

Ruth Lee

Research Councils UK office in the USA

Who does what?

- **Seven Research Councils spanning all academic disciplines: together known as 'Research Councils UK'**
- **Offices overseas work mostly in partnership with funding agencies; some support international student networking through competitions or partnerships between doctoral training centers**
- British Council works with UK universities on overseas student recruitment and on international strategic partnerships
- Science and Innovation Network across the US based in consulates; looking for US-UK S&T partnership opportunities of all kinds



Why is international student experience in STEM fields considered valuable?

- Access to world-class collaborators is a net gain for researchers worldwide: remove barriers to the 'best working with the best'
- Share access to state-of-the-art, expensive facilities
- Need to provide next-generation leading researchers with the flexibility and awareness to work in an international context
- Build new networks; sustain and develop existing collaborations
- Experience and learn from different pedagogic systems
- Overseas students provide an experience of the world at large to home students

What do we need to do in order to measure value?

- Need better means to track research partnerships. Less than half UK institutions hold information on international research collaborations centrally; 42% record at more local level; 14% do not record at all.
- Multiple units of analysis: individuals (career development), institutions (health of research base) and communities (scientific progress)
- Science of Science and Innovation policy research roadmap: 'How and why do communities of science and innovation form and evolve?'
- Need meaningful comparisons. SCIsip: 'There is little analysis of the way in which the practice of science has become distributed across space, time and research areas as a result of computational advances'
- Fewer and fewer 'controls', even without leaving the country
- Need to measure within historical and anecdotal context, including better understanding of early dissemination of ideas that do not lead *directly* to publication, and flow of supply and demand of researchers

NORFACE report on social science mobility at the doctoral level

2007 online survey of doctoral researchers in 12 European countries

548 responses; 10 in-depth interviews with supervisors, 32 with doctoral candidates

- Is mobility a metric that has come to stand for internationalization, and even for innovation? Might this privilege certain topics and comparative research?
- Internationalized research environments are available in home locations; this must be taken into account when comparing with 'static' doctorates
- Longer stays do not necessarily imply higher international exposure
- Value of virtual networking need exploring (e.g. e-social science)
- 'Character building' better undertaken at undergraduate level: must evaluate in specifically research terms at doctoral level
- Funding for mobility used to buy research time as much as international experience (extrication from professional and personal 'distractions')
- Does mobility work best when it operates through existing scientific networks and relationships, drawing on social and human capital?

What are the future opportunities and challenges for international STEM graduate education?

National policy and institutional practice moving in a supportive direction:

- Beyond recruitment to long-term collaborative relationships as engine of growth, with direct management support at university level
- But: students must want international experiences if universities are to invest in them. Careers advice needed: do students understand that markets and careers are international?
- Multilateral 'managed networks' are more flexible than bilateral partnerships, but need a serious management commitment
- Language issues: Language Based Area Studies centres
- To what extent can Research Council support add value? Should we provide funding, information, or both?
- Potential impact on mobility if students cannot progress directly from a UK Bachelor's degree to PhDs in other European countries

NORFACE report:

- Flexible funding for short-term research visits difficult to obtain, especially without a Research Council/equivalent award; some Research Councils now addressing this
- Shared languages, visa process, fees important
- Researchers in smaller institutions more inclined to seek out specialist supervision elsewhere, including abroad
- Encouraging mobility during the doctorate creates tension with regulated, structured, monitored supervision; need opportunities for more structured forms of mobility and exchange?
- Help finding accommodation, better support by host institution and improved funding were ways of improving productivity during mobility episodes
- Focusing on research can lead to isolation abroad/non-integration into teaching teams at home, harming career progression
- Special linguistic challenges for social science researchers

Doctoral career pathways study

- Major longitudinal study of PhD graduates – up to 10 years post-graduation (from 2003/04 cohort)
- Aims to gauge the extent to which doctoral graduates help to drive forward innovation and growth and thereby contribute to society, culture and economy
- Includes all contactable UK and EU domiciled graduates
- Enhancement of the Higher Education Statistics Agency survey of the destinations of leavers of higher education which asks graduates about their careers and choices roughly 3.5 years after graduation (known as the L DLHE)
- Target of 2500 responses
- First data in May 2009; analysis June-August 2009
- Research Councils will then commission an analysis to inform future phases of the study
- Case studies from Autumn 2009 as part of qualitative analysis
- Develop a 'panel' of doctoral graduates so careers might be tracked over a number of years