach retirement age. The actual rent payments still come from each country that you have lived in individually. Thus, three years of postdoc in a country will give you around 7% of your rent from that country. Even more inconvenient still is the fact that taking out the retirement money when leaving the country will result in severe financial penalties. There is no system in place that allows the transfer of money from a retirement fund in one country to a fund in another. A unified pension system is considered necessary to allow full mobility within the European Union, but it is far from being implemented at present (Uebelmesser 2003).

**Moving**

Personal belongings are very important in defining who we are (Belk 1988, Mehta & Belk 1991) Consequently, taking items beyond the immediately necessary on a move can be helpful to prevent homesickness and identity crises. From a legal point, bringing personal items into a foreign country is not too much of a problem, as moving goods are usually exempt from customs and taxation. However, shipping your belongings can be a cumbersome process, especially when the two countries are far from each other or not connected by land. Recently, for instance, the Transportation Security Administration (TSA) has banned shipping of personal effects on passenger planes within the United States. Since most air freight is in fact loaded onto passenger planes, this essentially means that sending personal belongings by air cargo is not possible anymore (except with FedEx or UPS who operate their own freight-only planes, yet this is an expensive option). The alternatives, shipping by land or sea, can take months and leave the goods in a damaged state. Moreover, many academic institutions do not refund postdocs for moving costs, limiting the amount of personal items that can be taken along. Yet more costs occur if storage of belongings is necessary in the home country.

**Discussion**

In this day and age, where buzzwords like “globalization” and “international experience” are rampant, why is it still so hard for postdocs to move to a foreign country? There are two main reasons. First, moving abroad for work still is not a very common concept: only 2.7% of the workforce in the European Union does not work in their home country (Andor 2011). Second, postdocs have little financial power – in comparison to individuals who are moved by companies and are provided for – to alleviate the costs of moving and to cover the income and benefits gaps that might arise from these moves.

So, how can this situation be improved? In my opinion, there are three levels that need to be worked on, on different time scales. On the governmental level, the situation will likely improve over time, as more and more people will become mobile and the fact that people come from different countries will permeate rules and regulations. Changes are necessary to iron out some of the bumps that are encountered today and which are largely due to the fact that an individual has no history (be it financial, legal, or educational) in a new country. The histories acquired in previous countries are not always considered valid and will moreover require translation and certification.

Another helpful development are concerted efforts to attract talent from abroad, e.g., the "Excellence Initiatives" installed in many European countries in the past years. Within these programs, having been born in a foreign country is the norm and thus the process is optimized for those researchers.

On the level of the funding agencies, postdocs would greatly benefit from fellowships that include advance payments of larger sums. As an example, I was fortunate to receive a fellowship from the Swiss National Science Foundation, which consisted of a single payment of the entire amount for 1.5 years. While this required financial responsibility on my side (to make sure I would have money left at the end of the first year), it also greatly facilitated paying all those deposits necessary in the beginning. Moreover, when searching for an apartment, the high bank account balance compensated for the fact that I did not have a credit history. Hybrid approaches consisting of advance and monthly payments might be more optimal, but it is important to acknowledge the fact that the first months in a new country use an extraordinary amount of money.

Finally, on the level of the universities, companies and research groups, the fact that everybody wants international researchers should be embraced more wholeheartedly. Contributions to moving and travel costs should become the rule rather than the exception. In my opinion, this would also be an excellent opportunity for philanthropists who would like to promote international mobility. Moreover, while many institutions feature "International Offices", these almost never answer the most interesting and relevant questions, e.g., how do I find an apartment; how do I fill in a tax form; which bank should I trust? I am aware that there might be legal reasons that these questions cannot be answered by office staff, but I am convinced that a university on the whole would profit immensely if they provided somebody who could (at least from time to time in the form of a workshop).

Why should universities and group leaders care about these issues? The reason is that while researchers are (inefficiently) looking for an apartment or (inefficiently) trying to understand a tax form or forced to an extended leave because an issue with their visa has been overlooked, they cannot be productive. After all, the main purpose of a postdoctoral stay is to grow scientifically and to contribute to the scientific enterprise. Being able to put "Completing tax forms in three different countries" in the skills section of your CV is not going to land you a faculty position or get that Nature paper published.

### **Acknowledgements**

Part of the experience this article is based on has been funded by the Swiss National Science Foundation, grant PBZHA-118815.

### **Literature**

Andor, L 2011, 'The free movement of workers - an opportunity for all', (speech transcript), 25 February 2011, <http://europa.eu/rapid/pressReleasesAction.do?reference=SPEECH/11/125&format=HTML&aged=0&language=EN&guiLanguage=en>. [28 February 2011].

Belk, RW 1988, 'Possessions and the Extended Self', *J. Consum. Res.*, vol. 15, pp. 139-168.

Brain drain and reference 32 therein. Available from: [http://en.wikipedia.org/wiki/Brain\\_drain](http://en.wikipedia.org/wiki/Brain_drain). [28 February 2011].

Mehta, R & Belk, RW 1991, 'Artifacts, Identity, and Transition: Favorite Possessions of Indians and Indian Immigrants to the United States', *J. Consum. Res.*, vol. 17, pp. 398-411.

Uebelmesser, S 2003, 'Harmonisation of old-age security within the European Union', *CesIFO Working paper No. 1108*.